



# Thurston PUD

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## Water System Plan Part A – Umbrella Plan Update

Final March 30, 2021



## Acknowledgements

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# Chapter 1

## Description of Thurston PUD

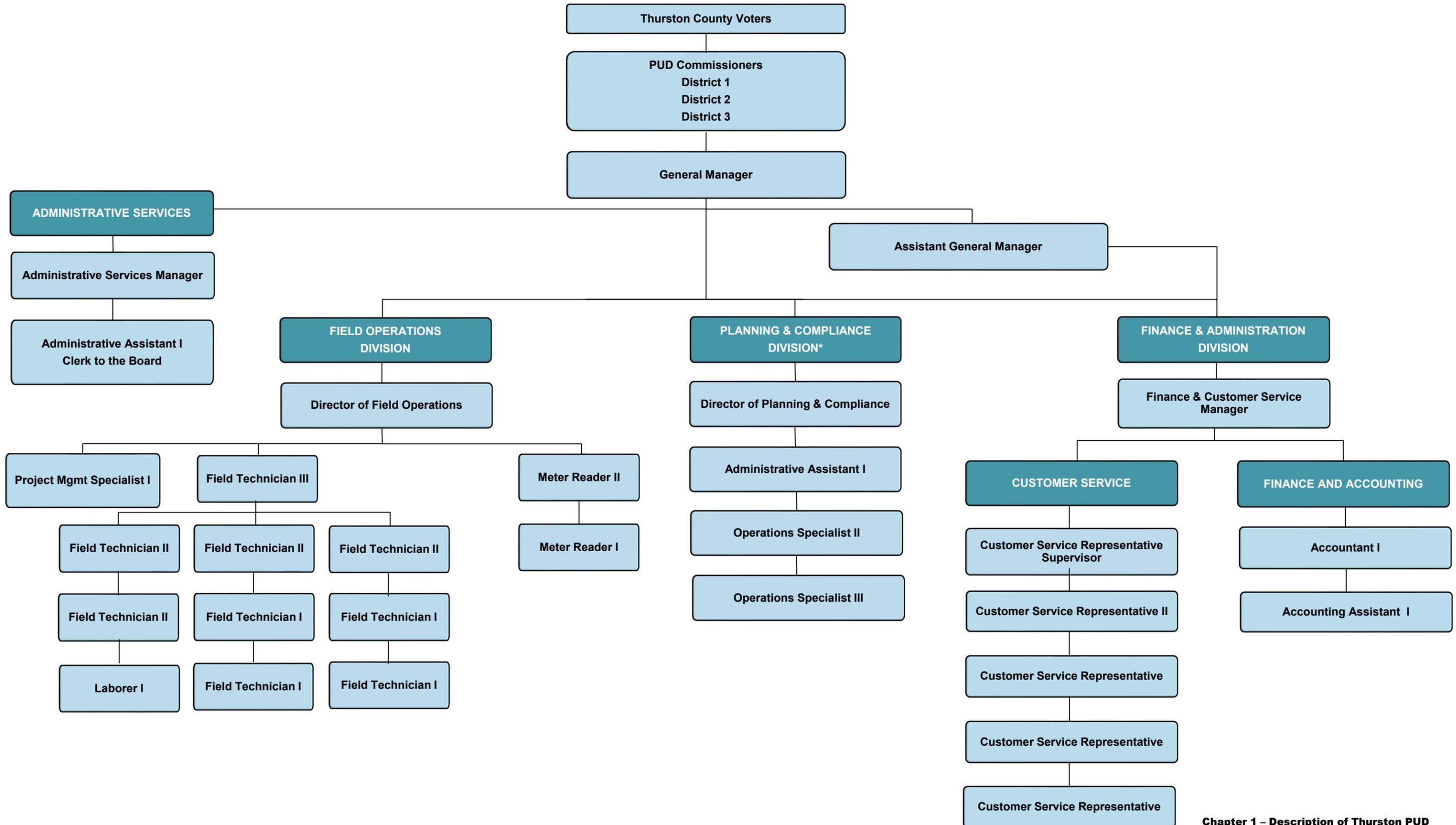
### 1.1 Ownership and Management

Public Utility District No. 1 of Thurston County (Thurston PUD) was formed in 1938 by a vote of the citizens of Thurston County. The District operates under the provisions of Title 54 of the Revised Code of Washington and has the authority to serve public water systems within Washington State. The District is governed by three elected PUD Commissioners. The Commissioners are elected by vote of the citizens of Thurston County for six-year terms of office. The Commissioners are responsible for establishing policy, setting rates, approving a budget, and hiring a General Manager. The General Manager is responsible for the overall management and operation of the utility, which is organized into four departments: Administration, Finance and Customer Service, Planning and Compliance, and Field Operations. **Figure 1.1** (K:/Personnel/Org Charts) provides an overview of the structure of the utility and the organization chart of management. Administration is comprised of the General Manager, Assistant General Manager, and Administrative Services Manager (ASM). This department also provides support for the Board of Commissioners. The ASM oversees the functions of human resource management, communications, facilities management, and disaster and emergency preparedness. The Finance and Customer Services Department is responsible for the accounting and financial operations of the District and oversight of the District's finances and customer service operations. The Field Operations Department is responsible for all daily water system operations, including maintenance, emergencies, replacement of aging infrastructure, water quality and meter reading. The District's field staff perform most infrastructure replacements and emergency repair work themselves. Large projects are sent to bid for outside contractors. The Director of Planning and Compliance (DPC) is responsible for the administrative and planning support for Field Operations, and the oversight of all technical and regulatory requirements for all water systems. The DPC oversees all aspects of water system-related capital improvement projects and is responsible for securing critical grants to fund or supplement infrastructure projects. Thurston PUD contracts with an attorney for legal services and hires engineers when needed.

Thurston PUD owns and operates 275 water systems, comprised of 74 Group A systems and 201 Group B systems in six counties, see **Table 1-1** (K:\WATER SYSTEMS\SYSTEM LISTS\Connection Summary by County Reports). Refer to **Table 1-2** (K:\WATER SYSTEMS\SYSTEM LISTS\Final Master List) for a list of all the water systems, identification numbers, class, county, and number of existing connections. Thurston PUD relies on certain water rights, including certificated water rights, permits, and permit exempt water rights, in support of its water systems and municipal supply, and holds the same for existing customers, future growth or supply needs, standby/reserve, backup or emergency, and other reasonable future use supported by this water system plan, and all relevant subparts. Refer to **Table 1-3** (K:\WATER SYSTEMS/Water Rights/Log of Water Rights) for a list of all the water rights.

Figure 1.1

# Public Utility District No. 1 of Thurston County



\*Planning & Compliance Division provides support for Field Operations Division

Table 1-1

## Thurston PUD Connections Summary per County

### End of 1st Quarter 2020

<u>Grays Harbor</u>	# of Systems	Active Connections	Approved Connections
Group A	1	16	16
Group B	3	21	21

<b>Total for Grays Harbor</b>	<b>4</b>	<b>37</b>	<b>37</b>
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<u>King</u>	# of Systems	Active Connections	Approved Connections
Group A	1	76	81
Group B	0	0	0

<b>Total for King</b>	<b>1</b>	<b>76</b>	<b>81</b>
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<u>Kitsap</u>	# of Systems	Active Connections	Approved Connections
Group A	0	0	0
Group B	5	28	29

<b>Total for Kitsap</b>	<b>5</b>	<b>28</b>	<b>29</b>
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<u>Lewis</u>	# of Systems	Active Connections	Approved Connections
Group A	7	432	454
Group B	47	240	282

<b>Total for Lewis</b>	<b>54</b>	<b>672</b>	<b>736</b>
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<u>Pierce</u>	# of Systems	Active Connections	Approved Connections
Group A	20	1102	1158
Group B	44	310	334

<b>Total for Pierce</b>	<b>64</b>	<b>1412</b>	<b>1492</b>
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<u>Thurston</u>	# of Systems	Active Connections	Approved Connections
Group A	45	5026	6285
Group B	102	633	668

<b>Total for Thurston</b>	<b>147</b>	<b>5659</b>	<b>6953</b>
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### TPUD Total

<u>Total</u>	# of Systems	Active Connections	Approved Connections
Group A	74	6652	7994
Group B	201	1232	1334

<b>Total Thurston PUD</b>	<b>275</b>	<b>7884</b>	<b>9328</b>
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Table 1-2

# Thurston PUD Master List

System #	Name	County	WFI	Group	Active Conn	Approved
661	141st Ave KPN	PC	24781T	A	22	22
210	Aust	LC	01222V	A	17	20
675	Biscay Acres	TC	071604	A	18	18
662	Boots & Saddles	PC	077304	A	36	51
676	Burnsville	TC	05329V	A	59	61
617	Cedar Ridge Estates	TC	029386	A	63	64
677	Cedar Shores	TC	049538	A	39	45
763	Cedarwood	TC	121009	A	62	62
253	Clerget	PC	381712	A	16	16
678	Cooperfield	TC	04459P	A	16	18
606	Cornerstone Est	TC	00133E	A	15	16
679	Country Club	TC	15503J	A	109	119
680	Countrywood Estates	TC	08393R	A	274	301
212	Covington	TC	02050D	A	15	15
355	Crescent Park	PC	16000D	A	213	214
663	Crocker Creek	PC	38261X	A	23	27
213	Crowder Road	TC	162773	A	20	20
681	Deerfield Park 1	TC	005582	A	35	35
682	Deerfield Park 2	TC	03681J	A	46	47
683	Deschutes Village	TC	19035Y	A	73	73
684	East Olympia	TC	04601J	A	23	25
664	Eggimann	PC	22585F	A	39	40
247	Elk Heights	PC	52614C	A	37	44
308	Evergreen Vista	PC	31881R	A	18	18
762	Forest Glen	PC	017128	A	21	21
685	Giffords	TC	008866	A	30	30
665	Glacier Vista	PC	077491	A	35	40
607	Hawk Acres	TC	31845T	A	129	136
686	Hawley Hills	TC	AB037F	A	51	52
608	Horsfall	TC	34505K	A	64	75
761	Keanland Park	TC	AD179G	A	57	109
351	Lazy Acres	TC	46441K	A	93	97
225	Lew's 81st	TC	604901	A	34	104
369	Loma Vista	TC	461648	A	69	69
687	Longhorn Country Est	TC	30190J	A	32	34
688	Marvin Gardens	TC	366997	A	37	37
618	Maxvale	TC	074864	A	31	48
689	Meadow Wood	TC	63131T	A	15	15
690	Meadows	TC	87784Q	A	918	1894
619	Mountian Lakeview	LC	56736A	A	28	31
364	Nisqually Highlands	TC	009530	A	55	57
691	Palermo	TC	052770	A	52	60
604	Pederson Place	TC	66734A	A	32	32
328	Pit	GHC	05956V	A	16	16
307	Pleasant Valley	PC	380816	A	17	19
605	Prairie Ridge	TC	02356W	A	100	123
759	Prairie View Estates	PC	047931	A	47	53
230	Prairie Villa	TC	69166J	A	19	19

# Thurston PUD Master List 2020 cont.

System #	Name	County	WFI	Group	Active Conn	Approved
667	Quail Run	PC	701850	A	198	198
616	Redtail Hawk	TC	AA776J	A	33	33
609	Ridgewood	TC	724146	A	71	81
692	Riverlea	TC	728178	A	49	56
626	ROM	LC	719307	A	23	48
668	Roy 325th	PC	247218	A	67	75
627	Sandra Avenue	LC	54591W	A	15	16
760	Scatter Creek Ranch	TC	AA916G	A	107	110
693	Silver Fox	TC	59953Q	A	20	20
612	Skookumchuck	TC	79860C	A	50	60
251	Smith S Prairie	TC	57851E	A	14	16
669	Spanaway 192nd	PC	155319	A	78	81
278	Sward	LC	06046H	A	10	10
694	Tahoma Meadows	TC	07215J	A	40	40
695	Talcott Ridge	TC	AA139P	A	46	46
600	Tanglewilde	TC	04397K	A	1785	Undetermined
354	Terry Lane	PC	876221	A	115	119
628	Timberline Village	LC	88388B	A	280	270
239	Tolmie Estates	TC	88667P	A	65	67
264	Travis Jack	PC	339241	A	61	61
240	Valley Meadows	LC	909811	A	59	59
696	Vineyard, The	TC	05290W	A	61	61
620	Walczak	King	923503	A	76	81
610	Webster Hill	PC	598755	A	20	20
670	Whiskey Hollow	PC	206926	A	15	15
263	Wilderness Glen	PC	312261	A	24	24
201	2533	LC	04217C	B	4	6
243	200th	PC	57616Q	B	8	9
245	304th & 92	PC	55590E	B	11	11
312	304th 1	PC	37970H	B	9	9
313	304th 2	PC	42271U	B	9	9
310	336th 1	PC	52701P	B	8	9
311	336th 2	PC	52714H	B	9	9
272	366th	PC	450811	B	4	4
202	4199-A	LC	03246K	B	5	6
203	4199-B	LC	06590B	B	2	6
204	4199-C	LC	06591V	B	4	6
205	4199-D	LC	06592C	B	2	6
255	77th	PC	52743R	B	6	6
378	Antrim	LC	06696K	B	6	6
697	Apricot Park 1	TC	06059A	B	6	6
698	Apricot Park 2	TC	06060X	B	5	6
389	Armstrong	PC	07476V	B	3	6
250	Bald Hills	TC	60692A	B	6	9
503	Bear	LC	07718Q	B	4	6
671	Berry #2	PC	45135X	B	8	9
672	Berry #3	PC	55644B	B	7	9
673	Berry #6	PC	05729C	B	5	6

# Thurston PUD Master List 2020 cont.

System #	Name	County	WFI	Group	Active Conn	Approved
699	Bordeaux Farms 1	TC	069877	B	5	6
700	Bordeaux Farms 2	TC	06988Q	B	6	6
701	Bordeaux Farms 3	TC	069898	B	6	6
702	Bordeaux Farms 4	TC	06990V	B	6	6
273	Boundary SK	PC	37571H	B	8	8
703	Brandywine 1	TC	06265R	B	6	6
704	Brandywine 2	TC	06267T	B	6	6
705	Brandywine 3	TC	06268A	B	6	6
706	Brandywine 4	TC	06269U	B	2	3
270	Brighton Creek	PC	00747J	B	8	8
208	Brockway #1	LC	050535	B	6	6
209	Brockway #2	LC	AA617 6	B	4	6
287	Brookhaven 1	LC	078474	B	6	6
288	Brookhaven 2	LC	078263	B	6	6
289	Brookhaven 3	LC	07921M	B	4	4
249	Brown S. Prairie	PC	01506T	B	6	6
707	C&M	TC	00662B	B	8	8
708	Campbell	TC	018277	B	5	6
366	Cedar Park	PC	04539A	B	6	6
709	Champion Estates A	TC	05367V	B	6	6
710	Champion Estates B	TC	05368C	B	5	6
256	Christensen Muck 1	PC	61751Y	B	9	9
257	Christensen Muck 2	PC	00244B	B	9	9
258	Christensen Muck 3	PC	00245V	B	9	9
504	Cougar	LC	077198	B	4	6
621	Country Homes	Kitsap	03720L	B	9	9
711	Country Sunrise	TC	AA994D	B	13	14
541	Cowlitz	LC	AA759D	B	6	6
514	Crow	LC	07723D	B	5	6
215	Deschutes Glen	TC	002111	B	9	9
712	Deschutes River Garden E	TC	06278K	B	6	6
713	Deschutes River Garden W	TC	06280P	B	6	6
367	Durkin	PC	AB153C	B	4	6
319	DWS Little	PC	59704P	B	6	6
513	Eagle	LC	077578	B	3	6
271	Easter Day	PC	42284M	B	8	9
347	Eastridge 2	LC	04570P	B	6	6
348	Eastridge 3	LC	06345C	B	5	6
344	Eastridge W	LC	04868Y	B	6	6
714	Empire	TC	00926R	B	9	9
386	Enslow #1	TC	07018U	B	5	5
387	Enslow #2	TC	07019B	B	4	5
388	Enslow #3	TC	07020Y	B	5	5
371	Fir Tree #1	TC	06829K	B	6	6
372	Fir Tree #2	TC	068306	B	6	6
373	Fir Tree #3	TC	06831P	B	6	6
374	Fir Tree #4	TC	068327	B	6	6
375	Fir Tree #5	TC	06833Q	B	6	6

# Thurston PUD Master List 2020 cont.

System #	Name	County	WFI	Group	Active Conn	Approved
376	Fir Tree #6	TC	068348	B	6	6
377	Fir Tree #7	TC	06835R	B	6	6
622	Forest Haven #1	Kitsap	06595X	B	5	6
629	Foron	LC	033498	B	6	8
248	Frick S Prairie	PC	595260	B	9	9
613	Frog Hollow 1	TC	AA763J	B	10	10
614	Frog Hollow 2	TC	AA7169	B	10	10
615	Frog Hollow 3	TC	AA778H	B	10	10
379	Fuller	LC	069434	B	5	6
601	Garden Acres 1	TC	02467T	B	6	6
602	Garden Acres 2	TC	06616H	B	4	5
603	Garden Acres 3	TC	066171	B	5	5
274	Granite #1	LC	05696H	B	6	6
275	Granite #2	LC	06212X	B	6	6
716	Grant	TC	632648	B	7	7
719	Guava	TC	06516C	B	8	6
717	Guava St A West	TC	02998Q	B	6	6
718	Guava St B East	TC	029998	B	5	6
259	Hansford Muck 1	PC	00898F	B	6	6
260	Hansford Muck 2	PC	008990	B	6	6
220	Harmon Rd	LC	31315C	B	7	8
380	Hebert	PC	07819C	B	4	6
512	Hemlock	LC	07722W	B	2	6
329	Heslep	GHC	542016	B	9	9
630	Hidden Meadows I	LC	02294R	B	6	6
631	Hidden Meadows II	LC	022959	B	6	6
632	Hidden Meadows III	LC	02296T	B	6	6
623	Highlands 1	Kitsap	06624Q	B	4	4
624	Highlands 2	Kitsap	066258	B	6	6
720	Hilt Street	TC	AB255C	B	4	4
315	Homestead 1	PC	04451K	B	6	6
316	Homestead 2	PC	05402V	B	6	6
268	Horn Creek 1	PC	37836E	B	4	9
269	Horn Creek 2	PC	647979	B	8	9
721	Hosch Estates 1	TC	07487M	B	6	6
722	Hosch Estates 2	TC	074885	B	4	4
723	Hosch Estates 3	TC	07489N	B	6	6
724	Hosch Estates 4	TC	07492A	B	4	4
301	Hunter 1	LC	060537	B	6	6
302	Hunter 2	LC	06054Q	B	5	6
303	Hunter 3	LC	060558	B	6	6
304	Hunter 4	LC	06056R	B	6	6
539	Indian Crest #1	TC	32654B	B	7	7
540	Indian Crest #2	TC	268519	B	6	6
221	Ivan St	TC	60351C	B	6	6
725	James Road A	TC	06639K	B	6	6
726	James Road B	TC	066406	B	6	6
727	James Road C	TC	06641P	B	6	6

# Thurston PUD Master List 2020 cont.

System #	Name	County	WFI	Group	Active Conn	Approved
728	James Road D	TC	066448	B	6	6
359	Johnson	LC	06348X	B	6	6
729	Knowles Rd	TC	07970D	B	7	9
314	Lake Whitman	PC	431220	B	8	9
290	LCUC 6	TC	060115	B	6	6
291	LCUC 7	TC	05735K	B	6	6
227	Little Donkey	TC	050891	B	8	8
730	Mallory C #1	TC	06560K	B	6	6
502	Maple	LC	077177	B	5	6
633	Margaret Meadows	LC	07763E	B	5	6
228	Marshall	TC	51848D	B	4	4
318	Mathias	PC	02233P	B	4	4
715	McGraw	TC	07549R	B	5	5
267	McKenna Estates	PC	42716H	B	8	8
731	McLane Point Seneca West	TC	06449K	B	4	8
732	Middle Street	TC	05161H	B	8	8
733	Morris	TC	04016L	B	6	6
734	Mound	TC	65065M	B	6	6
246	Mt. Ridge	PC	42251A	B	9	9
262	Mud Lake	PC	46640A	B	7	7
309	N. Roy	PC	46391Q	B	9	9
625	Nelson Highlands	Kitsap	06626R	B	4	4
229	Nisqually Vista	TC	05231V	B	12	13
735	Offut Lake Estates	TC	038954	B	6	6
330	Olin	GHC	031704	B	8	8
674	Orchard	PC	AB016P	B	6	6
736	Pecan Rd.	TC	01294P	B	5	5
317	Pepperwood	PC	056699	B	5	6
206	Post Lane	LC	03856L	B	6	6
282	Raubuck	LC	060471	B	6	6
501	Raven	LC	07716P	B	5	6
276	Red Cloud 2	LC	057321	B	5	6
283	RES 1	LC	06048J	B	6	6
284	RES 2	LC	060492	B	6	6
285	RES 3	LC	06052P	B	1	6
737	Reserve CP 1	TC	AB267H	B	7	7
738	Reserve CP 2	TC	AB2686	B	6	8
739	Reserve CP 3	TC	AB269A	B	11	11
740	Reserve CP 4	TC	AB270D	B	10	10
741	Reserve CP 5	TC	AB271F	B	9	9
231	Rich Rd	TC	722288	B	4	4
742	Richwood	TC	07783V	B	6	6
232	Rixie Rd	TC	73075T	B	3	4
286	Rommerman Rd	LC	02567X	B	6	6
384	Roseburg	TC	077090	B	6	6
508	Sales	PC	07752N	B	6	6
542	Salkum	LC	AA760F	B	6	6
234	Sargent Rd	TC	581714	B	5	5

# Thurston PUD Master List 2020 cont.

System #	Name	County	WFI	Group	Active Conn	Approved
743	Scatter	TC	017801	B	7	8
235	Seed Water	TC	21101R	B	7	9
236	Shadowood	TC	083316	B	8	9
370	Sky Acres	GHC	10233L	B	4	4
744	Sterling Estates East	TC	AA061K	B	6	6
745	Sterling Estates West	TC	AA062G	B	6	6
237	Tall Timbers	TC	224141	B	5	9
362	Taylor Cr #1	LC	06346W	B	6	6
363	Taylor Cr #2	LC	06391L	B	6	6
238	Tilley Rd	TC	013220	B	6	6
265	Tish Hinkle	PC	61946J	B	7	8
381	Tracy #1	TC	066279	B	6	6
382	Tracy #2	TC	06629A	B	4	6
383	Tracy #3	TC	06632Y	B	6	6
746	Travis	TC	07923N	B	3	6
241	Trinity Muck 1	PC	01122Q	B	8	8
242	Trinity Muck 2	PC	01110E	B	8	8
261	Trinity Muck 3	PC	01114H	B	8	8
747	Violet Meadows A	TC	06165M	B	4	6
748	Violet Meadows B	TC	061665	B	6	6
749	Violet Meadows C	TC	06167N	B	5	5
750	Violet Meadows D	TC	061686	B	6	5
751	Violet Meadows Est. 1	TC	058937	B	6	6
752	Violet Meadows Est. 2	TC	05894Q	B	6	6
753	Violet Meadows Est. 3	TC	058958	B	6	6
754	Violet Meadows Est. 4	TC	05896R	B	6	6
755	Violet Meadows Est. 5	TC	05899A	B	6	6
756	Violet Meadows Est. 6	TC	05902H	B	6	6
515	Whitney	LC	07888N	B	4	4
757	Whitney	TC	05614D	B	7	7
535	Wild Rose #1	TC	06767E	B	3	3
536	Wild Rose #2	TC	06768Y	B	6	6
537	Wild Rose #3	TC	06769F	B	6	6
758	Wind Tree Division 1	TC	AA492C	B	13	14
266	Y-Not	PC	556702	B	8	9

Table 1-3

### List of Thurston PUD Water Rights

1688 A (G2-*03135C)	G2-23320C	G2-26587C	G2-28168C
3577 A (G2-*04656C)	G2-23624C	G2-26623(A)P	G2-28169C
4344 A (G2-*06364C)	G2-23714C	G2-26697C	G2-28170C
CG2-*04626@2 (CG2-GWC3660(A)@2)	G2-24073C	G2-26840C	G2-28224C
CG2-*04626@3 (CG2- GWC3660(B)@3)	G2-24326C	G2-26876C	G2-28245C
CG2-00792	G2-24457C	G2-26894C	G2-28253C
CG2-22514(A)	G2-24488C	G2-26895C	G2-28254P
CG2-26392@2	G2-24585C	G2-26956C	G2-28255C
CG2-26629	G2-24694C	G2-27015P	G2-28671C
CG2-GWC1118@2	G2-24743C	G2-27076C	G2-28833C
CG2-GWC3060(B)	G2-24825C	G2-27095C	G2-28968C
CG2-GWC6977	G2-24840C	G2-27122C	G2-28990P
CS2-SWC3750	G2-24972C	G2-27123C	G2-29050 Application
G1-23141C	G2-25197C	G2-27203C	G2-29250P
G1-25142C	G2-25203C	G2-27269C	G2-29504 Application
G1-27806 Application	G2-25256C	G2-27306C	G2-29505 Application
G2-*06013C	G2-25263C	G2-27332P	G2-29549 Application
G2-00167C	G2-25373C	G2-27466C	G2-29553 Application
G2-00295C	G2-25400C	G2-27507C	G2-29559 Application
G2-00790C	G2-25406C	G2-27519C	G2-29560 Application
G2-00887C	G2-25437C	G2-27560C	G2-29565 Application
G2-00935C	G2-25461C	G2-27561C	G2-29566 Application
G2-00989C	G2-25478C	G2-27585C	G2-29582 Application
G2-01037C	G2-25486C	G2-27628C	G2-29596 Application
G2-01082C	G2-25488C	G2-27634P	G2-29632 Application
G2-08422P	G2-25491C	G2-27722C	G2-29697C
G2-08424P	G2-25555C	G2-27758P	G2-29771 Application
G2-20348C	G2-25612P	G2-27858C	G2-29857 Application
G2-20460C	G2-25619C	G2-27923C	G2-29863 Application
G2-21039C	G2-25621C	G2-27951C	G2-30183C
G2-21679C	G2-25719C	G2-28024C	G2-30617P
G2-21784C	G2-26032C	G2-28060C	G2-30618 Application
G2-22549C (application CG2-22549(A))	G2-26163C	G2-28061C	G2-30639P
G2-22747C	G2-26251C	G2-28062C	
G2-22756C	G2-26292C	G2-28090P	
G2-22961C	G2-26322C	G2-28097C	
G2-22984C	G2-26323C	G2-28103C	
G2-23121C	G2-26456C	G2-28104C	
G2-23130C	G2-26459C	G2-28111C	
G2-23193C	G2-26474C	G2-28150C	
G2-23296C	G2-26533C	G2-28167C	

## 1.2 History of Thurston PUD

Public Utility District No. 1 of Thurston County (Thurston PUD, District) was formed by a vote of the Thurston County Voters in 1938. In 1958, Thurston PUD entered into the water utility line of business with the acquisition of the Tanglewilde-Thompson Place water system when the water system encountered issues with their wells. During the same time, the City of Olympia was installing a main transmission line along Pacific Avenue. Seeing an opportunity to resolve the well issue, the PUD intertied the Tanglewilde–Thompson Place water system with the City of Olympia’s transmission line, and in 1962, Olympia began managing the system.

In 2002, the PUD’s Board of Commissioners entered into a contract with EES Consulting to develop a business plan in hopes of creating a viable working relationship between the PUD and the County. A five-year plan was developed and in 2003, the District hired a part-time General Manager. From 2003 to 2005, the District developed plans to expand its workforce and organizational structure, acquire loans, seek grants and bonding, and plan to complete projects and become a viable water utility in Thurston and the surrounding counties. A list of some of the District’s major accomplishments are below:

- In 2005, the District secured Public Works Trust Fund (PWTF) monies to acquire American Water Resources, Inc. (AWR) which operated 140 privately-owned water systems that had 1,556 connections spread across 5 counties. As part of the acquisition, the District acquired AWR’s certified water system operators resulting in the District officially becoming operational.
- In 2005, the District assumed operations and management duties for the Tanglewilde–Thompson Place water system from the City of Olympia; 1,300 connections.
- In 2005, the District served 2,856 connections, a population of over 7,700 customers in single family and multifamily homes, multiple schools, businesses, sporting fields and the Tanglewilde Park and Recreation District.
- In 2008, the District began a line of business providing satellite water management (SMA) services to non-PUD-owned water systems. The District managed its largest number of water systems in 2013 with 15 non-PUD-owned water systems serving a population of over 1,800. In 2017, the District announced it would no longer be in the SMA line of business and stopped providing SMA Service. The District purchased two systems it was managing in 2018: Cedarwood in Thurston County and Forest Glen in Pierce County.
- In 2010, the District acquired three Group A systems in Thurston County: Pederson Place, Prairie Ridge Estates and Cornerstone Estates, adding 147 new connections.
- In 2011, the District received Drinking Water State Revolving Fund (DWSRF) loans and drilled two new wells and erected a new reservoir for the Tanglewilde–Thompson Place

water system. These important additions allowed the District to produce its own water and to operate independently of the City of Olympia's water, except in an emergency.

- In 2013, the District updated the Part A Umbrella Water System Plan and Satellite Management Agency Plan in July.
- In 2013, the District completed an Asset Management Plan (AMP) for all 147 water systems. The AMP is a strategic approach to cost-effectively and efficiently managing the District's infrastructure assets. It is a living document that changes as assets are assessed, rebuilt or replaced and updated on an annual basis. As new systems are acquired, they are added to the AMP.
- In 2014, the District acquired the water systems owned by the Swift family consisting of three Thurston County Group A systems: Hawk Acres, Ridgewood, and Horsfall, adding 264 connections. Additionally, in 2014, working with Webster Hill water system's homeowners association and the Pierce County Public Works Department, the District acquired the troubled Pierce County water system, adding an additional 20 connections. Funding to replace the distribution system and other improvements came from a Pierce County community development block grant (CDBG).
- In 2015, the District conducted an extensive cost of service rate study and the District added and implemented a capital improvement surcharge to all connections to help pay for all capital projects. The fee started at \$1.00 per ERU, and in 2019, the monthly charge is \$9.35 per ERU (2020).
- In 2015, working with Washington State Department of Health and the Homeowners Association, the District added a Thurston County troubled water system, Skookumchuck, resulting in the addition of 50 new connections. This system was later upgraded with loans from the DWSRF including a chlorination treatment system and service meters.
- In 2016, the District acquired six water systems in Thurston County from Hansen Construction, LLC: Frog Hollow 1, 2, & 3, Redtail Hawk, Scatter Creek Estates and Keanland Park. This added 110 new connections from newer developments.
- In 2017, the District had a total of 159 water systems, and 4,170 connections. The District expanded by acquiring the H&R Waterworks (H&R) water systems which added 139 water systems, 4,064 connections, in seven counties to the District's customer base. In the acquisition, the District also hired H&R staff, resulting in nearly doubling the number of employees. The growth and transition produced very positive outcomes for the District. Before the acquisition, the District hired out most emergency repairs to private contractors due to the small workforce. With experienced H&R staff, the District completes the majority of emergency work, saving customers thousands of dollars per project.

- In 2018, the District updated its logo to **Figure 1.2** and rebranded itself as ***Thurston PUD***.
- In 2018, the District sold 32 water systems, with 655 customers located in Mason County to Mason County PUD No. 1.
- In 2020, the District currently owns 275 water systems (74 Group A and 201 Group B) with 7,884 active connections and 9,328 approved connections.

Thurston PUD’s Board of Commissioners will continue to bring professional water system management to small water systems by acquiring other water systems where those acquisitions are beneficial to the District, with emphasis given to acquiring water systems in Thurston County.

Thurston PUD’s mission is to *Provide safe, reliable, affordable, & sustainable utility service to our customers*. All customer service information, including current rates, lists of current and completed projects, and annual reports can be found at [www.ThurstonPUD.org](http://www.ThurstonPUD.org).

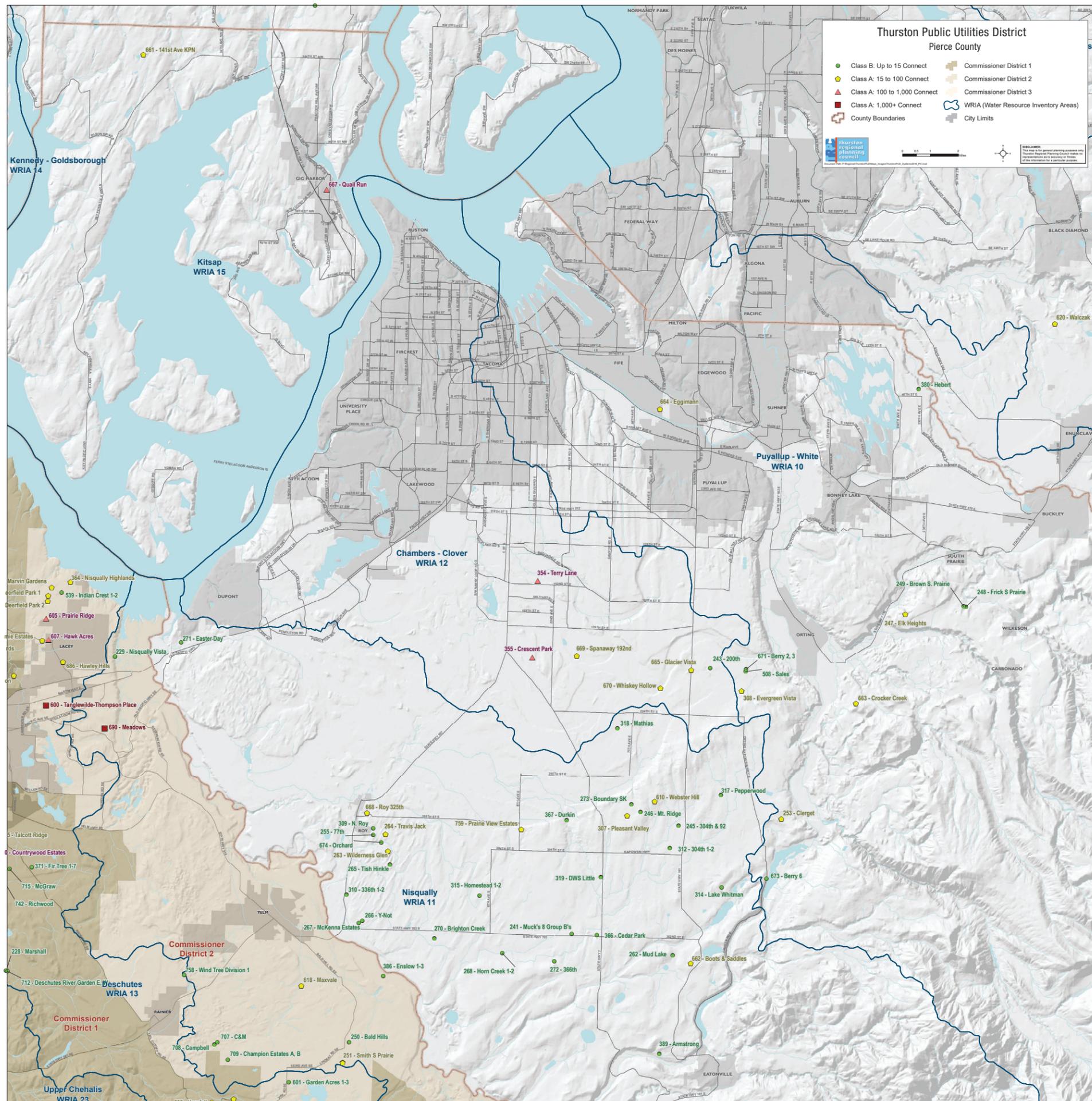
Figure 1.2



### **1.3 Geography**

Thurston PUD’s 275 water systems are spread throughout 6 counties. Each water system has its own approved service area. Refer to **Figure 1.3-Thurston**, **1.4-Pierce**, **1.5-Lewis**, **1.6-Grays Harbor**, **1.7-King** and **1.8-Kitsap** for the maps of the system locations throughout the Counties.





Name	#	WFI	Name	#	WFI
141st Ave KPN	661	24781T	Glacier Vista	665	07749I
200th	243	57616Q	Hansford Muck 1	259	00898F
304th & 92	245	55590E	Hansford Muck 2	260	00899O
304th 1	312	37970H	Hebert	380	07819C
304th 2	313	42271U	Homestead 1	315	04451K
336th 1	310	52701P	Homestead 2	316	05402V
336th 2	311	52714H	Horn Creek 1	268	37836E
366th	272	450811	Horn Creek 2	269	647979
77th	255	52743R	Lake Whitman	314	43122O
Armstrong	389	07476V	Mathias	318	02233P
Berry #2	671	45135X	McKenna Estates	267	42716H
Berry #3	672	55644B	Mt. Ridge	246	42251A
Berry #6	673	05729C	Mud Lake	262	46640A
Boots & Saddles	662	07730A	N. Roy	309	46391Q
Boundary SK	273	37571H	Orchard	674	AB016P
Brighton Creek	270	00747J	Pepperwood	317	056699
Brown S. Prairie	249	01506T	Pleasant Valley	307	380816
Cedar Park	366	04539A	Prairie View Estates	759	04793I
Christensen Muck 1	256	61751Y	Quail Run	667	70185O
Christensen Muck 2	257	00244B	Roy 325th	668	247218
Christensen Muck 3	258	00245V	Sales	508	07752N
Clerget	253	381712	Spanaway 192nd	669	155319
Crescent Park	355	16000D	Terry Lane	354	87622I
Crocker Creek	663	38261X	Tish Hinkle	265	61946J
Durkin	367	AB153C	Travis Jack	264	33924I
DWS Little	319	59704P	Trinity Muck 1	241	01122Q
Easter Day	271	42284M	Trinity Muck 2	242	01110E
Eggmann	664	22585F	Trinity Muck 3	261	01114H
Elk Heights	247	52614C	Webster Hill	610	598755
Evergreen Vista	308	31881R	Whiskey Hollow	670	206926
Forest Glen	762	017128	Wilderness Glen	263	31226I
Frick S Prairie	248	59526O	Y-Not	266	55670Z

FIGURE 1.4  
**Thurston PUD**  
 Water System Location Map  
 Pierce County

March 2020



**Thurston Public Utilities District  
Lewis County**

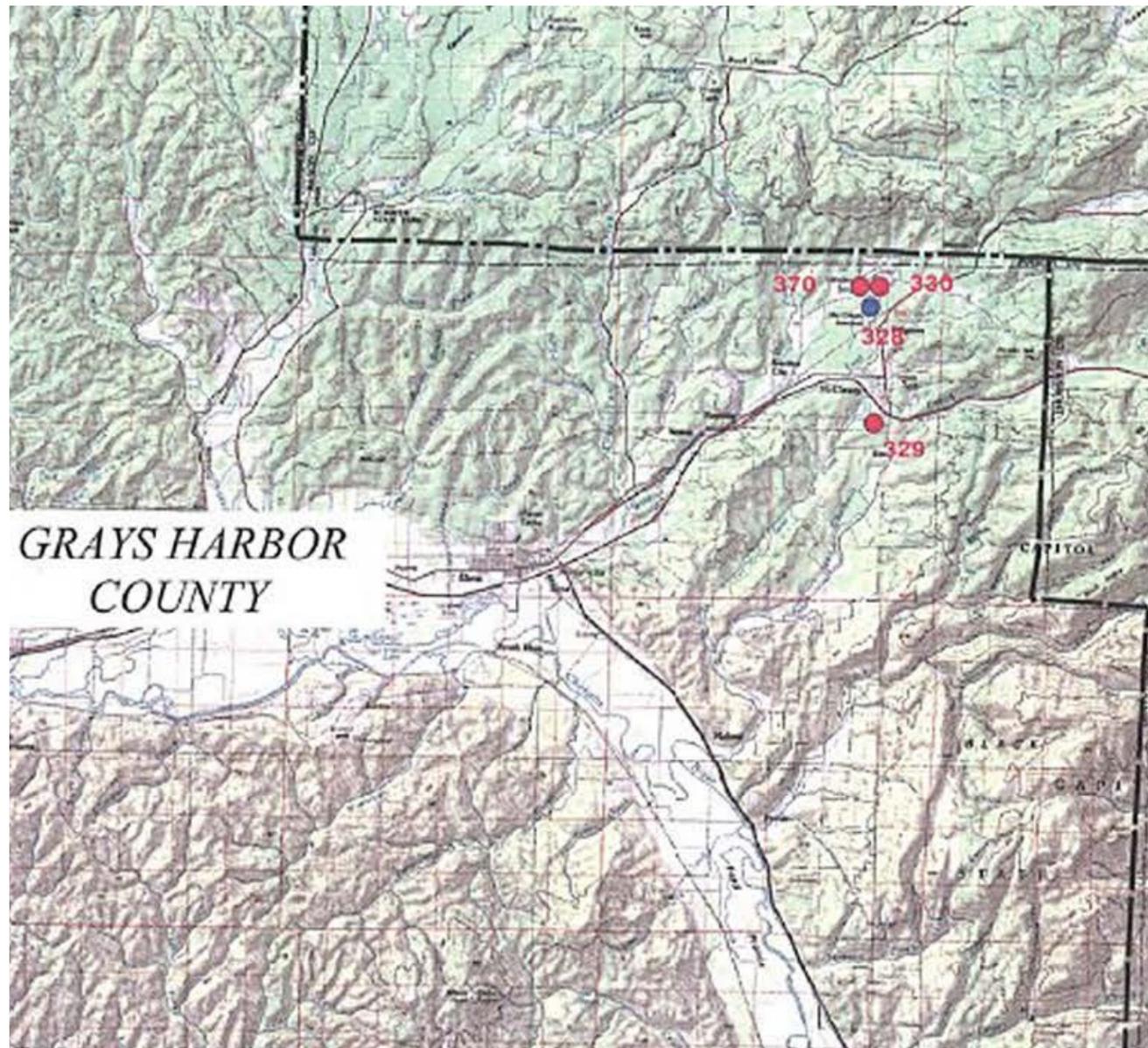
- Class B: Up to 15 Connect
- Class A: 15 to 100 Connect
- Class A: 100 to 1,000 Connect
- Class A: 1,000+ Connect
- County Boundaries
- Commissioner District 1
- Commissioner District 2
- Commissioner District 3
- WRIA (Water Resource Inventory Areas)
- City Limits

Thurston Regional Planning Council  
0 0.5 1 2 Miles  
DISCLAIMER: This map is for general planning purposes only. Thurston Regional Planning Council makes no representation as to accuracy or fitness of the information for a particular purpose.

Name	#	WFI	Name	#	WFI	Name	#	WFI	Name	#	WFI	Name	#	WFI
2533	201	04217C	Brookhaven 2	288	078263	Granite #1	274	05696H	Johnson	359	06348X	ROM	626	719307
4199-A	202	03246K	Brookhaven 3	289	07921M	Granite #2	275	06212X	Maple	502	077177	Rommerman Rd	286	02567X
4199-B	203	06590B	Cougar	504	077198	Harmon Rd	220	31315C	Margaret Meadows	633	07763E	Salkum	542	AA760F
4199-C	204	06591V	Cowlitz	541	AA759D	Hemlock	512	07722W	Mountain Lakeview	619	56376A	Sandra Avenue	627	54591W
4199-D	205	06592C	Crow	514	07723D	Hidden Meadows I	630	02294R	Post Lane	206	03856L	Sward	278	06046H
Antrim	378	06696K	Eagle	513	077578	Hidden Meadows II	631	022959	Raubuck	282	060471	Taylor Cr #1	362	06346W
Aust	210	01222V	Eastridge 2	347	04570P	Hidden Meadows III	632	02296T	Raven	501	07716P	Taylor Cr #2	363	06391L
Bear	503	07718Q	Eastridge 3	348	06345C	Hunter 1	301	060537	Red Cloud 2	276	057321	Timberline Village	628	88388B
Brockway #1	208	050535	Eastridge W	344	04868Y	Hunter 2	302	06054Q	RES 1	283	06048J	Valley Meadows	240	909811
Brockway #2	209	AA6176	Foron	629	033498	Hunter 3	303	060558	RES 2	284	060492	Whitney	515	07888N
Brookhaven 1	287	078474	Fuller	379	069434	Hunter 4	304	06056R	RES 3	285	06052P			

**FIGURE 1.5**  
**Thurston PUD**  
**Water System Location Map**  
**Lewis County**

March 2020

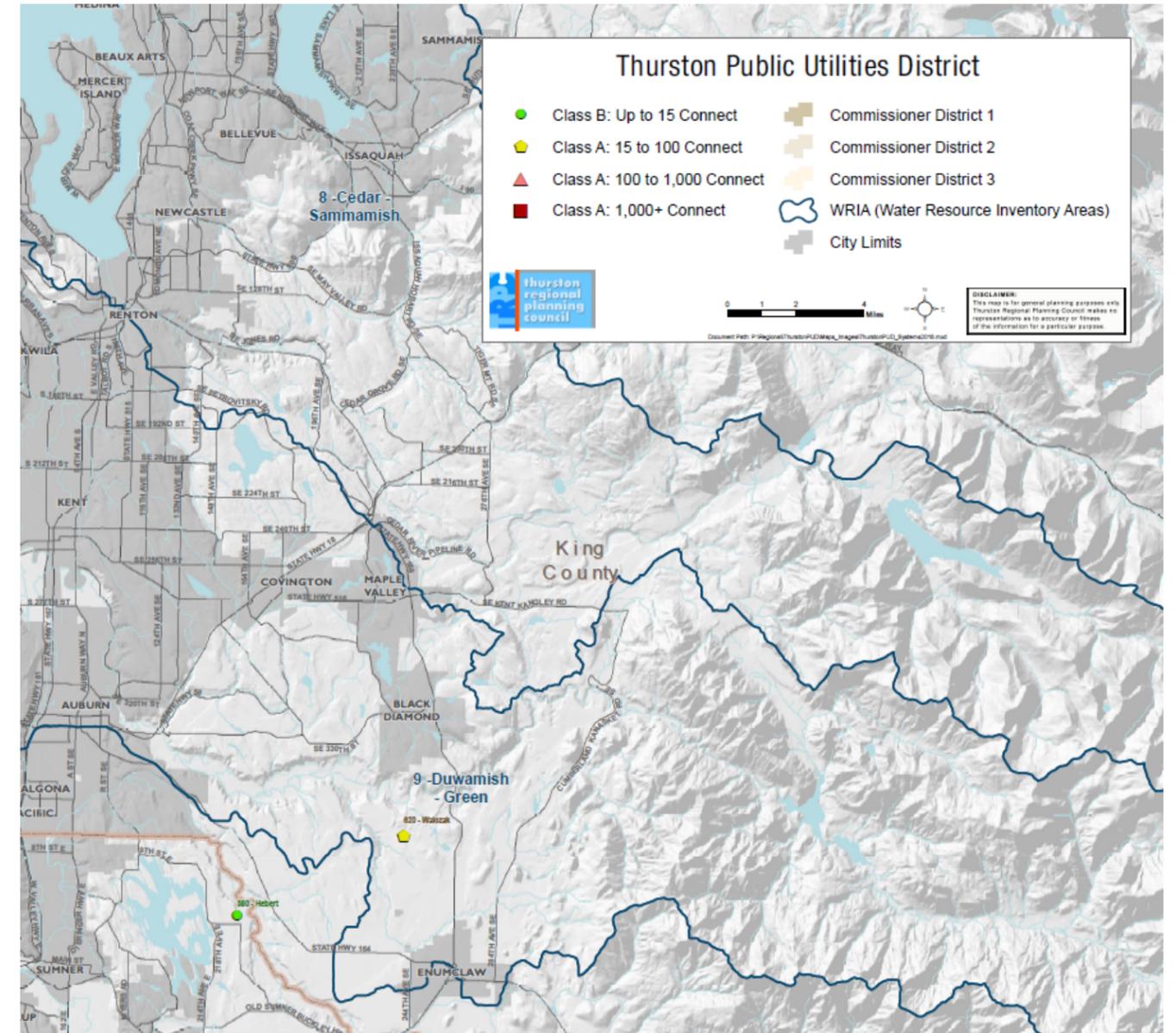


Name	#	WFI
Heslep	329	542016
Olin	330	031704
Pit	328	05956V
Sky Acres	370	10233L

FIGURE 1.6

**Thurston PUD**  
Water System Location Map  
Grays Harbor County

March 2020

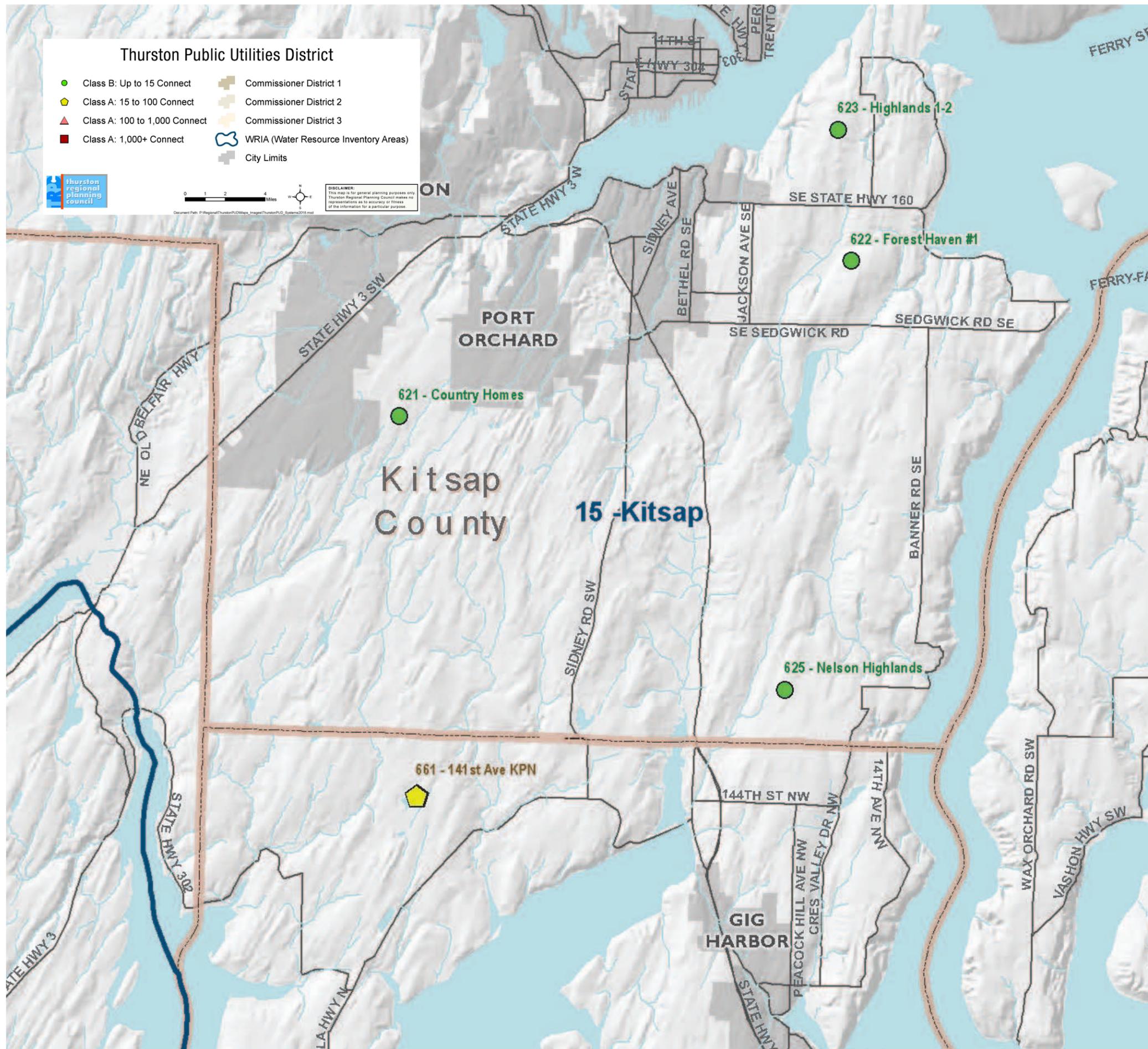


Name	#	WFI
Walczak	620	923503

FIGURE 1.7

**Thurston PUD**  
Water System Location Map  
King County

March 2020



Name	#	WFI
Country Homes	621	03720L
Forest Haven #1	622	06595X
Highlands 1	623	06624Q
Highlands 2	624	066258
Nelson Highlands	625	06626R

FIGURE 1.8

**Thurston PUD**  
Water System Location Map  
Kitsap County

March 2020

# Chapter 2

## Thurston PUD Policies

### 2.1 Utility Policies

Thurston PUD's water policies are contained in the District's Policies and Procedures Manual for Administration of Water Services included in **Appendix A**. Section 2 of this appendix contains Thurston PUD policies relating to general terms and conditions for water service, including the following:

- Initiating and terminating service
- Service and equipment requirements
- Meter reading, billing, payment, and collections
- Dispute resolution
- Rates, fees, and charges
- Violations
- Fire protection
- Special arrangements for short-term water usage

Section 3 of Appendix A contains Thurston PUD's extension policies, including:

- Administrative procedures
- Financing and fees
- Design requirements
- Construction procedures
- Interim connections

### 2.2 Conditions of Service

#### 2.2.1 Existing Connections

New customers are required to complete an Application of Service for water service, which can be found on the District's website. By receiving water service, the new customer agrees to abide with Thurston PUD terms and conditions.

#### 2.2.2 New Connections

Potential customers must request a connection by completing a Certification of Water Availability Application, which can be found on the District's website.

Once a potential customer submits the application and payment for the appropriate fees, the PUD will review its current connections summary, which lists the approved connections for the

individual water systems for any available connections within the approved retail service area. Then, the process, which can take up to 45 days, is as follows:

- If an approved connection is available for an individual water system within the service area, a letter is issued to the applicant with instructions on the conditions of receiving a new connection as well as a county-specific Certificate of Water Availability (COWA). COWAs will reserve the connection for a specific amount of time. All COWAs expire one year after issue date, except for Pierce County where COWAs expire three years after issue date. If a COWA expires and the connection has not been put to use, applicants must re-apply for a new certificate to continue to reserve the connection.
- If no approved connections are available, the service area, water system capacity, and water rights are reviewed to determine if the connection can be served. If it is determined that the system has adequate water rights and the connection is within the approved PUD's service area, or no specified service area, and the District is willing to serve the connection, the applicant will receive a letter explaining the steps to take to upgrade the water system, to serve the connection which may include making water system improvements and updating the Part B Water System Plan (in Group A water systems), to be able to serve the connection. A meeting may be needed.
- If no connections are available, and the District does not feel the service can or should be provided, the applicant will receive a letter stating no connection is available.

## **2.3 Service Areas**

Thurston PUD has approved retail service areas for each of its Group A water systems. Group B water systems are limited in the number of connections they can serve. The approved service areas for Group A water systems can be found in each individual Part B water system plan. Thurston PUD's water rights for municipal supply purposes include a place of use corresponding with the respective system water service area or water right place of use, as applicable, and in reliance on those water rights identified in Table 1-3, which can also be found in each individual Part B water system plan, as applicable. Thurston PUD will not normally provide service outside its service areas, unless on a temporary basis and in agreement with the primary purveyor for that service area, and upon obtaining approval from the state or local Department of Health. Since Thurston PUD is considered a municipal water supplier, as defined in RCW 90.03.015, it has a duty to provide retail water service within its retail service area. The four threshold factors that require Thurston PUD to provide service are as follows:

1. Thurston PUD has sufficient capacity to serve water in a safe and reliable manner.
2. The service request is consistent with adopted local plans and development regulations.
3. Thurston PUD has sufficient water rights to provide service.
4. Thurston PUD can provide service in a timely and reasonable manner.

## 2.4 Expansion of Existing System

The conditions of service for expansion within Thurston PUD's service areas are required to be in accordance with the Extension Agreement included in **Appendix B**. Thurston PUD will consider modifying the exterior boundaries of their service areas to accommodate growth; however, this will be done on a case-by-case basis and may require an amendment to the individual Part B water system plan.

## 2.5 Related Plans

The related plans reviewed for this water system include the following:

- PUD #1 of Thurston County – Part A Umbrella (2013)
- 2003 Municipal Water Law
- Thurston County Comprehensive Plan
- Thurston County Coordinated Water System Plan
- Pierce County Comprehensive Plan
- Pierce County Coordinated Water System Plan
- Washington State Growth Act
- East King County Coordinating Water System Plan
- Lewis County Code 8.55 Group B Public Water Systems
- Thurston County Article III
- Kitsap Drinking Water Supply Regulations Ordinance, 2018-01
- Tacoma-Pierce County Environmental Health Code, Chapter 3
- Grays Harbor Group B Ordinance 2017-001

The 2003 Municipal Water Law requires that water system plans be consistent with local plans and regulations. The signed Consistency Statement Checklists are included in **Appendix C**.

A State Environmental Policy Act (SEPA) Checklist has been prepared for this WSP in accordance with WAC 197-11. A copy of the completed SEPA Checklist is included in **Appendix D**.

## 2.6 Franchise Agreements

In order to perform work within rights-of-way, Thurston PUD is required to have a current franchise agreement with the appropriate jurisdiction. Thurston PUD has franchise agreements with Thurston, Pierce and Lewis Counties included in **Appendix E**.

## 2.7 Intertie Agreements

Thurston PUD has four Intertie Agreements, included in **Appendix F**:

1. City of Olympia: Emergency source at the Tanglewilde–Thompson Place water system.
2. City of Lacey: Source at the Covington water system.
3. Spanaway Water: Emergency source at the Crescent Park water system.
4. Spanaway Water: Emergency source at the Terry Lane water system.

## **2.8 Acquisition of Water Systems**

Subject to financial and operational capabilities, and approval by the Thurston PUD Board of Commissioners, the District is willing to consider water system acquisitions at any time. Although new water systems must come into Thurston PUD “whole” and “up to standard,” Thurston PUD may try to find funding for major upgrades that may need to be completed in order to make the system “whole” and/or to bring it “up to standard.” If this is the case, the water systems customers will be responsible for the cost of the improvements to their water system, prior to becoming part of the PUD’s owned water systems.

Once Thurston PUD acquires a water system, the major upgrade(s) will be added to Thurston PUD’s Capital Improvement Plan.

Thurston PUD may submit loan requests and packages to the State of Washington Department of Health, Office of Drinking Water for Drinking Water State Revolving Fund loans (DWSRF) and/or Washington State Public Works loans. The District may also find other sources of funding. These loans and funding will be used for water system upgrades as part of a water system’s transition to PUD ownership and management.

## **2.9 Satellite Management**

Thurston PUD is not actively managing water systems owned by outside sources. Thurston PUD may consider managing these water systems on a case-by-case basis. Thurston PUD’s main goal is to own water systems.

## **2.10 Water Supply Analysis**

Thurston PUD relies on those certain water rights identified in Table 1-3 for municipal supply, and holds the same for existing customers, future growth or supply needs, standby/reserve, backup or emergency, and other reasonable future use supported by this water system plan, including all subparts. A Water Rights Self-Assessment Form (WRSF) is included in Appendix W. If existing water rights are not sufficient to meet full buildout demand, the District would seek to negotiate an interlocal agreement to secure additional water supply or seek additional water rights and coordinate the pace of development in the relevant area, as applicable.

## **Chapter 3**

# **Water Use Efficiency Program**

### **3.1 Objectives**

The objectives of this Water Use Efficiency Plan (WUE) are:

- Describe how Thurston PUD will meet the state requirements of the WUE rule.
- Outline the water use efficiency goal Thurston PUD has established.
- Describe the water use efficiency measures that Thurston PUD has chosen to implement to meet its goals.

Thurston PUD's water use efficiency program will be re-evaluated annually.

### **3.2 Water Use Efficiency Rule Background**

The Washington State Legislature passed the Water Use Efficiency Act of 1989 (RCW 43.20.230 Water Resource Planning), which directed the Department of Health (DOH) to develop procedures and guidelines relating to water use efficiency. In response to this mandate, the Department of Ecology (Ecology), the Washington Water Utilities Council, and DOH jointly published a document titled *Conservation Planning Requirements* (1994).

In 2003, the Municipal Water Supply – Efficiency Requirements Act (Municipal Water Law) was passed and added new requirements to RCW 70.119A Public Water Systems-Penalties and Compliance. It requires additional conservation measures and serves as the new standard for water efficiency for all public water systems, in particular municipal water suppliers. The Municipal Water Law, among other things, directed DOH to develop the Water Use Efficiency Rule (WUE Rule), which became effective January 22, 2007. The WUE Rule is outlined in WAC 246-290 Group A Public Water Supplies and the *Water Use Efficiency Guidebook* (DOH Publication #331-375, Revised 2017). These documents provide guidelines and requirements regarding the development and implementation of conservation and efficiency programs for public water systems and municipal water suppliers. Conservation and efficiency programs developed in compliance with these documents are required by DOH and Ecology as part of a public water system water right application. Conservation must be evaluated and implemented as an alternate source of supply before state agencies approve applications for new or expanded water rights.

The WUE Rule sets further requirements for public water systems. The *Water Use Efficiency Guidebook* replaces the 1994 *Conservation Planning Requirements* and is comprised of eight chapters:

1. Introduction to Water Use Efficiency Requirements
2. Water Meters
3. Data Collection
4. Demand Forecasting
5. Water Use Efficiency Program
6. Distribution System Leakage
7. Goal Setting and the Public Forum
8. Annual Performance Report

### 3.3 Water Use Efficiency Descriptions and Requirements

State water use efficiency rules apply only to Group A water systems. However, the District focuses on water use efficiency for both Group A and Group B water systems. The *Water Use Efficiency Guidebook* establishes varying implementation and evaluation requirements for municipal water suppliers (MWS). The new requirements focus on the importance of measuring water usage and evaluating the effectiveness of the WUE program. There are three fundamental elements to the rule, including planning, distribution leakage standards, and goal setting and performance reporting.

Table 3-1  
**Summary of WUE Requirements**

Requirement	Deadline for MWS under 1,000 connections
Begin collecting production and consumption data	January 1, 2008
Include WUE program in planning documents	January 22, 2008
Set WUE goals	July 1, 2010
Submit service meter installation schedule	July 1, 2009
Submit first annual performance report	July 1, 2010
Meet distribution system leakage standard (based on 3-year rolling average)	July 1, 2011, or 3 years after installing all service meters
Complete installation of all service meters (Group A Systems)	January 22, 2017

#### Water Meters

Metering all water production and consumption is critical for determining system-wide and individual water use efficiency. The rule sets deadlines for meter installation and data collection, which are shown in Table 3-2.

Table 3-2  
**Meter and Data Collection Deadlines**

<b>Requirement</b>	<b>Deadline for MWS under 1,000 connections</b>
Install production meter(s)	January 22, 2007
Begin collecting production and consumption data	January 1, 2008
Submit service meter installation schedule	July 1, 2009
Complete installation of all service and intertie meters	January 22, 2017

As Table 3-2 indicates, the WUE rule requires production meters on all existing and new water sources and requires consumption meters on all customer connections by 2017.

**Data Collection**

The WUE rule requires regular collection of production and consumption data. Data must be reported in Thurston PUD’s planning documents and in its annual performance report to DOH. Water use data will be used for the following:

- Calculating leakage
- Forecasting demand for future water needs
- Identifying areas for more efficient water use
- Evaluating the success of the WUE program
- Describing water supply characteristics
- Aiding in decision-making about water management

DOH recommended the collection of production and consumption data to begin by January 1, 2008 in order to have a year’s worth of data available in preparation for the first annual report, due July 1, 2009.

The WUE rule also sets requirements for collecting source and service data. Source meters must be read monthly and reported in monthly and annual totals. Service meter totals must be reported in annual amounts for each customer class, although it is recommended to read meters on a monthly or bi-monthly basis.

**Distribution System Leakage**

The WUE rule requires that water distribution systems have a rolling average leakage rate of less than 10 percent for three years of finished water production by July 1, 2011. Distribution system leakage is defined as the water lost from the distribution system and includes both apparent losses and real losses.

*Apparent losses* include things such as theft, meter inaccuracies, and data collection errors. *Real losses* are the physical losses from the distribution system and include such things as reservoir

overflows and leaky water mains. *Known* or *credibly estimated losses* can be excluded from the leakage calculations and may include uses such as construction, firefighting, and flushing.

*Distribution system leakage* for Thurston PUD equals the difference between the treated supply volume from each source and the volume measured at the customers' meters plus any credibly estimated authorized unmetered usage.

### **3.4 Water Use Efficiency Measures**

The WUE rule requires that water efficiency measures must be implemented or evaluated. WAC 246-290-810 Water Use Efficiency Program identifies the minimum number of water use efficiency measures that must be evaluated based on system size. As a total, Thurston PUD has under 9,999 connections, and therefore must evaluate or implement six supplementary water use efficiency measures in addition to the mandatory measures. The following sections describe the mandatory measures and the supplemental measures Thurston PUD will evaluate for implementation.

#### **Mandatory Measures:**

##### **Source and Service Metering**

Thurston PUD was fully metered until the purchase of the 139 water systems owned by H&R Waterworks Inc., in October of 2017. Since the acquisition, the District has metered Timberline Village and currently has seven Group A (66 connections) and 13 Group B (52 connections) water systems that remain unmetered. The District plans to fully meter the seven Group A systems by the end of 2020 and the 13 Group B systems by the end of 2021. Meter replacement is scheduled through the Asset Management Plan for a life cycle of 20 years. Other factors like accuracy rate, readability, new technology and budget will be considered when the meter nears the end of its life cycle.

##### **Leak Detection and Water Accounting**

Thurston PUD prepares a monthly Distribution System Leakage (DSL) spreadsheet for all Group A water systems (K:\METERS\Consumption Reports\2020\MONTHLY DSL-GPDPC YTD 2020) that compares source to service meter and beneficial usage. The District currently has 33 water systems over the 10 percent leak loss requirement, but only 10 of those water systems have a water loss of over three gallons per minute. In the District's experience, distribution leaks of under three gallons per minute are difficult to detect on small water systems, resulting in the District prioritizing systems with over three gallons per minute. Thurston PUD performs leak detection, as needed, with ultrasonic leak detection equipment, listening devices, and audits.

DSL can be found in each Group A water system Part B water system plan and is provided at each sanitary survey. Most Thurston PUD water systems are under 500 connections which are allowed up to 20 percent DSL, but only if specifically requested and further evidence is submitted to the department including the following information:

- Production volume
- DSL volume
- A completed leak detection survey included in the most recent plan approval period for water systems plans and in the last 6 years for small water system management programs
- All leaks found have been repaired
- Unable to find more leaks in the water system
- Efforts to minimize leakage are part of the WUE program
- Justification of the technical, economical or water system characteristics for the higher level of leakage

The District will request the DSL allowance within the Part B or Small Water System Management Programs for all systems. There are currently 23 systems that have leak losses of less than three gallons per minute; all the steps listed above have been completed. For systems over the 10 percent DSL or over three gallons per minute, a Water Loss Control Action Plan will be provided and implemented, an example is included in **Appendix G**.

### **Customer Education**

Thurston PUD sends out seasonal water conservation tips to customers at least bi-annually within our monthly newsletter. Conservation is also included in our annual consumer confidence reports. Newsletters can be found online at <http://www.thurstonpud.org/pud-news-newsletters.htm>

### **Six Supplementary Measures Thurston PUD has Implemented:**

1. Participate in regional water planning efforts

Thurston PUD is an active member of the Regional Water Cooperative of Pierce County, <https://www.rwcpc1966.org/>. Currently, the District is also working with Pierce County Water Utility Coordinating Committee (WUCC) to update the Pierce County Coordinated Water System Plan. The District is also actively participating in Water Resource Inventory Area Groups 11-Nisqually, 13-Deschutes, 22-Lower Chehalis and 23-Upper Chehalis.

2. Host water conservation information/education on website

Thurston PUD maintains a conservation page on its website that includes information on the District's current incentive programs, drip irrigation, indoor conservation tips and links to other conservation pages. <http://www.thurstonpud.org/water-systems.htm>.

### 3. Implement conservation rate structures

Established early in its history, Thurston PUD implemented inclining block rates structure and believes it is one of the most powerful measures to incentivize customers to conserve water. Historically, the District acquired new systems with weak inclining block rates. Those weaker block rates encouraged high water consuming behavior by customers that resulted in these systems not meeting the current District's conservation goal of 250 gallons per day. Historically, consumption reduces and levels out within a three-year average. In 2020, the growing needs of the District's new customers influenced a revisit and change of the rate block structure. The fourth and newly-created fifth tier have larger usage ranges allowing more water usage accompanied by steeper rates. You can see our current rates on our website <http://www.thurstonpud.org/our-rates.htm>.

### 4. Provide bills showing consumption history

Thurston PUD bills include 12-month consumption histories on customer bills in the form of bar graphs. In 2020, bills included converted consumption numbers from cubic feet to gallons to help customers view their daily use in a more commonly understood measurement.

### 5. Incentive Programs

It has been determined that Thurston PUD's highest consumption comes from outdoor usage, prompting more incentive programs that target summer outdoor usage. In 2020, the District offers rebates toward upgrading outdated irrigation controls to Smart controls. The District continues to offer two programs from 2019:

- Landscaping/Irrigation Audits
- Cellular Smart meters

Historically, the District has also offered rebates toward toilet replacements and provided free showerhead and outdoor timers. Evaluations of each of the incentives will be discussed further in the plan.

### 6. Customer Leak Repair Incentives

Thurston PUD actively helps customers to become aware of customer-side leaks and provides incentive to repair them quickly. If a meter reader observes high usage on the meter, a door hanger will be left on the customers front door notifying them of a potential leak. The customer can then call PUD Customer Service to assist them in determining if they have a leak. Our Customer Service Representatives also review and audit all monthly consumption. If suspiciously high usage is found, an informational letter on how to locate leaks on the customer side of the connection is provided to the customer. If a leak is found and fixed within 10 days, the District will provide some relief for some of the water consumption. This policy can be found in the District's Policy and Procedures Manual, 2.4.6 Adjustments.

Thurston PUD annually reviews and evaluates the WUE program. The District poses the following questions to determine a program's effectiveness:

- Was our incentive a success, and did it meet our conservation goal?
- Did each of the water systems meet the WUE conservation goal?
- Leak loss per system?
- What are new measures we can implement and their cost effectiveness to customers and the District?

Staff submit results through reports to the Thurston PUD Board of Commissioners after July 1<sup>st</sup> of each year, example included in **Appendix H**.

### **3.5 Goal Setting and Performance Reporting Requirements**

Municipal water suppliers are required to set WUE goals through a public process and report their performance annually to their customers and DOH.

#### **Thurston PUD WUE Goal**

Thurston PUD's goal setting history, through a public process, has been:

#### **2009**

Following a public information meeting, the Thurston PUD Board of Commissioners approved the following WUE goal for the Tanglewilde water system on May 26, 2009:

Thurston PUD will reduce the amount of water use by three percent per Tanglewilde connection through teaching and encouraging conservation to our customers over the next six years.

#### **2010-2015**

On June 22, 2010, the Thurston PUD Board of Commissioners approved the following WUE goal for the remainder of its Group A water systems:

Thurston PUD will reduce seasonal summer daily demand by three percent on average for residential customers within the next six years.

### **2015-2021**

On May 26, 2015, the Thurston PUD Board of Commissioners approved the following WUE goal for all Group A water systems:

Reduce and/or maintain the average annual Equivalent Residential Unit (ERU) water usage for all accounts, per Group A system, to a value of 250 gallons per day (gpd) through 2021.

### **2021-2030**

On November 10, 2020, the Thurston PUD Board of Commissioners approved the following WUE goal for all Group A water systems:

New Goal – Reduce and/or maintain the average annual average demand per connection, per Group A system, to no more than 250 gallons per day (gpd).

All related WUE documents are included in **Appendix I**: Resolution 08-04, Resolution 09-26, Resolution 10-43, Resolution 15-16, Resolution 20-035 and public notices.

### **Thurston PUD Annual Reports**

The annual report provided to DOH by July 1 must include:

- Total system production and system wide consumption
- Distribution system leakage in percentage and volume
- Goal description, schedule, and progress toward meeting goals

Thurston PUD submits the annual WUE report on DOH's SENTRY database system, <https://fortress.wa.gov/doh/eh/portal/odw/si/Disclaimer.aspx?Page=FindWaterSystem.aspx>, before July 1 every year and adds a copy of the report to the website at [http://www.thurstonpud.org/water-systems-ccr-2017\\_copy\(1\).htm](http://www.thurstonpud.org/water-systems-ccr-2017_copy(1).htm). Additionally, the District reports this information to each customer on the annual Consumer Confidence Reports (CCR), example included in **Appendix J**. The CCR provides each individual water system the current goal, total water produced and what the average household used for that water system.

## **3.6 Demand Forecast**

A water system demand forecast for a consecutive 10-year and 20-year period is a required element of all water system plans, including the incorporation of projected savings from the water system's WUE program into the demand forecast.

Thurston PUD includes water demand forecasts in each of its Part B elements, and in reliance on the District's current water right allocation as identified in Table 1-3, as applicable. As Part B elements are updated, the District will forecast demand both with and without savings obtained from the current WUE program.

Forecasting information will include:

- Population - current and future for the next 10 years
- Historic water use patterns
- Local land use plans
- Water rates and their impact on consumption
- Employment – economic development and employment trends
- Projected water use efficiency savings

Thurston PUD will use the applicable county comprehensive plan to forecast growth for the future in each service area.

### **3.7 Reclaimed Water**

Reclaimed water is municipal wastewater that has been treated to a level appropriate for certain non-potable applications, such as irrigation of landscaping, golf courses, play fields, and parks. The use of reclaimed water reduces stress imposed upon potable water systems, especially during peak usage times.

Due to the location and small size of the majority of the Districts systems, reclaimed water is not available or feasible for implementation in most cases. However, the District is considering the use of reclaimed water in the Tanglewilde system, the District’s largest system, and if it is available to the District. The Lacey Olympia Tumwater and Thurston County Clean Water Alliance has constructed a satellite reclaimed water production facility along Martin Way, just west of the Tanglewilde system. Reclaimed water transmission facilities convey the reclaimed water to wetlands and recharge basins located in the Hawks Prairie area. These pipelines are located near some the District’s irrigation customers, including the Nisqually Middle School and Bucknell Park. The District plans to further explore the opportunity to use reclaimed water generated by LOTT for these types of purposes. More detail regarding this potential use of reclaimed water is discussed in the Part B WSP element for the Tanglewilde system.

### **3.8 History of Thurston PUD WUE Program**

In 2015, the District had 28 Group A water systems with all meeting the approved goal. The average temperature for the year was 53 degrees and the rainfall at the Olympia Airport was 57.51”. For DSL, 19 of the 28-water systems had a three-year running average over 10 percent with five systems over three gallons per minute. Of those five, two had major leaks that were repaired (2015). The District offered \$50 toilet rebates as the customer conservation incentive which were estimated to save 16,790 gallons per year per replacement. Seventeen rebates were requested by customers with a total savings of 285,430 gallons of water.

In 2016, the District had 32 Group A water systems and only one, newly acquired system, did not meet the current goal. The average temperature was 52 degrees and the rainfall at the Olympia Airport was 56.93”. For DSL, 19 of the 32 water systems had a three-year running average over

10 percent with five systems over three gallons per minute and of those five, two had major leaks repaired. The District incentive was \$50 toilet rebates which were estimated to save 16,790 gallons per year per replacement. Seven rebates were requested by customers with a total savings of 117,530 gallons of water.

In 2017, the District acquired H&R water systems in October and added 48 Group A systems increasing the District's number to 80 Group A water systems. These new systems were not on the District's conservation rates and 16 of the 48 did not meet the District's goal. Two "Legacy" systems (systems already owned by the PUD) did not meet the current goal. The average temperature was 51 degrees and the rainfall at the Olympia Airport was 61.49". For DSL, 31 of the 80 water systems had a three-year running average over 10 percent with six systems over three gallons per minute. The District's conservation incentive was free garden timers which were estimated to save 100 gallons per day of outdoor usage. One hundred-twenty-six garden timers were distributed, but the results were inconclusive to the savings. The District learned that the program needed more set points to determine if we met the goal.

In 2018, the District had 74 Group A water systems with 16 that did not meet the current goal. The system with the highest gallons per day was Talcott Ridge averaging 473 gallons per day. The average temperature was 51 degrees and the rainfall at the Olympia Airport was very low at 45.32". For DSL, 25 of the 74 water systems had a three-year running average over 10 percent with seven systems over three gallons per minute. The District incentive was free garden timers which were estimated to save 100 gallons per day of outdoor usage. Fifty-three garden timers were distributed, but the savings totals were inconclusive. The District learned that the program needed more set points to determine if we met the goal.

In 2019 the District had 74 Group A water systems and 11 did not meet the current goal. The average temperature was 50 degrees and the rainfall at the Olympia Airport was 37.08". For DSL 29 of the 74 water systems had a three-year running average over 10 percent with 7 systems over three gallons per minute. It was determined that educating customers on their outdoor usage and irrigation systems would benefit the customers and the water systems. The District offered irrigation audits, reviewing the customer's equipment and water patterns, and smart (cellular) meters that allow customers the option of reviewing their consumption in real time along with setting up leak alerts through a web portal or smart phone app. 10 irrigation audits were conducted and 10 smart meters were installed. The District's overall average usage lowered by 1.5% of all Group A customers.

The District will continue to emphasize water use efficiency and conservation. The District sent letters out in 2019 and 2020 to all customers that used over 6,000 gallons of water in the month of August of the previous year asking them to conserve water.

## Chapter 4

# Asset Management Plan

### 4.1 Asset Management Plan

Thurston PUD has developed an *Asset Management Plan* (AMP) for all its water systems. The District’s intention in developing the asset management program was to make capital and *operations and maintenance* (O&M) decisions based on knowledge of an asset’s useful life, current condition, probability and consequence of failure, customer service level expectations and full life cycle costs. See example in **Appendix K**.

The AMP is a “living document” that changes as assets are replaced and at least bi-annually all cost replacements numbers are reviewed.

In developing the AMP, a listing of all assets owned by the system, known as an *asset inventory*, was completed. Thurston PUD’s asset inventory includes a year-built date for all assets. Based on year-built data and accounting depreciation “useful life” standards, the District is able to estimate when an asset needs to be replaced, and an estimated cost for replacement, with a 3% inflation rate per year.

The District conducts assessments of each asset to determine its current condition. The District expects any additional analysis it conducts to lengthen the service life of the majority of its assets beyond current useful life assumptions. Additional analysis will also provide data that helps the District develop an O&M program aimed at lengthening the service life of assets where such efforts are advantageous based upon full life cycle costs.

Where such efforts are not advantageous, an asset could instead be allowed to “run to failure.” Below is a list of factors the District considers when deciding to allow an asset run to failure:

- Group A water systems with redundancies
- Asset is considered “off the shelf” item and is commonly available; not a specialty item
- Asset can be accessed 24/7 - 365 days per year
- Asset can be replaced within an 8-hour period of time

In 2013, Thurston PUD conducted a cost of service rate study using outside consulting services in order to evaluate how best to meet future capital funding requirements as contained in the Asset Management Plan. The District then reached out to customers to better understand their level of service expectations and willingness to pay. In 2015, the District implemented a monthly Capital Improvement Surcharge to help pay for the replacement of assets.

## **4.2 Capital Improvement Plans**

Thurston PUD uses the AMP to help develop the annual budget and Capital Improvement Plan (CIP) for the District as a whole. (See Capital Improvement Budget in **Appendix L**) Since the District takes most of its assets to failure, it is hard to predict which assets will be replaced per year, so past actual costs are also used for planning the annual budget. Notably, the PUD has discovered that assets originally installed in the 1970's, are functioning for about double the life cycle than assets replaced in the 1990's.

For individual systems, CIPs are developed using the AMP that include projects to maintain and protect public health for a 10- and 20-year period. These individual plans are found in the Part B WSP. For each CIP item, a project cost is developed, which includes construction costs plus allowances for sales tax, design fees, and administrative costs.

# Chapter 5 Operations and Maintenance Program

## 5.1 Water System Management

The Director of Field Operations (DFO) is responsible for the daily Field Operations, including maintenance, emergencies, replacement of aging infrastructure, water quality and meter reading. The field staff are able to perform all tasks required to operate water systems, but most have specific daily tasks, including water quality and testing, treatment operations and maintenance, landscaping and building maintenance, leak detection and repair, system maintenance and repair, meter reading, and project management.

The Director of Planning and Compliance (DPC) is responsible for the administrative, planning, and support for Field Operations, and ensures that all technical and regulatory requirements are met for all the District’s water systems. This team is supported by Operation Specialists and an Administrative Assistant that work with the field staff to maintain programs like the cross-connection control, annual compliance testing, fire hydrant maintenance, maintaining records, and preparing compliance documents like Water Use Efficiency and Consumer Confidence Reports.

In Chapter 1, Figure 1.1 (K:/Personnel/Org Charts) provides an overview of the structure of the utility and the organization chart of management.

## 5.2 Staff Certifications

Field staff certifications and licenses, as of May 2020, are shown in Table 5-1.

<b>Name</b>	<b>Years’ Experience</b>	<b>Position</b>	<b>Certification Level</b>	<b>Certification #</b>
James Campbell	17	Director Field Operations	WDM2, CCS, WTPO1, L&I Electrician, Plumber	10679
Kim Gubbe	23	Director Planning & Compliance	WDM2, CCS, WTPO2	7314
Dan Lovell	16	Project Management Specialist I	WDM3, CCS, WTPO1 L&I Electrician, Plumber	10852
Richard Sanchez	16	Field Technician II	L&I Electrician, Plumber	---
Robert (Kirk) Gietz	13	Field Technician II	WDM1	11586
Jason Choate	12	Field Technician II	WDM1, CCS, BAT L&I Electrician, Plumber	11839 B5051
Jacob Boogerd	8	Field Technician II	WDM1 Electrician, Plumber Trainee	13853
Justin Kadoun	4	Field Technician I	WDM1	14725

Joseph Greene	4	Field Technician I	WDM1	14721
Anthony Dahmen	4	Field Technician I	WDM1	14803
Derek Genre	24	Field Technician I	WDM1	14805
Richard Holmes	3	Meter Reader II	WDM1	14342

Notes: WDM = Water Distribution Manager, CCS = Cross Connection Control Specialist, WTPO = Water Treatment Plant Operator

Pursuant to DOH regulations, the District must have, at a minimum, one Water Distribution Manager 2 (WDM2) and Water Treatment Plant Operator 1 (WTPO1) on staff at all times. In the event of non-compliance, DOH will be notified as soon as possible and the District will either immediately hire an operator with the proper certificates, or contract with an approved SMA to establish compliance.

### 5.3 O&M Service Areas

The District’s 275 systems are split into three O&M service areas: North, South, and Central. Each route is assigned to a Field Technician I. If the assigned technician cannot complete the route, other field staff members will assist at the discretion of the Director of Field Operations.

### 5.4 Routine and Preventative Maintenance Activities

The routine and preventative maintenance activities include, but are not limited to, the following tasks:

- Treatment of source water, disinfection, and water quality monitoring;
- Regular pump house checks to visually inspect water system facilities and provide security checks;
- Preventative maintenance of the wells, reservoirs, booster stations, pressure reducing valves, and treatment equipment;
- Preventative maintenance of the distribution system, including the flushing, valve and hydrant program;
- Routine maintenance of the distribution system and facilities, including repairs and replacements;
- Distribution system leak detection;
- Emergency work, including main breaks, customer complaints, and facility failures;
- Construction management and inspection support on water system projects;
- Water production reporting; and
- Utility locates.

#### 5.4.1 Routine Maintenance Schedules

The District has established routine operations and maintenance procedures and schedules. Table 5-2 provides a summary of these activities. **Appendix M** contains the Group A and B routine maintenance checklist templates. Also enclosed in the appendix are pump house

and storage checklists, which are specific items, listed in Table 5-2, scheduled for completion on a routine basis.

<b>Table 5-2</b>	
<b>Thurston PUD Routine Maintenance Schedules</b>	
<b>Group A Systems</b>	<b>Group B Systems</b>
<i>Weekly</i>	<i>Weekly</i>
Treatment system checked	Treatment system checked
<i>Monthly</i>	<i>Monthly</i>
Check system pressure	Read source meter
Check for leaks	Read service meters
Booster pump check (noise, overheating, etc.)	
Well pump check (noise)	<i>Quarterly</i>
Bladder tanks checked for air/water ratio	Check system pressure gauges
Hydropneumatic tanks for air/water ratio	Check for leaks
Read source meter	Booster pump check (noise, overheating, etc.)
Read service meters	Well pump check (noise)
Air compressor – drain water	Bladder tanks checked for air/water ratio
	Hydropneumatic tanks for air/water ratio
<i>Quarterly</i>	Pumphouse checklist – complete
Flushing as needed	Flushing as needed
Check production of well	Check production of well
Check pressure switch on/off	Check pressure switch on/off
<i>Annually</i>	<i>Annually</i>
Pumphouse checklist – complete	Check electrical draw of well pump
Check electrical draw of well pump	Check air in pressure tanks
Check air in pressure tanks	Exercise distribution valves
Exercise distribution valves	Hydrant flushing & repairs
Exercise pumphouse valves	Exercise pumphouse valves
Storage checklist – complete	Storage checklist – complete
Hydrant flushing & repairs as needed	Check air compressor filter, oil & belt
Check air compressor filter, oil & belt	Production of well
Maintenance on chlorine pumps	Maintenance on chlorine pumps
<i>Every Five to Seven Years, or as needed</i>	<i>Every Three to Five Years, or as needed</i>
Reservoir inspecting and cleaning	Reservoir inspecting and cleaning

### 5.4.2 Operation and Maintenance Procedures

Detailed Operation and Maintenance Procedures can be found in **Appendix N**:

- Chlorination O&M Procedures
- Ultraviolet (UV) O&M Procedures
- Corrosion Control O&M Procedures
- Bag Filters O&M Procedures

- Iron and Manganese Treatment
- Flushing O&M Procedures
- Hydrant O&M Procedures
- Distribution Valve O&M Procedures
- Service Requests

## **5.5 Water Quality Sampling**

Water quality sampling and testing is conducted in accordance with DOH or local health department requirements. Department of Health’s Water Quality Monitoring Schedule is used annually to determine what sampling is required for each year. Monitoring plans have been created for each system for coliform, lead and copper and disinfection by-products. Examples are included in **Appendix O**. The individual monitoring plans are included in Part B water system plans.

If any water quality testing exceeds the standards set forth in WAC 246-290-310, the DOH will be notified immediately. The District will contact the appropriate DOH regional office for Group A systems or the appropriate county authority for Group B systems. Response plans for each agency can be found in the Emergency Response Plan in **Appendix P**.

When Level 1 or 2 Assessments are required, the DFO will be responsible for completing the assessments and submitting to appropriate DOH office by the 30-day deadline. The DFO will also be responsible for all corrective action to be completed by approved deadlines.

## **5.6 Emergency Response Plan**

The District’s Emergency Response Plan (ERP) is provided in its entirety as **Appendix P**. The ERP contains emergency contact lists, a priority service customer list, DOH and public notification procedures, response procedures tailored to various emergency situations, and contingency plans.

When an emergency occurs, the General Manager will determine the best staff member to be lead and manage the situation, called an incident commander. The incident commander will build a team to manage the event. The General Manager will always be the Commander, but the District has found that each emergency can require a different level of experience to manage the event. In the past, the Director of Planning and Compliance has taken lead on E.coli events and currently the Administrative Services Manager is the lead for the emergency and disaster planning and response including pandemic crises.

## **5.7 Water Shortage Response Plan**

In addition to the continual water use efficiency strategies listed above, the District has a Water Shortage Response Plan that addresses water use efficiency and curtailment in the event of a water supply shortage. The Water Shortage Response Plan strategies are intended to be used only for the duration of the water shortage event.

The Water Shortage Response Plan addresses water use efficiency strategies and curtailment measures to be implemented at various stages based on the severity of water supply shortage. The plan also states that the District will be responsible for identifying the trigger point for implementation of each stage. The following four stages are identified in the Water Shortage Response Plan, which is included in **Appendix Q**.

- Stage 1, Voluntary Water Use Efficiency – This includes public outreach activities and program promotion to encourage voluntary water use efficiency by the consumer.
- Stage 2, Outdoor Restrictions – This stage includes various strategies to reduce outdoor water use, such as encouraging water efficient devices and compliance with alternating days for outdoor watering.
- Stage 3, Mandatory Outdoor Restrictions and Indoor Water Use Efficiency – This stage includes prohibiting outdoor use with consequences for violators. Consumers are also asked to reduce indoor water use.
- Stage 4, Water Rationing – This stage is intended to ration a limited supply of water so as to serve only essential uses.

## **5.8 Cross Connection Control Program**

The purpose of a Cross Connection Control Program (CCCP) is to protect a public water system from contamination due to existing or potential cross connections. The District has developed and implemented a comprehensive CCCP that establishes cross connection control policies, program guidelines, and requirements for installation, testing, and maintenance of approved backflow prevention assemblies. The CCCP is provided in **Appendix R**.

The District’s CCCP has been developed according to WAC 246-290-490 Cross Connection Control of the Group A Drinking Water Regulations. The District’s CCCP objectives are to:

- Reasonably reduce the risk of contamination of the public water distribution system; and
- Reasonably reduce the District's exposure to legal liability arising from the backflow of any contaminant originating from the customer's plumbing system and then supplied to other customers.

To meet these objectives, the program addresses the following minimum required elements:

- Establishment of legal authority and program policies;
- Evaluation of premises for cross-connection hazards;
- Elimination and/or control of cross connections;
- Provision of qualified personnel;
- Inspection and testing of backflow preventers;

- Quality control of testing process;
- Response to backflow incidents;
- Public education for consumers;
- Record keeping for CCCP; and
- Special requirements for reclaimed water use.

In addition, the District’s CCCP addresses:

- Coordination with the Local Administrative Authority (LAA), i.e., the local building or plumbing official regarding CCCP activities; and
- Prohibition of the return of used water into the public water system distribution system.

## **5.9 Record Keeping and Reporting**

### **5.9.1 Record Keeping**

Thurston PUD maintains, at a minimum, the following records in digital or hard copy format for the specified time period in accordance with:

- 40 Code of Federal Regulations (CFR)141.33 – Record Maintenance
- WAC 246-290-480 – Recordkeeping and Reporting
- WAC 246-290-485 – Recordkeeping and Reporting for Groundwater Systems
- Secretary of State (SOS) Utility Services Records Retention Schedule

Certain records have multiple retention schedules based on which source of information is being referenced. In these instances, Thurston PUD adopts the longer of the retention schedules. In addition, the Disposition Authority Number (DAN) needed to identify SOS destruction protocol is listed where applicable. Types of records are listed in **Appendix S**.

### **5.9.2 Reporting**

Thurston PUD notifies customers and appropriate agencies in accordance with federal, state and local requirements including, but not limited to, the following:

- 40 CFR Subpart D – Reporting and Recordkeeping
- 40 CFR Subpart Q – Public Notification of Drinking Water Violations
- WAC 246-290-480 – Recordkeeping and Reporting
- WAC 246-290-485 – Recordkeeping and Reporting for Groundwater Systems
- WAC 246-290-490 – Cross-Connection Control
- WAC 246-290-840 – Water Use Efficiency Performance Reports
- WAC 246-290 Part 7 – Reporting
- WAC 246-291-360 – Public Notification for Group B Systems

Types of reports and the allowable time to submit are listed in **Appendix S**.

## **5.10 Customer Complaint Response Procedures**

The following procedures are taken when the District receives a complaint from a customer:

- Customer calls into the office and a representative takes the complaint over the phone or in person. After-hours emergency calls are routed to a third-party call center, that is then relayed to the District's 24/7 on-call staff.
- Complaints are entered as service requests and emailed to the PUD Field Technician group, escalated to the Customer Service Manager as needed, or routed to the appropriate department manager.
- If the complaint is related to a physical issue within the water system, the Director of Field Operations ensures the complaint is directed to the appropriate field staff based on importance and personnel available in the location of the problem. Almost all other complaints are related to billing and handled over the phone or in person. Billing related complaints are documented in the customer's account without the need of a service order. All other complaints are routed to the appropriate department manager or to the General Manager.
- When service requests are completed, the Field Technician's notes are emailed to the Customer Service Department and are entered into Springbrook (the District's customer database and billing software). After the notes are entered, Customer Service closes the service order.
- The email containing the Field Technician's notes is stored within the *Service Request- E-mailed* subfolder in the PUDCustomerService inbox. In addition, the notes are retained within Springbrook which is backed up by Thurston County's IT Department.
- The type and number of complaints are reported quarterly to the Board of Commissioners.

## **5.11 Design Standards and Construction Specifications**

The District's design standards and construction specifications (subject to modification and update by the District as necessary) are included in the Policies and Procedures Manual (see **Appendix A**). These standards apply to rural water systems located outside of urban growth area (UGA) boundaries.

For new systems located within a UGA boundary, the District will coordinate with the appropriate local jurisdiction for system design standards. For existing systems within a UGA boundary, the District will also coordinate with the appropriate jurisdiction for system design standards relating to any facility replacement or upgrades. For water systems located in Pierce County, Pierce County Coordinated Water System Plan regulations must be followed, including Pierce County Chapter 17C.60.165 (fire flow) and Chapter 19D.130 (design standards).

## **5.12 Contract O&M Services**

The District is capable of providing contract O&M services. A model contract for such services is provided as **Appendix T**. As of May 2020, the District is not providing these services unless the owner of the water system is looking to be acquired by the District.

# Chapter 6

## Financial Program

### 6.1 Introduction

The effective implementation of a WSP is dependent upon accurately developing a document that can be financially supported by the utility, will meet State and local regulatory requirements, and provides the flexibility to deal with unforeseen changes.

This section presents a financial plan that reviews the sources of funds (revenues) and applications of funds (expenses) for the District. The financial plan includes projected operating and capital costs of the system for the ten-year time horizon of 2020-2029. The revenues and expenses used in the financial plan were obtained from the District's 2020 budget in conjunction with historical consumption information. The capital costs contained within the financial plan are based on 2019 and projected 2020-2029 costs detailed in Appendix K and L.

### 6.2 Past Financial History

As discussed in Section 1.2, the District was created in 1938, and for a long period of time owned only one water system (Tanglewilde-Thompson Place in Thurston County). Since 2005, the District has acquired multiple water systems in western Washington. Presently, the District owns 275 systems in six counties. The financial analysis presented in this WSP includes the District's financial history for the years 2017-2019, as well as the current operating budget for 2020.

### 6.3 Development of the Financial Plan (Revenue Requirement)

A financial plan is developed to determine the District's ability to meet its capital improvement and operating needs over the ten-year review period. In developing the financial plan, fund balance and reserve levels were also analyzed. The financial plan was developed to review the projected revenues and expenses of the water system for 2020 - 2029. The District's 2020 budget forecast was used as a base. Future years were escalated by applying factors for inflation and growth, as described below.

#### 6.3.1 Revenues

The first component of the financial plan is a review of the sources of funds of the water system. The different revenues received from operations are:

- Rate revenues – water sales to customers;
- Other revenues – ancillary fees;
- Interest Revenue –interest earnings on fund balance; and
- Tax Levy

Projections for future year revenues were developed by applying a projected growth rate of three percent to the 2020 budgeted rate revenue. The three percent growth level appeared to be appropriate when reviewing the water sales from 2017-2019. Other miscellaneous revenues, including investment interest, fees and other revenue, are projected to increase approximately three percent per year through 2029.

Rate revenues are projected to be \$6 million in 2020. The rate revenues of the District come from retail sales to the metered and irrigation customers. With growth applied at one percent per year, a general rate increase of three percent annually appears to be likely in 2021-2029, and with the growth rate continuing at one percent the total rate revenue is expected to reach \$8.8 million by 2029.

Other water revenue for 2019 totals \$673,427. The other revenue is comprised of surcharges for both capital improvements in the future and to pay loans incurred in the past for system upgrades. Surcharge revenue is expected to increase in both 2020 and 2021 and then holds steady for the remainder of the projected period.

Tax levy revenue for 2020 is expected at \$298,591. The tax levy is expected to increase at a rate of one percent annually, reaching \$326,565 by 2029.

The total revenue available to offset the operating and capital requirements of the water system total \$6.9 million in 2020 increasing to \$9.3 million by 2029.

### **6.3.2 Expenses**

The second part of the financial plan is a review of the applications of funds. In developing the financial forecast, four main cost components were reviewed:

- Operating Expenses
- Taxes
- Debt Service
- Capital Improvements Funded from Rates

The projection of operating expenses is based on the 2020 budget forecast. These expenses are then projected for future years by applying escalation factors dependent upon the type of expense being reviewed.

#### ***Operation and Maintenance Expenses***

Using the budget as a starting point, expenses were escalated by factors representing assumed inflationary rates to obtain projected costs. Escalation factors range from anticipated increases in salaries and benefits to employees expected to increase three percent annually. All other expenses for water system operations and administrative expenses are expected to increase by two percent per year.

O&M expenses are expected to increase from \$4.1 million in 2019 to \$6.3 million in 2020, excluding state utility taxes.

## ***Taxes***

The water system has tax obligations to the state in the form of excise taxes. The State Public Utility Tax is calculated as 5.029 percent of the water utility rate revenues. The District also incurs the cost of county operating permits on all of its water systems. These tax payments total \$344,391 in 2019 and increase to \$470,76 by 2029. Projected taxes for the period assume constant tax rates over time.

## ***Debt Service***

The debt service payment on the current outstanding debt ranges from \$1,014,733 in 2019 to a high of \$1,538,579 in 2022, before maturities gradually bring the debt service payment down to \$1,440,237 in 2029. The bulk of this payment, \$732,431-\$1,243,552 is for revenue bonds with a final maturity of December 2042. In addition, the District has existing Public Works Trust Fund (PWTF) and Drinking Water State Revolving Fund (DWSRF) payments ranging between \$298,372-\$201,525 per year through October 2039.

The District has applied for and received additional PWTF and DWSRF to fund capital projects on existing systems. As these projects are incomplete and the final cost of the projects are yet unknown, the loan repayments have not been factored into the financial projections provided. The District would need to obtain a bank loan or bond refinancing to fund any future acquisitions. It is anticipated that the revenue from newly acquired customers would pay the cost of any new loan.

Meeting debt service coverage requirements is an important financial indicator for well-managed utilities. Debt service coverage is a financial measurement of an entity's ability to repay debt. A *debt service coverage ratio* is a comparison of net income before debt service payments to the total debt service on revenue bonds. The District must meet a 1.25 coverage ratio test according to existing bond covenants. Typically, this does not include any PWTF loans or other short-term credit instruments. The District has been successful in meeting this covenanted debt ratio since 2010. It is anticipated that with the additional rates expected from the planned future rate adjustments, the District will continue to meet this debt coverage requirement. The District will remain watchful of this requirement during its financial evaluations.

## ***Capital Improvement Projects from Rates***

Capital improvement projects are related to the infrastructure of a utility. Chapter 4 provides a description of how the District develops its Capital Improvement Plan using the information gathered in its Asset Management Plan. An example of the Asset Management Plan is provided in **Appendix K** and a summary of the capital projects is provided in **Appendix L**.

As discussed in Chapter 4, the District has developed a Capital Improvement Surcharge to help pay for the replacement of assets. A cost of service study was conducted in 2014 and the surcharge implemented at a rate of \$1.00 per ERU in 2015, growing to \$9.35 per ERU in 2020. This surcharge has been placed into a reserve account and is used to fund capital

replacements for small projects, and to pay debt service on large replacement projects. In 2021 the Capital Improvement Surcharge is expected to be raised to \$10.00 per ERU and remain at that level through the planning period.

The District has reserve funding available in the form of unspent bond proceeds from the most recent 2020 bond issue, which has helped and continues to help fund planned and unanticipated new capital improvements. It is anticipated that the District will use this reserve funding through the planning period. Reserve funds are discussed later in this section.

### 6.3.3 External Sources of Funds for Capital Projects

The District may apply for grant and loan funds available to public entities for water system projects. Table 6-1 provides a summary of the contacts for various funding agencies. These sources rarely provide full funding of a construction project. The District would need to supplement any of these funds with matching funds to meet eligibility criteria and to ensure recommended capital improvement projects can occur.

<b>Table 6-1 Funding Agency Contacts</b>				
Program	Address	Phone	Fax	Internet
Centennial Clean Water Fund	Department of Ecology P.O. Box 47600 Olympia, WA 98504-7600	(360) 407-6510		<a href="http://www.ecy.wa.gov">www.ecy.wa.gov</a>
Drinking Water State Revolving Fund	Department of Health DWSRF PO Box 47822 Olympia, WA 98504-7822	(360) 236-3089	(360) 236-2252	<a href="http://www.doh.wa.gov">www.doh.wa.gov</a>
Public Works Trust Fund	Public Works Board P.O. Box 42525 Olympia, WA 98504-2525	(360) 725-4000		<a href="http://www.pwb.wa.gov">www.pwb.wa.gov</a>
Infrastructure Database (over 200 funding programs)	Infrastructure Assistance Coordinating Council (IACC)	(360) 725-3062		<a href="http://www.infracfunding.wa.gov">www.infracfunding.wa.gov</a>

A brief description of these funding sources is provided below.

#### ***Department of Ecology***

The Centennial Clean Water Fund (CCWF) is available to local governments and tribes for measures to prevent and control water pollution. Both grants and loans are available on a yearly funding cycle.

CCWF is the largest state grant program for water projects. It provides grants for planning, design, and construction of facilities and other activities related to water quality. The primary focus of the program is pollution prevention and funding projects with a quantifiable water quality benefit. Funds are available to protect a source of water supply, as well as funding of water conservation or water reuse projects, if they can be shown to

be the cost-effective alternative to solve a water quality problem. Funding from this program is not available to provide excess capital but must be used to meet existing residential needs. Funding can also not be used to provide a source of supply. Grants and loans from this program are also available for the wellhead protection activities.

Interest rates are 0.5 percent for loans up to five years while those over five years, but less than 20 years have a 1.5 percent rate. Grant funding of 50 to 75 percent of a project is available depending on the type of project.

Another source of Washington Department of Ecology (Ecology) grant funding provided by the Remedial Action Grant Program is normally used only to mitigate contamination events.

### ***Washington Department of Health***

The Safe Drinking Water Act (SDWA) appropriates funding for states to develop their Drinking Water State Revolving Fund (DWSRF) loan programs. Each state receives annual allocations in the form of a capitalization grant.

DWSRF loans are available to all community public water systems, and non-profit, non-community public water systems, except federally owned and State-owned systems. The loans may be used to address SDWA health standard violations, replace infrastructure for SDWA compliance, or consolidate supplies and acquire property if needed for SDWA compliance. DWSRF loans are highly competitive for each cycle and receiving funding from this program is not a sure thing.

The interest rates on DWSRF loans range from zero percent to 1.5 percent with a one percent loan fee on all loans. The interest rate is dependent on the economic situation of the area, and the loan term is 20 years. Economically disadvantaged or other eligible projects can obtain principal forgiveness of 30 to 50 percent.

### ***Public Works Board***

The Public Works Trust Fund loan program is set up by the Legislature to assist cities, towns, counties, or special districts with funding for different types of public works projects. The projects can include streets, roads, drainage systems, water systems, sanitary sewer systems, and broadband programs. The emphasis of allocating funds is for replacement and/or repair of existing systems. Funds are not allocated to install new water systems. Rather, funds are granted to rehabilitate or replace existing systems serving an existing population. The Public Works Trust Fund loans are highly competitive for each cycle and receiving funding from this program is not guaranteed.

The loans are issued at up to 2.55 percent interest rate for a maximum term of 20 years for applications requesting 95 percent project funding. The interest rate decreases to 0.5 percent when applicants provide at least 15 percent of the project funding. Debt service coverage is not imposed on the PWTF loan.

### ***Infrastructure Assistance Coordinating Council***

There are numerous other programs with funding available for various other aspects of water utility capital projects. The Infrastructure Assistance Coordinating Council (Council) provides resources and conferences on the available funding sources. This Council is comprised of state and local organizations whose function is to provide funding for infrastructure repair and development. The purpose of the Council is to assist local governments in coordinating funding efforts for infrastructure improvements. This is an important resource as the Council will be aware of any new funding opportunities that may arise.

While the above list of possible grant and loan opportunities for the District is not exhaustive, it does highlight the most probable outside funding sources, excluding revenue bonds, available to the District for its water capital improvement needs. Revenue bonds are another external source of funding for capital projects.

Internal funding sources available to offset capital costs include contributions received from new water connections and existing reserves. The District's contributions appear low. This may warrant reviewing the system development charges of the utility to ensure they are consistent with system planning criteria and are keeping pace with inflation.

## **6.4 Summary of the Financial Projections**

A detailed financial plan and analysis using the assumptions provided in Chapter 6.3 above, is provided in Appendix U.

It is important to note that the financial plan presented in Appendix U is predicated upon an assumed level of growth on the system (1.0 percent per year), and assumptions related to inflation. Should this growth increase, slow down, or not occur, the level of rate adjustment required will be affected. Likewise, if costs escalate faster or slower than indicated in this plan, the rate adjustments needed would also be affected.

## **6.5 Reserve Levels**

A key indicator of financial health and viability is a utility's reserve levels. Because a majority of the utility's revenue is consumption based, and therefore dependent upon optimal weather conditions, maintaining adequate reserve levels is important for stable fiscal management of the utility. A discussion of the utility's reserves is provided below.

Industry standards (American Waterworks Association – AWWA) recommend that utilities maintain working capital reserves at a level adequate to handle unexpected occurrences, including unexpected cash flow fluctuations. The Financial Policies of the District establish target reserve levels at a minimum of 60 days of operations and tax expense. For the District, that minimum balance would equate to approximately \$734,000 in 2019 and increasing to \$1,104,800 by 2029. The District begins 2020 with a balance of \$1,814,328 in working capital. Throughout the planning period this balance fluctuates, but always stays above the target level.

In evaluating the infrastructure of the District through its Asset Management Plan, described in Chapter 4 with an example in Appendix K, the District has identified critical assets that are at the end of their service life or are at risk of failure. The District has implemented a Capital Surcharge in 2015 to begin funding the replacement of infrastructure at failure or at the end of its service life. Capital Surcharge funds are held in a reserve account to be used for water system asset replacement or for the debt service on funds obtained for water system replacement. The balance of this Capital Surcharge reserve account is \$1,769,219 at the end of 2019 and is expected to increase to over \$3,000,000 in 2023.

The District also has a balance in the Project Fund, representing unspent bond proceeds that are available for use for new capital projects needed by the District. At the end of 2019, this reserve balance was approximately \$491,160. In early 2020 the District issued new bonds to raise \$5,250,000 in additional capital funding to be available for projects through the year 2024. Sound financial policies indicate that a fund balance equal to an average years' worth of capital projects is a healthy reserve amount or an amount equal to 1.25 of the District's depreciation. These funds are available should the assumed PWTF loans not be obtainable by the District to fund future capital projects.

The District maintains a revenue bond reserve, with a balance in 2019 of \$863,927. In 2020, with the additional bond financing, the bond reserve account grows to a balance of \$1,244,259. This reserve is set aside to make final debt service payments at the maturity date of the bonds issued. These funds can only be used as bonds are retired and the reserve is no longer required.

A summary of the projected reserve levels is provided in Appendix U.

The reserve review indicates that the District has adequate reserve funding to meet unanticipated obligations and general operating fluctuations given the District adjusts rates to meet the revenue requirement as developed in this analysis. All reserve target minimums stated in the Financial Policies are met. See the end of Appendix V (Financial Policies/Guidelines to Aid in Setting Rates) for more detail regarding District reserve policies.

## **6.6 Review of the Existing Water Rates**

There are various “generally accepted” water rate structures that can be used to establish or develop rates. The initial starting point in considering a rate structure is the relationship between fixed costs and variable costs. Fixed costs are generally collected as a fixed charge on a monthly basis (e.g. \$5.00 per month/meter). This charge may be called by various names (e.g. customer charge, meter charge, base charge, etc.) but in all cases, it is intended to collect those fixed costs that the utility incurs.

Currently, the District has both a meter charge for service and a consumption charge based on usage. The consumption rate is based on a five-tier block of usage. For purposes of this overview, the rates in effect as of January 2020 are presented in Appendix A.

The consumption charge uses a tiered rate structure. This type of rate structure is designed to send a price signal to customers that use of water in the high tiers will cost more. Occasionally the District will serve customers who are unmetered. For these customers, a flat rate is in place to charge the customers. Under the flat rate the customers pay the same charge regardless of usage. The District’s meter charge is based on the size of the customer’s meter. This approach is used often to identify that different meter sizes place different demands and capacity requirements on the system. It is common to base the meter charge rate differential on the American Water Works Association safe operating capacity of the meter. The meter capacity approach is summarized in Table 6-2.

<b>Meter Size</b>	<b>Safe Maximum Oper. Capacity GPM [1]</b>	<b>Capacity Meter Weights</b>	<b>Meter Charges at Capacity Weightings</b>
3/4”	30	1.00	\$12.00/month
1”	50	1.67	20.00
1-1/2”	100	3.33	40.00
2”	160	5.33	64.00
3”	300	10.00	120.00
4”	500	16.67	200.00
6”	1,000	33.33	400.00
8”	1,600	53.33	640.00
10”	2,300	76.67	920.00
12”	3,375	112.50	1,350.00

[1] AWWA C-700-77 Cold Water Meters - Displacement Type

As Table 6-3 indicates, the fixed meter or base charge increases in relationship to the safe operating capacity of the various meter sizes. Meter capacity is an important concept in that a customer that has a 2” meter is regarded, from a capacity perspective, as the equivalent of 5.33 -3/4” customers. Another way of saying this is the commercial customer with a 2” meter is, from a capacity perspective, the equivalent of five (5.33) single-family homes with 3/4” meters. Since a large portion of costs are generally related to meeting capacity requirements, one can see the importance of considering capacity in establishing rates for customers. As the District determines the need for larger meters for its customers, the above meter ratios are used to calculate the monthly fixed meter charge.

The conceptual rate review undertaken indicates that the District’s rates are contemporary and attempt to capture the cost differential to serve customers with varying usage characteristics and facility requirements. Completion of a comprehensive rate structure review would assist the District identify if any rate structure changes are warranted based on the District’s goals, objectives and the manner in which costs are incurred.

## **6.7 Overview of Future Water Rates**

Based upon the results of the financial analysis, the District will require adjustments in rates in future years to meet the on-going needs of the water utility system, as identified within this document.

The District may wish to conduct a review of its water rates which would provide possible changes to its current rate schedules. These changes may be to simplify the rates for all the District's customers (i.e., single rate for all systems) or develop rates by system to account for specific costs associated with operating and maintaining each unique system. In any case, this analysis would provide alternative rate structures that meet the goals and objectives of the District.

## **6.8 Summary**

The financial plan results presented in this section indicate that water rates for the ten-year projected time horizon of 2020-2029 will adequately fund the projected O&M, capital, and debt service requirements if the recommended rate adjustments are made. The District has been proactive in its financial management in the past. It has demonstrated its commitment to responsible management of the utility by funding adequate levels of operations, capital and reserves. Continued fiscal management will enable the water utility to operate on a financially sound basis.

Appendix A  
Policies and Procedures Manual

Water System Plan – Part A

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**POLICIES AND PROCEDURES MANUAL  
FOR  
ADMINISTRATION OF WATER SERVICES**

**PUBLIC UTILITY DISTRICT NO. 1  
OF THURSTON COUNTY**

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**Section 1**  
**Introduction**

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**1.1 Goal**

Public Utility District No. 1 of Thurston County (hereinafter referred to as Thurston PUD or the District) has developed this Water Policy Manual to provide a helpful guide to water services for customers, the building trades, and the employees and representatives of the District. The District's overall goal is to provide safe and reliable service to all its water customers at the most economical cost possible. In pursuing this goal, the District's guiding principles include the following:

- (a) The District will endeavor to provide potable drinking water at flows and pressures meeting applicable regulations to all customers of the District.
- (b) The priorities of the District are established as follows: first, emergencies; second, maintenance and operations; and third, new service installations.
- (c) As an ethic, water conservation will be incorporated in all practices where it is reasonably applicable and cost-effective. When necessary, the District may require conservation practices be utilized to preserve available resources and the environment.
- (d) The District shall endeavor to provide all of its customers with high quality, courteous service in all of its activities.

**1.2 Purpose**

This manual outlines the policies and procedures to be applied by District staff in providing water service to individual properties served by the District, managing extension and improvement of the District's water distribution facilities, and providing service to satellite water systems owned or operated by the District. Nothing in this Manual shall be interpreted to apply to District actions with regard to provisions of electrical or other utility services besides water. A copy of this document shall be available for the public during regular District business hours at the District's Headquarters, located at 1230 Ruddell Rd SE, Lacey, WA 98503.

**1.3 Related Policies**

The District's function is not to plan land uses within its boundaries, but to respond to land uses planned in the District's service areas under the applicable local land use plan. The District's facilities, their encumbrances and their impact on the community will not be used as tools for implementing changes in the character or timing of planned land uses.

The District's service area will comply with the Washington State Department of Health (DOH) water system planning requirements. Water system plans forecast service area needs over a 20-year time frame. The District's capital improvement program and incremental extensions and improvements to the District's system must be consistent with the plan, as updated from time to time, whether they are carried out by the District or a third party.

Decisions on system extension, pipeline capacity, looping, etc., will be guided by the plan. The District's General Manager will, at his/her discretion, determine the extent to which capital improvements are for the purposes of transmission or other general system needs; which are for the purposes of distribution within an area of the District; and which are for the sole benefit of a single subdivision or development. When new developments are proposed, the District may require the developer to dedicate permanent utility easements for installation of water pipelines and other facilities in order to facilitate construction of the overall District system in accordance with the plan. The District's share of the cost of new facilities will be determined by this manual and by the General Manager.

#### **1.4 Application of Policies and Procedures**

In specific instances, the General Manager may, at his/her discretion, waive or modify the application of the policies and procedures described herein, including the application of standard fees and charges, provided that such waiver or modification allows for more effective or efficient achievement of District goals, objectives, and overall policies.

In cases where such waiver or modification involves a significant cost, or where its relationship to existing policies is not clear, the General Manager must report any waivers or modifications to the Board of Commissioners within the next two regularly scheduled Commission meetings.

If authorized by the Board of Commissioners, specific fees and charges may be adjusted for inflation automatically on an annual basis. Other adjustments to the magnitude of standard fees and charges may be made only upon the authorization by the Board of Commissioners.

#### **1.5 Revision**

These policies and procedures cancel and supersede all previous service policies. They may be revised, supplemented or otherwise modified only by action of the Thurston PUD Board of Commissioners; in an emergency situation, the General Manager may make such reasonable modifications as he/she deems necessary; provided, however, such modifications are reported to and ratified by the Commission within the next two regularly scheduled Commission meetings.

#### **1.6 Conflict**

In case of conflict between this manual and the provisions of any resolution of the Board of Commissioners, rate schedule, or special contract, the provisions of the resolution, rate schedule, or special contract shall apply.

### **1.7 Saving Clause**

If any clause, sentence, paragraph, section, or portion of these policies and procedures, for any reason shall be ruled invalid by a court of competent jurisdiction, such judgment shall not affect, impair, or invalidate the remainder.

### **1.8 Definitions**

The following terms wherever used in this Manual, the District's rate schedules, and in any application or agreement for water service, shall have the following meanings, unless otherwise clearly stated:

#### **1.8.1 Customer**

Any individual person, firm, or organization who purchases water service, or is legally responsible for the purchase or payment for water service, at one or more locations from a water utility system under one or more rate classifications, contracts, or schedules.

#### **1.8.2 District**

Thurston PUD or Public Utility District No. 1 of Thurston County

#### **1.8.3 Equivalent Residential Unit ("ERU")**

The volume of water demand and use deemed by the District to be characteristic of a single-family residential unit, which shall equal an average water consumption of 1,000 cubic feet (one cubic foot is equal to 7.48 gallons) per month and 33.3 cubic feet per day to determine General Facilities Charges for new connections.

#### **1.8.4 General Facilities Charge**

One-time connection charge paid by the property owner seeking to connect to a water system increasing the size or number of connections. The purpose of the charge is to promote equity between new and existing customers. Equity is served by providing a means for new customers to share in the capital costs incurred to support their addition to the system.

#### **1.8.5 Interim Connection**

Connection to a District main, for the purposes of establishing interim service.

### **1.8.6 Interim Water Service**

Water service provided on a long-term basis to a property that does not abut a District main. See Section 3.6.

### **1.8.7 New Customer**

Any customer

- connecting to the District's water system where no connection previously existed,
- requesting additional connections to such system, or
- adding to the number of "equivalent residential units" served through an existing water service connection to the District's water system.

### **1.8.8 Point of Delivery**

The location, usually on the customer's premises and adjacent to the District's meter (or other agreed point), where the customer's water pipe is connected to the District's supply. Also called **Delivery Point**.

### **1.8.9 Standard Specifications**

Appendix A to this manual, setting forth all the District's standards and specifications for design and construction of water facilities.

### **1.8.10 Temporary Water Service**

Metered water service provided on a short-term, temporary basis to a fixed site (e.g., a construction site). This includes water service supplied through a District main, or a fire hydrant designated by the District and equipped with a separate valve installed for this purpose. However, it does not include intermittent, unmetered use of fire hydrants to fill mobile water tanks; or short-duration use of fire hydrants at fixed sites.

### **1.8.11 Water Consumption**

Water delivered at the point of delivery, typically measured in cubic feet.

### **1.8.12 Water Availability Letter**

Letter issued by the District that owners must receive before service is provided to new connections; this letter provides the owner with the details needed to become a customer of the District.

### **1.8.13 Water Main Extension**

Any District-owned water main which, at the time of installation, is installed adjacent to, or to serve, properties which were not previously adjacent to, or served by, a District-owned water main.

### **1.8.14 Water Service**

The availability of water at the point of delivery for use by the customer, irrespective of whether water is actually used.

**Section 2**  
**General Terms, Conditions**  
**and Policies for Water Service**

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**General Terms, Conditions, and Policies for Water Service**

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**2.1 GENERAL PROVISION**

**2.1.1 Scope**

Section 2 of this Water Policy Manual provides the General Terms, Conditions, and Policies for furnishing and receiving water service. These terms, conditions and policies are a part of all oral or written proposals, offers, agreements, and contracts for furnishing and receiving water service relating to the District. A copy of this document shall be available for the public during regular District business hours at the District's Headquarters, located at 1230 Ruddell Rd SE, Lacey, WA 98503.

**2.2 INITIATING and TERMINATING SERVICE**

**2.2.1 Service Application or Contract**

(a) Each New Customer desiring water service must complete and submit a signed application prior to service connection.

A completed application for water service may be submitted in person or mailed to the District's Headquarters, located at 1230 Ruddell Rd SE, Lacey, WA 98503. Applications may also be emailed to Customer Service at [PUDCustomerService@ThurstonPUD.org](mailto:PUDCustomerService@ThurstonPUD.org), or faxed to (360) 357 -1172.

(b) The District may, in some circumstances, accept an application for service from a second party (e.g., renters, tenants, etc.), with the understanding that the first party will sign an application within fifteen (15) days.

(c) At the time of application, all New Customers shall be informed of connection fees and of any additional charges for services after regular service hours. Any claimed or actual failure to inform shall not, however, relieve the new customer of any such fees or charges.

(d) Large industrial or commercial contracts may be written on a special form and shall contain such provisions and stipulations as may be necessary or desirable to protect the interests of both the District and customer. A special meeting, which the requestor will pay for, may be required.

### **2.2.2 Agreement**

Acceptance of service is subject to current District policies, rates, service requirements and regulations, with or without a written application or contract.

### **2.2.3 Owner/Agent Agreement**

Property owners renting or leasing their properties to others are responsible for all water service charges incurred by the properties. The property owners can enter into an agreement with the District whereby the District will bill the tenant directly for the water service charges during their occupancy. Upon execution of this agreement, the tenant must apply for service with the District and pay all applicable fees and deposits. This direct bill agreement does not remove the ultimate responsibility of the property owner for unpaid utility bills for the service address.

### **2.2.4 Initiation of Service**

(a) Service will be initiated when the customer has met all District requirements and submitted:

- Proper application and a demonstration of credit sufficient for reasonable assurance that service bills and fees will be paid.
- Valid service and mailing address(es).
- Payments as required on outstanding accounts.
- Payment of applicable deposits and other fees.

(b) When new installations, conversions or upgrades of District facilities are required to provide service, requirements will vary as follows:

Newly constructed or upgraded services must first request a Water Availability Letter from the District. In addition to the above requirements, the District also requires appropriate evidence of state, city or county plumbing inspection.

The District may require the presence of a responsible person at the time the water is turned on. If required, and arrangements are made to have such person present at a predetermined time, and such person is not present, the District may charge a fee comparable with that listed in the District's Schedule of Charges and Fees to arrange a subsequent time to

turn on the water. Only authorized District personnel may initiate a water service connection.

### **2.2.5 Disconnection of Service**

(a) Service may be disconnected for good cause, including (but not limited to):

- Violation of service requirements or regulations, rate schedules, contracts or plumbing codes.
- Failure to pay fees or deposits.
- Theft or illegal diversion of water.
- Customer system leaks of which the District becomes aware and which causes or may result in significant water loss and/or property damage.
- No one assumes responsibility for service.
- Failure to pay water charges when due.

The District may also refuse or disconnect water service that is used in a manner that can adversely affect any service provided to other customers as further described in Sections 2.3.5 and 2.3.16.

(b) Disconnection notices will be mailed to all affected customers.

The nature of the disconnect notice and the period of time before disconnection shall be reasonable under the particular circumstances with special consideration for the potential dangers to life and property.

(c) The termination of service for any cause shall not release the customer from the obligation to pay for water received, fees owed, and charges specified in this manual or in any existing contract.

(d) Service will not normally be disconnected without a disconnect notice for nonpayment of bills. Exceptions may include a customer's failure to pay an applicable deposit, a customer's failure to contact the District following tenant move-out, or a customer's failure to provide a replacement payment in the event of a returned payment.

(e) For disconnections under the appeal process, the District reserves the right to terminate any service by locking meter isolation valves or physical disconnection as the District may choose.

### **2.2.6 Reconnection**

When service is disconnected for noncompliance with service requirements or regulations, nonpayment or fraudulent use, the service will not be reconnected until the situation is corrected to the District's satisfaction.

Before reconnection, the customer will be advised of current fees and charges for service restoration.

Only authorized District personnel may initiate and turn on services to a water service connection. Appropriate charges for turning on or reconnecting service will be assessed as applicable.

### **2.2.7 Termination of Service by a Customer**

When a change of occupancy or legal responsibility takes place for water service to any connection served by the District, the customer may terminate service by notification in person, by telephone, or in writing to the District within a reasonable time prior to such change, unless otherwise noted by a special contract or agreement with the District. The outgoing customer may be held responsible for all services supplied up to the date notification is received by the District. The District reserves the right to read the meter(s) for a final bill within a one-week period from the date of notification to terminate, and such reading(s) may be adjusted for consumption, if any, used by subsequent customer(s). The final reading may be estimated by the District. Under some circumstances the District may require written authorization from the customer paying for water service before discontinuing such water service.

## **2.3 SERVICE and EQUIPMENT REQUIREMENTS**

### **2.3.1 Customer Facilities**

(a) Plumbing and Equipment: The customer shall install, own and maintain all plumbing and equipment beyond the delivery point, excluding meters and special facilities installed or furnished by the District. The customer's plumbing is to conform to:

- District service requirements and regulations.
- Municipal, county and state requirements.
- Accepted modern standards as set forth in the Uniform Plumbing Code.

### **2.3.2 Requirement of Adjacency to District Main**

In order to be served by the District's water system, the customer's property must lie adjacent to a District water main. If the customer desires water service, and if the customer's property lies remote from a suitable District main, the customer shall be required to extend the main through or past his/her property and pay for all costs associated with the main extension.

The General Manager, or his/her designee, shall have the authority to waive the requirement of adjacency to a District main.

### **2.3.3 Placement of Service Equipment**

(a) It is preferable that water services not be over 300 feet from the meter to the point of use in order to maintain adequate pressure. Services over 300 feet in length are permitted; however, the District will not guarantee adequate pressure for these services.

(b) The customer's service pipe shall be extended eighteen (18) inches beyond the meter. The water service pipe shall be installed at a location mutually agreeable between the District and customer. The District will install the meter, meter box, and tailpiece assembly.

Private service lines shall not cross other parcels, nor shall they be constructed in public rights-of-way or in private rights-of-way solely dedicated to another property without the express approval of the General Manager, or his/her designee.

Evidence of permission to make such crossings shall be provided to the District at the time application.

District and all necessary permits, easements or other authorization shall be obtained at customer expense.

### **2.3.4 Responsibility for Maintenance**

The District is responsible for maintaining its facilities and equipment up to and including the point of delivery. The customer owns and maintains equipment beyond the point of delivery. (See Subsection 1.8.11)

### **2.3.5 Safeguard of District Facilities**

The customer shall provide space for and exercise proper care to protect any of the District's facilities on the customer's premises. This shall include meters and other facilities installed by and remaining on the property of the District. Any person knowingly and maliciously

damaging or tampering with District meters and other equipment; reconnecting a previously disconnected meter for the purpose of restoring utility service; tampering with any District equipment with the intent of defrauding; or illegally diverting utility service may be prosecuted by the District in accordance with Chapter 9A.56 RCW. In addition, in the event of unauthorized connection, and loss or damage to the District's property, the District may collect from the customer the charge for estimated unmetered water, the cost of facility repairs and replacement, administrative costs, attorneys' fees, a tampering fee, and other costs authorized or awarded pursuant to RCW 80.28.240. The District shall also bill the customer for reasonable administrative costs that shall include all time and expense by District personnel to resolve the situation. This charge will be in addition to the charge for estimated unmetered water.

(a) The District may refuse or disconnect service to customers when conditions are known by the District to be defective or out of compliance with codes, regulations or requirements. The District is not liable for loss or damage to persons or property resulting from defects or negligence:

- By the customer beyond the point of delivery, or
- In the customer's installation, facilities, or equipment.

(b) When an individual's action might endanger District property or interrupt water service, arrangements can be made in advance for a crew member or serviceman to standby. Cost for this service may be charged to the responsible party.

Should loss or damage occur to District property, the responsible party may be charged for repair or replacement cost, administrative time and expense and estimated loss of unmetered water. This includes but is not limited to an intentional diversion by an individual or damage caused by a vehicle. However, if a District employee is at the site and approves the method and work, the charge to the customer may be modified or waived.

### **2.3.6 Access to Premises**

(a) The customer is required, as a condition of service, to provide District representatives with safe, clear access and entry to customer premises for service-related work. The District's facilities must remain unobstructed and accessible at all reasonable times so the District may:

- Install, inspect, maintain or remove equipment or plumbing.
  - Read, connect, disconnect or inspect metering devices.
  - Inspect customer-owned cross-connection control devices.
  - Inspect all customer water facilities to ensure there are no cross-connections. At any time a cross-connection is discovered and not immediately remedied by the customer, the District reserves the right to terminate water service to the customer until such cross-connection is removed.
- (c) For locked District equipment, the customer will provide the District with an access key. When necessary for customer convenience, the District may install an accessible key box, for which a standard fee may be charged the customer.
- (d) The customer shall provide space and protection for District facilities on the customer's premises, including meters, and other equipment installed by and belonging to the District.
- (e) Although the customer is responsible at all times for maintaining customer-owned equipment, the District may inspect customer equipment before or after the service connection.

However, such inspection, or lack of inspection, shall not be construed as placing upon the District any responsibility for the condition, or maintenance of the customer's plumbing; nor does it guarantee the absence of cross-connections in the customer's service.

**2.3.7 Separate Service for Each Lot, Property, or Residence**

Each lot, property, or residence will be required to have a separate water service, except as provided for in this subsection. Customers shall not extend a service line to an additional residence or Accessory Dwelling Unit (ADU) without the written consent of the District.

- (a) Each multi-family residential structure may be served by either a joint meter or individual meters for each unit, at the option of the property owner.
- (b) Commercial, industrial, institutional, or governmental customers with facilities occupying multiple lots or structures under a single

ownership, may be served by either joint meters or individual meters for each structure, at the option of the owner.

(c) Multi-tenant commercial, industrial, institutional, or governmental properties or structures may be served by either joint meters or individual meters for each tenant, at the option of the owner.

(d) A single meter may serve multiple residential lots or properties if the District approved such an arrangement in advance.

(e) One meter may be used to provide water service to separate, non-rented, and primarily non-commercial structures on the same property, if they conform to applicable zoning and applicable county and/or city regulations.

If joint metering is used, the customer shall be the property owner or another person who agrees to be responsible for the entire billing. If a property owner requests to convert a joint meter shared by multiple tenants to individual meters for each tenant, the property owner is responsible to pay the cost of meters, meter installations and any other associated costs or fees.

### **2.3.8 Multiple Meters**

When a customer's service requires application of more than one rate schedule, one meter will be installed for each applied schedule. Each meter will be billed separately unless otherwise specified in a special contract.

The customer will be responsible for purchasing and installing any additional meters desired for customer purposes, and for placing such meters on the customer side of the District meter. Such meters shall be as approved in advance by the District, and shall be installed at the customer's sole expense, and in a manner and location as approved by the District.

The builder of a multiple-unit complex is required to permanently and accurately number meters and corresponding building units.

### **2.3.9 Meter Testing**

The District will, at its own expense, inspect and test its meters as required to ensure a high standard of accuracy. Additional tests at the customer's request may be made; and if the meter is found to register within two (2) percent of accuracy, the District may charge a test fee

(refer to Appendix B) for all such tests made at intervals more frequent than once in three (3) years. If the meter is found to register in excess of two (2) percent, higher or lower, the District will waive the test fee and will adjust the customer's billing for the known or assumed period of error, not to exceed six (6) months prior to the meter test date.

### **2.3.10 Pressure Reducing Valves**

Pressure reducing valves (PRVs) serve to protect customers' plumbing and appliances from damage due to high water pressure. A pressure reducing valve shall be installed when the District determines that water pressure at a service location exceeds 80 pounds per square inch (psi). The following conditions shall determine how the installation is performed:

- (a) For pressures greater than 80 psi, but not more than 120 psi, the customer may select one of the following options:
  - At the time the meter is installed, the District will install a PRV on the District side of the meter, for a one-time set fee. After the PRV is installed, the District will be responsible for its maintenance, repair, and/or replacement at no additional cost to the customer. However, if the customer does not request the District to install a PRV at the time of meter installation, and later requests the District to install a PRV, the full cost of installation will be charged to the customer, rather than the set fee.
  - The customer may install his/her own PRV, or have a plumber install it, on the customer side of the meter, at the customer's expense. In this case, the property owner will be responsible for maintenance, repair or replacement.
- (b) For pressures greater than 120 psi:
  - At the time the meter is installed, the District will install a PRV on the District side of the meter, for a one-time set fee. After the PRV is installed, the District will be responsible for its maintenance, repair, and/or replacement at no additional cost to the customer.

### **2.3.11 Booster Facilities**

The District may boost service pressure via an individual booster pump housed in a suitable location on the customer's property. This method of service shall only be used in the interim until system improvement are made to resolve pressure deficiencies and shall be designed in accordance with good engineering criteria and practices as listed in WAC 246-290-200 and considered in limited circumstances where: 1) a positive pressure of 30 psi cannot be provided during peak hourly design conditions; 2) a multiple customer booster facility is not feasible; and, 3) the customer is located in close proximity to a storage reservoir that will provide positive pressure to the suction side of the individual booster during peak hourly demand flow and fire flow conditions. If these conditions are met, service shall be conditioned upon with District which could include service fees in addition to other applicable service charges. The property owner shall provide a suitable location, power supply, and suction/discharge piping in accordance with the District's Standards and Specifications. In addition, the customer shall sign a Boosted Service Agreement which outlines the terms and conditions of such service.

This section does not apply to design of water systems for new developments.

### **2.3.12 Cross-Connection Prevention**

Cross-connections between the District's water service and any other source of water are prohibited, unless authorized by the District in combination with the use of a backflow-prevention assembly. Service connections and individual customer plumbing systems shall be constructed and maintained so as to prevent backflow of potentially contaminated water into a potable water system. The control or elimination of cross-connections shall be in accordance with the provisions of WAC 246-290-490, as modified from time to time.

The District reserves the right to inspect all customer water facilities to ensure that no cross-connections exist, in accordance with District policies on access to premises (see Section 2.3.6). If an unauthorized cross-connection is discovered and not immediately eliminated, water service may be suspended until the cross-connection is eliminated.

### **2.3.13 Backflow Prevention Assemblies**

The District may, at its sole discretion, permit or require a customer to install a backflow prevention assembly on the customer's plumbing

system or service connection. Customers required to install backflow prevention assemblies include, but are not limited to, those who:

- (a) Operate commercial or residential fire sprinkler systems connected to their plumbing;
- (b) Operate an irrigation system connected to their plumbing;
- (c) Maintain cross-connections of their water system with air-conditioning systems, medical equipment, or other devices or processes where chemicals, microorganisms, or other objectionable substances may be drawn into the water system;
- (d) Own or maintain systems that, in the judgment of the the District's licensed Lead Cross Connection Specialist (CCS), usually Director of Field Operations, compromise the health and safety of other users of the District's water system.

The customer is responsible for the entire cost of installing a backflow-prevention assembly. The assembly shall remain in the customer's ownership and as the customer's responsibility.

Annual testing, periodic inspections and repairs of backflow-prevention assemblies, as required by WAC 269-290-490, shall be arranged by customers at their own expense, using firms or individuals that are licensed Backflow Assembly Tester (BAT). A signed copy of the inspector's completed report shall be provided to the District to confirm that assemblies are operating in a satisfactory manner.

Inadequate maintenance of a backflow-prevention assembly shall be grounds for suspension or termination of water service.

#### **2.3.14 Relocation of Delivery Points**

- (a) A customer's delivery point may be relocated at the customer's request. Delivery point relocation is subject to advance payment of the estimated cost of relocating the District's service pipe, meter and other facilities. The customer shall be responsible for relocation of the service line to the new location. The District will disconnect the old service at the meter and connect the new service.

The District may reduce the costs to be charged to the customer for relocating any of the District's facilities, as requested by a customer, to

the extent that such relocations may benefit the District. In determining the amount of such reduction, the District will give consideration to the remaining physical life of facilities or equipment replaced, the improvement to the system operations, and any increased revenue that will accrue to the District as a result of such relocation.

(b) A customer shall be responsible for the relocation of a meter box when property alterations have been made which leave meter access or location unacceptable to the District. The District may disconnect service when the meter box is not satisfactorily relocated.

**2.3.15 Resale**

Customers may resell water only with written District permission. Rates charged may not exceed rates the District charges for similar service.

**2.3.16 System Disturbances**

Water service shall not be utilized in such a manner as to cause severe disturbances or pressure fluctuations to other customers of the District. If any customer uses equipment that is detrimental to the service of other customers of the District, the District may require the customer to install, at his/her own expense, equipment to control such disturbances or fluctuations.

**2.3.17 Freezing**

It shall be the customer's responsibility to protect from freezing all piping, fixtures and appurtenances on the customer's side of the point of delivery.

Any damage resulting from freezing shall be considered the responsibility of the customer.

**2.3.18 Interruption of Service**

(a) It is the District's intent to provide adequate and continuous service with minimum interruption. However, the District:

- Does not guarantee against occasional curtailment or failure of water service;
- Shall not be liable for resulting injury, loss, or damage; and
- Shall not be considered in breach of contract for temporary interruption of service.

(b) Repairs or improvements to facilities requiring temporary service interruption will be expedited and timed to minimize customer inconvenience. When possible, a preceding notice will be sent to the customer.

(c) If the customer's water service fails, the customer shall endeavor to determine if the cause is on the District's side or the customer's side of the meter.

When the District responds to a customer call after service hours, and the problem is found to be with customer equipment, the customer may be charged a set fee for such response.

When the District responds to a customer call, and the problem is found to be with customer equipment, the water serviceperson may make repairs at the customer's request following the customer's execution of a service request agreeing to pay actual time and materials to make the repair. The charges will be included on the customer's next regular billing.

#### **2.3.19 Additional Water Supply**

A customer desiring a District change in the capacity of its service connection and meter to supply increased quantities of water shall notify the District sufficiently in advance so that the District may, if determined to be feasible, provide the facilities required to supply increased quantities of water. The customer shall pay in advance the cost of any such facilities.

#### **2.3.20 District Representation by Employees**

Except as specifically authorized in these policies and regulations, no promise, agreement or representation of any employee or agent of the District, with reference to the furnishing of water service by the District, shall be binding on the District, and in no event shall the same be binding on the District unless the same shall be in writing signed by the General Manager or his/her designee.

No inspector, agent or employee of the District may ask, demand, receive or accept any personal compensation for any service rendered to a customer in connection with supplying or furnishing water service by the District.

## **2.4 METER READING, BILLING, PAYMENT and COLLECTIONS**

### **2.4.1 Meter Reading**

- (a) Meters will be read in monthly cycles, unless an exception is made due to unique environmental situations by the General Manager or his/her designee. The District may alter or reroute its meter reading and billing cycle dates when such alteration or rerouting is in the best interest of the District.
- (b) Initial or final readings may be estimated and/or prorated.
- (c) Special meters may be installed on any account when the nature of the customer's equipment and operation so indicates for correct rate schedule application and/or customer service improvement.

### **2.4.2 Billing**

Billing statements will be sent to the mailing address furnished by the customer. Failure to receive a billing statement will not release the customer from the obligation to pay for services provided.

Billing statements will be issued monthly, and generally will be based on exact meter readings.

Billing charges may be estimated when:

- A meter is not accessible to the meter reader;
- A meter is under snow or water;
- A meter malfunctions;
- Other circumstances beyond District control interfere with meter reading.

In the event that billing charges are estimated, an adjustment will be made at the time of the next regular billing that is based on an actual meter reading.

The District will send billing statements and notices by first class mail. A customer who does not provide a proper mailing address (or a means of receiving mail) may be subject to disconnection.

### **2.4.3 Payment**

The customer's obligation to pay a bill accrues on the date the billing statement is issued. Payment is due by the due date listed on the billing

statement. Payments will be considered made when received at the District's Headquarters. Payments are to be accompanied by a billing remittance slip or account number.

#### **2.4.4 Adjustments**

Certain staff have the authority to grant adjustments when it is demonstrated that the cost of continuing to deny the customer's request substantially exceeds the amount in dispute and results in reduced customer satisfaction. Customer Service Representatives are authorized to waive certain fees such as penalties, new account set up, tamper fees and reconnection fees as appropriate to resolve issues with customers; the Assistant General Manager and General Manager will be notified when more than \$250 per account in any given occurrence is forgiven. Authority limits are established as follows:

- Assistant General Manager/General Manager – Over \$3,000 each occurrence
- Finance and Customer Service Manager – Up to \$3,000 for each occurrence
- Customer Service Supervisor – Up to \$1,000 each occurrence
- Customer Service Representative – Up to \$100 each occurrence

(a) In the case of incorrect application of rates, meter malfunction, or clerical errors, retroactive billings will be made for up to the prior six (6) billings on monthly-billed accounts. In the case of billing to the wrong customer due to meter misidentification, adjustments will be made up to three (3) years prior.

A final balance (debit or credit) of less than three dollars (\$3.00) may be routinely written off by the District.

When it has been determined that a customer has received unmetered service or when the customer has caused the service furnished to be improperly or inaccurately metered, the District may render bills for such service based upon its reasonable estimate of the service actually furnished for the full period during which the service was unmetered or improperly metered, or as provided in Section 2.3.9.

However, in those cases where the premises have been remodeled resulting in a situation whereby more than one customer is served by one meter, no adjustments will be made and the account customer of the premises shall be required to assume responsibility for the billing

effective the last regular reading date unless another person agrees in writing to assume full responsibility for the billing.

(b) A customer may be eligible for an adjustment to their water bill in the event of a loss of water through abnormal conditions when the cause is deemed by the District to have been undetectable and not resulting from a lack of normal maintenance by the customer. No adjustments shall be made in water charges for losses resulting from customer negligence, improper operation of plumbing by the customer, and/or failure of the customer's plumbing system. The section of service line qualifying for a potential leak adjustment is between the point of delivery at the meter box and the house or facility. Taps off the service line, and any leaks resulting from such taps (such as, but not limited to, irrigation, swimming pools and outdoor hose bibs) are not be eligible. The date that qualifies as "official notification" of a leak varies depending upon the circumstances.

(1) If a District employee identifies a potential leak, a phone call will be made to the customer or written notification will be mailed. A door hanger may also be left in a prominent place at the residence. The date of the telephone call or letter will serve as the "official notification" date.

(2) If the customer contacts the District regarding the possibility of a leak, a visit to the site address will be initiated. Upon verification of a qualifying leak, the customer will be notified by phone or written notification. The date of the phone call or written notification will serve as the "official notification" date.

Once a leak has been identified, the customer will be provided with a ten (10) day period to contact the District to advise that repairs have been scheduled during which the adjustment period will continue.

The time period during which a customer could expect to receive an adjustment is from the "official notification" date back to the billing period where the leak can be detected and forward to include the ten (10) day period allotted to contact the District to advise that repairs are scheduled.

Customers will be charged for the average cost of water produced on the water system, which has been determined at \$1.09 per 100 cubic feet (ccf), when the customers meet the other criteria of the policy. The cost of

water produced will be reviewed periodically and the amount of the adjustment may be administratively reduced as long as there is no loss to the District. Authority levels for adjustments is provided above in Section 2.4.4.

The methodology for determining excess amount of water over normal consumption will be determined by the prior year's history for an existing customer; an average use of 1,000 cubic feet per month will be used as the "normal use" base for new customers or customers without sufficient consumption history.

A customer is eligible for one leak adjustment per service address, per twenty four (24) consecutive months, from the time of a previous leak adjustment, or more often if approved by the General Manager or Assistant General Manager. The Customer Service Representative Supervisor and Assistant General Manager, or General Manager his/her designee will be responsible and accountable for authorizing adjustments.

Review Section 2.4.4 for staff members responsible and accountable for authorizing adjustments.

No adjustment shall be made in the water billing by reason of freezing, unless approved by the General Manager or Assistant General Manager.

#### **2.4.5       Reminder Notices**

Reminder notices will be sent on past due accounts. An account is considered past due if payment (in full) for an applicable period has not been received within 15 days after the billing date. A past due fee is charged to a customer account at the time a reminder notice is generated.

#### **2.4.6       Disconnect Notices**

(a)    Disconnect Notices for bimonthly accounts will be mailed approximately 10 days after reminder notices are sent. The notice will be for amounts in arrears only. Billing statements will show any and all amounts in arrears as well as any new billing charges and past due fees.

(b)    Disconnection will occur following the due date listed on the notice unless:

- The delinquent payment has been received at a District office by the due date.

- A deferred payment agreement has been reached.
- The customer has appealed the action and a hearing is pending.

(c) Exceptions: In certain instances, where health, safety or essential services would be otherwise jeopardized, or for purposes of economy, the District may suppress normal disconnection practices.

#### **2.4.7 Collection**

While considering individual customer needs, the District is obligated to make prudent collections. Reasonable collection methods will be used, including disconnection of service, collection agency assignment, and/or legal action.

#### **2.4.8 Extenuating Circumstances**

(a) The District will pursue a solution with customers temporarily unable to pay on time due to extenuating circumstances, including but not limited to financial hardship. The availability and terms of a deferred payment plan will be based on a review of the individual customer's situation, including:

- Amount and age of delinquency.
- Past payment record.
- Ability to pay.
- Demonstration of good faith.

(b) Employees will give customers available information on other resources for assistance when appropriate.

(c) Service will not be terminated for inability to pay when termination would be especially dangerous to health of a resident, as determined by the District so long as the customer has made application to appropriate agencies for assistance and payment is pending.

#### **2.4.9 Deferred Utility Payments and Payment Plans**

Customers will have an opportunity to keep water service accounts current through optional payment programs arranged through a Customer Service Representative. Deferred payments or payment plans of up to one year will be provided to allow the customer the opportunity to comply. Requests for payment plans longer than a year will require approval by the General Manager or Assistant General Manager.

Customers who have failed to honor the agreed upon payment plans may not be allowed to establish new payment plans, subject to the approval of the Customer Service Supervisor and the Assistant General Manager.

#### **2.4.10 Insolvent Accounts**

If the District has reasonable cause to believe a customer to be in financial difficulty or contemplating bankruptcy, appropriate action may be taken to secure the payment of charges due. Requirements may include a security deposit, altered payment schedule, or other actions deemed necessary and reasonable by the District, including filing a Notice to Title on the property advising of an unpaid utility account.

#### **2.4.11 Transfer of Unpaid Balances**

A water service customer's unpaid balance may be transferred into any current water service account of the same customer and same type as part of current obligation and subject to the District's requirements for payment. The customer will be notified of:

- Transferred balance.
- Date and location of service of unpaid account.
- Impact of future service.

#### **2.4.12 District Pay Stations**

- (a) Pay stations may be established for the purpose of collecting customer payments throughout the District's service area with the approval of the District's General Manager or his/her designee.
- (b) The pay station agent will prepare collection reports in duplicate. A PDF copy of the cash report will be emailed daily to the District at [PUDCustomerService@thurstonpud.org](mailto:PUDCustomerService@thurstonpud.org). The original cash report, remittance slips, and receipts will be mailed twice a week to the Thurston Public Utility District No. 1, 1230 Ruddell Road SE, Lacey, WA 98503.
- (c) The pay station agent will be responsible for all money paid by the customer.
- (d) The pay station agent will accept payments only for those accounts that are accompanied with a billing remittance slip or the customer's account number.

- (e) The pay station agent will not accept second party checks for payment of an account.
- (f) The District will pay the pay station agent a set fee per remittance slip for each collection.
- (g) The District will furnish without charge, all necessary stationery, supplies, and prepaid postage envelopes for mailing of the daily collection reports to the District.

## **2.5 DISPUTE RESOLUTION**

### **2.5.1 Mandatory Hearing**

Any customer, person, or entity who believes that he/she has been adversely affected by a decision which the District has made in the categories outlined below has the right to have that decision reviewed in a hearing to be held by a District Hearing Officer.

- (a) Service disconnection;
- (b) Refusal to deliver water service;
- (c) Transferring an outstanding balance to a new water account;
- (d) Requiring a payment plan;
- (e) Requiring the customer to provide security deposit as a condition of receiving water; or
- (f) Requiring the customer to pay a fee or penalty; (e.g., reconnection fee, new account service charge, etc.).

### **2.5.2 Discretionary Hearing**

The District may, at its discretion and with the approval of the General Manager or his/her designee, provide a hearing to any customer who believes he/she has been adversely affected by any decision of the District on any matter other than the decisions listed in Section 2.5.1.

### **2.5.3 Binding Decision**

The decision of the District's Hearing Officer shall be final, unless either party elects to challenge the decision in a court of law.

### **2.5.4 Written Hearing Request**

A request for a hearing must be made in writing signed by the customer or from a customer's verifiable email address or by someone with legal

authority to act on the customer's behalf. Each hearing request must include a concise statement of both the decision to be reviewed and the relief which the customer is requesting. In addition, each hearing request must include an address to which notices, including notice of the hearing date and location, the decision of the District representative and any other written communications may be mailed to the customer.

**2.5.5 Delivering Request for Mandatory Hearing**

The customer's written request for a mandatory hearing must be delivered to the District's Customer Service Supervisor who will copy and deliver it to the District's Finance and Customer Services Manager (FCSM), the Assistant General Manager and the General Manager.

**2.5.6 Delivering Request for Discretionary Hearing**

If the District has informed the customer that it will provide a discretionary hearing, the customer's written request for a discretionary hearing must be delivered to the District's Customer Service Supervisor who will copy and deliver it to the District's Finance and Customer Services Manager (FCSM), the Assistant General Manager and the General Manager.

**2.5.7 Hearing Date**

The General Manager will appoint a Hearing Officer and will determine the date and time of the hearing, which shall be held at the District Headquarters within ten (10) business days after the hearing request is received by the District's Hearing Office. Provided, that a hearing date will not be established if the written hearing request does not include an address to which notices to the customer may be mailed or if the written hearing request is, in the opinion of the District's Hearing Officer, otherwise materially deficient.

**2.5.8 Notice of Hearing**

The Hearing Officer will mail notice of the hearing or, under the circumstances described in Section 2.5.7 above, notice that a hearing date will not be established by first class mail, postage prepaid, to the customer at the address set forth on the hearing request within three (3) business days after the hearing request is received by the Hearing Officer.

**2.5.9 District's Action Stayed Pending Receipt of Written Request for Hearing**

If a customer:

- (a) Contacts the District within three (3) business days after receiving notification, whether written or oral, of a decision of the District; and
- (b) Is orally informed that the customer may have a hearing to review that decision; and
- (c) States, within one (1) business day after being informed that a hearing is available, that the customer intends to request a hearing;

Then, as a result of the statement of intent, all District action which would be taken as a result of the decision shall be stayed until the written request for a hearing is received by the District or for a period of six (6) business days after the date upon which the customer orally stated that a hearing would be requested, whichever is earlier.

**2.5.10 District’s Action Stayed Pending Hearing**

If the District receives a written request for a hearing within the time set forth in Section 2.5.9 above, all District action which would be taken as a result of the decision shall be stayed until noon, ten (10) business days after the Hearing Officer’s written decision on the matter is received by the Customer Service Supervisor: Provided, that if a hearing date is not established for a reason set forth in Section 2.5.7, District action will not be stayed.

**2.5.11 Security Deposit Pending Hearing**

If a customer requests a hearing to dispute a debt for water service which exceeds \$1,000 and the customer wishes to receive water service until the hearing is held, the customer must provide security for the water service to be provided by the time the written request for a hearing is delivered to the District. The amount of security will be the amount of money that will reasonably accrue from the usage of water, based upon prior usage at the facility involved, from the date the customer orally informs the District that a hearing will be requested until thirty (30) days thereafter.

**2.5.12 Performance Pending Hearing**

All obligations which are not the subject of the dispute to be decided by a Hearing Officer shall be performed by the District and/or the customer. This shall include, in the case of a dispute over amounts to be paid, the payment of all non-disputed amounts.

### **2.5.13 Failure to Appear**

If a customer fails to appear for a hearing within fifteen (15) minutes after the time set forth in the notice of hearing, the customer will be in default, and the Hearing Officer shall decide the disputed matter in favor of the District and the customer shall be required to pay a penalty which may be added to any existing account of the customer. If the customer fails to appear, the customer's request for another hearing will not be granted unless the failure to appear was caused by an emergency or because of the occurrence of an unforeseeable circumstance or event, which shall be determined by the Hearing Officer, and the customer pays the penalty prior to the subsequent hearing. In such case, the subsequent hearing must be held within ten (10) business days of the original hearing.

### **2.5.14 Continuances**

Any request for a continuance shall be made to the Hearing Officer, which shall grant such a continuance only in the case of an emergency or because of the occurrence of an unforeseeable circumstance or event. Any request for a continuance made by a customer which is not received at least twenty-four (24) hours (i.e., one complete business day) before the scheduled hearing may result in an award in costs to the District which may be added to any existing account of the customer.

### **2.5.15 Representation**

A customer may represent himself/herself or may be represented by an attorney, relative, friend, or any person other than a District employee. The District will not be represented by an attorney unless the customer is so represented. If the customer is to be represented by an attorney, the customer must inform the District of that fact at the time the written request for a hearing is delivered to the District, or if the services of an attorney are procured later, then as soon as such representation is arranged.

### **2.5.16 Evidence**

The Hearing Officer may consider evidence which will assist the Hearing Officer in reaching a decision and may give effect to the rules of privileged communications (e.g., attorney/client privilege, husband/wife privilege, etc.) under the law. Information that is irrelevant and unduly repetitious may be excluded. Documentary evidence may be received in the form of copies or excerpts. Each party shall have the right to ask questions of persons who make statements at the hearing.

### **2.5.17 Legal Authority**

The Hearing Officer shall apply as the first source of law District Resolutions, Code and Regulations. If none of these govern or decide the issue(s) presented, the Hearing Officer shall resolve the issue(s) on the basis of the best legal authority and reasoning available, including that found in the state and federal constitutions, statutes, and court decisions.

### **2.5.18 Limitation on Authority**

The Hearing Officer shall not have the power to declare a District Resolution, Code provision, regulation or any portion thereof invalid for any reason, but may allow argument to be made for purposes of subsequent review.

### **2.5.19 Review of District Action**

If the dispute involves a question of whether the customer is indebted to the District, the District must establish the customer's obligation by a preponderance of the evidence. If the dispute involves a question of whether a District decision is inconsistent with the regulations of the District, the customer must establish that the District's decision is a willful and unreasonable action made without consideration and in disregard of facts and circumstances.

## **2.6 RATES, FEES and CHARGES**

### **2.6.1 Service Connection Charge**

(a) A Service Connection Charge (SCC) shall be charged to all New Customers connecting to District facilities, and to all existing customers requesting additional service work.

(b) Additional costs for services may be required if the service will be connected to a main previously constructed, under the District's line extension policy (see Section 3.3).

### **2.6.2 General Facilities Charge**

The District has limited capacity to serve additional customers without infrastructure installation and replacement. The general facilities charge is levied by the District per ERU, payable to the District, and representing a new customer's proportionate share of costs the District incurs in construction or acquisition of water general facilities, (e.g., source, storage, treatment, and transmission facilities); required to support the addition of the new customers and other new customers

projected by the District to be added to its water systems under the District's current Water System Plan.

### **2.6.3 Rate Schedules**

(a) The District has rate schedules for particular types of service provided. For specific detail, refer to the Rate Schedules for the current year. In case of conflict between the provisions of any rate schedule or special contract and this Water Policy Manual, the provisions of the rate schedule or special contract shall apply.

### **2.6.4 Non-Standard Service Charges**

(a) The District shall charge private parties and public entities for services rendered by the District on behalf of such private parties or public entities.

(b) For services not covered by standard fees or charges, the rate charged for services (the "service rate") rendered by District personnel shall be the hourly rate for the position, including benefits, plus overhead.

(c) Equipment shall be billed at reasonable rates consistent with retail rental rates for like equipment in the Greater Olympia-Lacey-Tumwater-Tenino area. Such rates will be established by the General Manager or his/her designee, on a case-by-case basis, by obtaining three or more estimates from private rental firms in the area.

### **2.6.5 New Account Service Charge**

(a) A new account service charge will be billed during processing of each service application, except for:

- Name changes when no closing bill is requested or required.
- Owner/agent agreement with owner/agent assumption of responsibility for service between tenants.
- Disconnection of an account for nonpayment and reconnected subject to a reconnection fee.
- Name changes between husband and wife.
- Name changes between the deceased customer and estate.
- Customers added to the District through a water system acquisition.

- (b) The customer is to be advised of the new account service charge at the time the application is taken.
- (c) The new account service charge is to be billed within ten (10) days from the date the application is received.
- (d) The following procedures shall be followed:
  - Separate applications for service when billed on different account numbers at the same address – one charge for each account, unless separate accounts are established for District convenience.
  - Multi-service account – one charge for each additional meter reconnection after the initial application.
  - Multi-metered complex (e.g., apartment house)
    - One charge per account for general use areas.
    - If no general use account, one charge per building to initiate service for one or more non-rented units.

**2.6.6 Records Research Charge and Public Information Requests**

The District will make information and records available to the public for inspection and copying in accordance with RCW Chapter 42.56, the Washington Public Records Disclosure Act, and District policy.

Information and records concerning water service, including rates, charges, connections, disconnections, construction, installations, engineering, policies and procedures may be obtained from the District’s Headquarters located at 1230 Ruddell Rd SE, Lacey, WA 98503.

Requests for public records will be handled in compliance with provisions of the District’s policy 200-010 Public Records Disclosure. No fee is charged for inspection of public records on the premises; however, the District imposes a charge for providing copies of public records and other miscellaneous fees – please review Policy 200-010 for more information. Such charges do not exceed the actual costs of copying.

**2.6.7 Disconnection/Reconnection Charge**

- (a) Whenever water service has been disconnected for noncompliance with the District’s policies and procedures, for nonpayment, or for fraudulent use, service will not be reconnected until the situation

requiring such action has been corrected to the satisfaction of the District. A reconnection fee shall be charged for reconnection during regular business hours. A higher fee shall be charged for reconnection at all other times including weekends and holidays. As appropriate, the customer will be advised of these fees in advance.

**2.6.8 Discounts**

The District does not currently offer discounts for water service.

**2.6.9 After Hours Connection Charge – New Customer or Vacant Account Reconnect**

(a) If a customer requests a connection to occur between the hours of 3 p.m. to 8 a.m., or during weekends or holidays, the District will advise that there will be an after-hours connection charge in addition to the new account service charge.

**2.6.10 After Hours Service Charge – Established Customers**

Established customers will incur an after-hours service charge, plus material cost and tax, if a water service person is dispatched to the customer's premise, *at the customer's request*, outside of the hours of 3:00 p.m. to 8:00 a.m. or on weekends and holidays and it is determined that the problem is caused by a failure of the customer's facilities.

**2.6.11 Returned Payment Charge**

A returned payment charge may be billed to each water service account for which payment has been received by any check or legal tender which is subsequently returned to the District by the bank. Reasons for returned payment may include but are not limited to irregularities, lack of sufficient funds in the payer's bank account, the customer having closed the account or other situations that result in a returned payment.

**2.6.12 Security Deposits**

(a) Security deposit may be required of a customer at application or later for any of the following reasons:

- Incomplete application.
- Misrepresentation of identity.
- Tampering with District equipment.
- Bankruptcy petition.

- No established credit.
  - Poor payment record/history.
- (b) A notice will be mailed to the customer when a security deposit is required, showing the amount, due date and customer rights to appeal.
- (c) Payment is due as stated in notification unless other arrangements are made within that period.
- (d) Amount of deposit will be a maximum of \$150.00. Higher credit scores may lower the amount of the deposit.
- (e) Refund or application of deposit may be made, based on evaluation of customer credit history, after 24 months experience with residential customers and 36 months with nonresidential customers.
- (f) At termination of service, an existing deposit will be refunded, less outstanding amounts due.
- (g) **Transfers:** When a customer relocates and reapplies for service, an existing deposit may be carried over to service at the new location and may be adjusted, depending on the circumstances.
- (h) **Interest:** The District does NOT pay interest on customer security deposits.

### **2.6.13 Charge at Cost for Nonstandard Service**

Customer shall pay the cost of any special installation necessary to meet the customer's particular requirements for service at other than standard pressures, or for closer pressure regulation than would normally be provided at the location involved.

### **2.6.14 Surcharges**

Upon approval by the Board of Commissioners, the District may impose surcharges on monthly customer rates to fund capital improvements or operations and maintenance. Surcharges may be imposed on all District customers, or on customers in selected pressure zones, satellite systems, etc., according to the benefits derived from the capital improvements or the operations and maintenance activities funded.

## **2.7 VIOLATIONS**

### **2.7.1 Unauthorized Taking of Water, Tampering with Equipment, and Unauthorized Connection to the District's System.**

When appropriate, the District will seek prosecution for theft of water, destruction of District property, and other violations of law affecting delivery of its services. The District may pursue collection under RCW 80.28.240 for its losses, damages, and costs related to such actions to the full extent provided by law.

In addition:

(a) There may be levied an investigation or service and/or commodity charge against any person, firm or corporation who shall take water or knowingly received the benefit of water taken from any water line, reservoir, or fire hydrant, or any facility of the District without the District's consent and without first having obtained from the District a permit to take such water. Such sum shall be due and payable immediately upon the taking of such water.

(b) There may be levied an investigation, service and/or commodity charge against any person, firm or corporation who shall tamper with any water meter, fire line meter, service line, or any meter related appurtenances of the District. Such sum shall be payable at the time of discovery by the District of such tampering.

(c) There may be levied an investigation, service and/or commodity charge against any person, firm or corporation that takes water from an angle stop, service lead, angle check valve, or related appurtenances intended for a future meter installation without consent from the District. A meter will not be installed to serve the property until any and all charges and the standard meter installation fees are paid. If a meter application has been purchased from the District and, prior to installation, it is determined by the District that water has been taken in violation of this section then such meter will not be installed and the meter application will be held until the purchaser of such meter application pays the charge.

(d) There may be levied an investigation, and service and/or commodity charge against any person, firm or corporation that operates any valve in the District's system without the District's consent. Such

sum shall be due and payable at the time of the District's discovery of unauthorized operation.

## **2.8 FIRE PROTECTION**

### **2.8.1 Commercial Fire Protection Service**

(a) Application for water service for the sole purpose of commercial fire protection must be made by completing and signing a standard application form.

(b) The minimum charge shown on the District's rate schedule includes water for fire protection use only. The monthly rate of water used, except for fire protection, will be double the regular-metered service water rate applicable to that certain customer.

(c) Service charge for new fire protection service connection.

- The customer must pay the cost, including installation costs, from the customer's premises to an existing main of the District.
- The customer must pay the cost of a detector check and meter, plus the cost of installation.
- Services to be used for fire protection exclusively may only be fitted with fixtures that will be used for fire protection and shall not be connected to any fixtures that will be used for other purposes. Customers having such services shall be charged no less than the minimum standby service charge as established from time to time by resolution of the Board of Commissioners. In no case shall any connection be made upon any service line, tank or other fixture installed exclusively for fire protection for any purpose except the fire service or through any pipes, tank or other fixtures reserved for fire protection be permitted for any purpose except the fighting of fires. To protect against water being drawn from a fire service line for any purpose other than fighting fires, the District may install a detector meter on such service and charge all costs of such installation to the property and the customer.

### **2.8.2 Hydrant Installation**

The District will install hydrants on existing District water mains, at the request of one or more customers if the mains are of sufficient capacity

to provide adequate fire protection with costs borne by the customer(s). The type of hydrant and location shall be as specified by the District, which shall include the requirements established by appropriate jurisdictional agencies, whichever is stricter.

Upon request, the District will prepare an estimate for the total cost of the installation of a hydrant. Upon payment of this estimated amount, the District will make the installation. On completion of the work, the customer will either be refunded or billed the difference between the estimated amount and the actual cost. At the District's option, this work can be done at a contract price to be paid in advance.

### **2.8.3 No Guarantee of Adequate Water for Fire Protection**

Notwithstanding the provisions contained in these schedules for commercial fire protection service, or for other metered service, including water furnished to any fire hydrant or other equipment used, or which may be used for fire connection service, it is understood that the District cannot guarantee any minimum quantities of water or pressure of the water to be furnished to any of such hydrants or outlets, and the District shall not be liable in any manner for any loss or claim by reason of the quantity of water, or pressure of the same furnished to such hydrant or outlet.

## **2.9 SPECIAL ARRANGEMENTS FOR SHORT-TERM WATER USAGE**

### **2.9.1 Temporary Water Service**

At the District's discretion, temporary water service may be provided to accommodate special needs for water at a fixed site on a short-term basis (e.g. on-site needs for construction activities). Temporary water service may be provided from a District main or from a fire hydrant specifically designated for this purpose by the District (see Section 2.9.2). Only District personnel are authorized to install a connection to a District main or fire hydrant for this purpose.

Temporary service may be authorized for a period not to exceed six (6) months at a time. Upon expiration of the initial six (6) month period, a customer may request an extension of temporary service for one additional six (6) month period. No more than one extension will be granted, unless authorized by the General Manager.

A customer obtaining temporary water service will not be required to pay a General Facilities Charge (GFC). However, a customer obtaining

temporary water service will be required to pay a deposit for the estimated costs of installation and removal of the equipment required for temporary service, as well as a damage or security deposit. In addition, temporary service will be metered and the customer shall be required to pay both a meter-reading charge and a charge for water usage in accordance with the appropriate rate schedule. Arrangements for metering and billing will be established on a case-by-case basis.

Upon termination of temporary service, the District will disconnect the temporary water service and take possession of the associated District equipment, or, if appropriate, convert the temporary service to permanent water service. Following disconnection or conversion, and payment of all outstanding charges for water usage, the District shall return any surplus of installation and removal charges that exceed the actual costs incurred by the District. In addition, the District shall refund any damage or security deposits, less the amount needed to replace or repair District equipment. However, in the event the customer fails to pay outstanding charges for water usage, the District may retain an amount equal to such outstanding charges.

### **2.9.2 Hydrant Use**

No person shall operate or tamper with a fire hydrant connected to the District's water system, without the express written approval of the District or, in the case of an emergency threatening life or property, the approval of an authorized representative of the appropriate fire department. In addition to the penalty established in Section 2.7.1, any person violating this provision shall pay for the amount of water used, as estimated by the District and based on the applicable rate schedule.

At the District's discretion, authorization may be granted to take water from a fire hydrant connected to the District's water system. Procedures for authorizing use of fire hydrants shall be as follows:

(a) When a customer desires to use a fire hydrant for Temporary Water Service (short-term water service at a fixed site) the procedures in Section 2.9.1 shall be followed. The customer shall utilize only the hydrant specifically designated by the District for this purpose, and will obtain water through a separate valve installed by the District on that hydrant.

(b) When a customer desires to use a fire hydrant for short-duration purposes at a fixed site (i.e., not exceeding three (3) days), or for

intermittent use by a mobile water tank (e.g., tanks on hydro seeding or public works maintenance vehicles), the following procedures shall apply:

- The customer shall obtain a Hydrant Use Permit from the District. A permit will be issued either for a daily (one (1) to three (3) days); monthly; or six-(6) month period. The customer shall pay a fee established by the District for the Permit. However, at the District’s discretion, the fee may be adjusted if the quantity of water deviates by more than fifty (50) percent from the following:

Daily Permit	2,500 gallons total
Monthly Permit	10,000 gallons total
Six-Month Permit	10,000 gallons/month

- Metering will not be required for this type of use. A charge for water use shall be included in the permit fee.
- The customer shall utilize only those hydrants specifically designated by the Hydrant Use Permit.
- The customer shall utilize a backflow-prevention device approved by the District. As a condition of obtaining a Hydrant Use Permit, the customer shall permit District inspection of equipment to be used, to ensure backflow-prevention devices are adequate.
- The customer shall obtain a placard from the District that indicates a Hydrant Use Permit has been obtained. At any time a hydrant is being used, the customer shall display this placard in a prominent position clearly visible from the street. The customer shall not provide this placard to any other person.

**Section 3**  
**Extension Policies**

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### **3.1 INTRODUCTION**

#### **3.1.1 General Provisions**

The District will provide facilities for the distribution of water within its service areas in accordance with approved land use plans, policies or other regulatory requirements governing service provisions. Extension of a system to serve additional customers, properties, tracts, or subdivisions will normally be paid for by the individuals that are benefited.

For an extension, an applicant (hereinafter “Applicant” or “Developer”) will normally be responsible for financing the entire cost of an extension. Costs include new facilities, replacement of existing system components when necessary for making the extension or improvement, and upgrades to meet requirements which are associated with the applicant’s project. Over-sizing water system components as outlined below, however, will not be charged to the applicant. Reimbursement or credit against District charges is available in some circumstances.

All water facilities must be located on property owned by the District, in public rights-of-way, or dedicated easements; must be transferred to the District’s ownership for operation, maintenance, and service responsibilities; and will be subject to maintenance bonding requirements.

#### **3.1.2 Application of Policies and Procedures**

In specific instances, the General Manager may, at his/her discretion, waive or modify the application of the policies and procedures described herein, including the application of standard fees and charges, provided that such waiver or modification allows for more effective or efficient achievement of District goals, objectives, and overall policies. Conditions for waiver or modification of the application of these policies and procedures as contained in Section 1.4 of this Manual.

#### **3.1.3 Standards and Specifications**

Water system extensions, improvements, or new facilities must be constructed in accordance with the District’s Standards and Specifications for Design and Construction (Appendix A). Copies will be furnished by the District upon request. It is the responsibility of the Developer to ensure that the latest version of the Standards and Specifications is used.

The Standards and Specifications have been developed as professional, technical guidelines for guiding system design and installation. The

General Manager or his/her designee may modify the Technical Standards and Specifications, to maintain consistency with changing technology and industry standards. In addition, the General Manager may waive strict application of the Standards and Specifications in certain instances, provided that the resulting design or construction is approved by the District, and remains consistent with the goals and objectives expressed in this Manual.

#### **3.1.4 Notification**

The contractor shall schedule a pre-construction conference and notify the District at least five (5) working days prior to commencing work. All work shall be inspected by the District. Contact the District Field Operations Department to schedule all tie-ins at least three (3) days in advance.

### **3.2 ADMINISTRATIVE PROCEDURES FOR SYSTEM EXTENSION**

#### **3.2.1 Plan Approval Required**

All plans for extensions, improvements, or additions to water facilities must be approved by the District prior to construction.

#### **3.2.2 Application**

Requests for extension or improvement of a District water system to serve newly developed and/or existing properties shall be made by applicants or their agents using the District's application format. Each application shall contain a legal description of the property to be served and be accompanied by two (2) paper copies and one (1) digital version of preliminary plans, showing the location of all water lines, hydrants, and valves needed to serve the area.

It is recommended that applicants schedule a meeting with District Planning and Compliance staff to discuss the proposed project, prior to completion of the application.

#### **3.2.3 District Review**

The District will review the application and associated plans. A Plan Review Fee, as described in Section 3.3 (see Appendix B, Table B-5), will be assessed to compensate for review services.

The applicant will be notified of the feasibility of the service requested, conditions for construction, and any additional facilities (e.g. water source, storage, booster stations, water main upgrades, etc.) that may be required as a result of the proposed extension/development. Additional special requirements such as cross connection control devices or backflow prevention assemblies shall also be specified. This process will enable an

applicant to estimate more accurately, construction costs and District charges.

If fire flow is required, in some instances, the plan must be approved by appropriate Fire Marshal.

In all cases where a road right-of-way will be used for mains or other improvements, the appropriate city or county governmental agency must also approve the plan.

At the District's option, engineering design services may be provided by District staff at the application stage. A fee will be charged for such services (see Section 3.3).

#### **3.2.4 Extension Agreement**

If a project is accepted, the applicant shall then execute an Extension Agreement with the District which will specify the terms and conditions of the extension or system improvement in accordance with the District's standards. Extension agreements must be signed by the General Manager or his/her designee.

#### **3.2.5 Submittal of Plans and Specifications**

At the time the Extension Agreement is submitted, one (1) digital and two (2) paper sets of detailed plans and specifications shall be submitted by the applicant to the District for review and approval. All drawings and specifications must be stamped by a registered Professional Engineer licensed in the State of Washington.

As the project progresses, any deviations from originally approved plans and specifications shall be approved in advance by the District in writing and recorded. Updated plans must be provided to the District.

#### **3.2.6 Permits, Easements, and Approvals**

At the District's option, the applicant may be required to prepare all necessary documentation for permits, easements, and approvals. These could include, but are not limited to, documents pertaining to lane closure, building, grading, drainage, shorelines, conditional use, variance, Department of Health, Parks & Recreation trail crossing, and railroad agency permits. The District will ordinarily prepare documentation for Right of Way permits. The required documents shall be provided to the District, which will submit them to the appropriate agencies for processing. Any fees levied for permit processing shall be paid by the applicant.

The developer's contractor shall secure all permits and authorizations required from local and State agencies and disposal sites related to asbestos work, removal and disposal, including but not limited to

submittal of a written “Application to Perform an Asbestos Project” to the Puget Sound Air Pollution Control Agency (PSAPCA). No work on asbestos-cement pipe shall proceed without proper permits, certifications, worker protective clothing and breathing apparatus, and approved asbestos disposal bags. Prior to commencing work on asbestos-cement pipe, the contractor shall provide the District with a copy of any “Application to Perform an Asbestos Project,” which has to be filed by the contractor with PSAPCA relating to work under this specification. The cost of asbestos related permits shall be available at the project site at all times.

The developer’s contractor shall comply with all provisions of any applicable permits.

A copy of the appropriate plans, specifications, and all required permits shall be maintained on the project site at all times during construction.

All District facilities shall be installed within the city/county right-of-way or in a District-approved easement. The developer, at the District’s option, shall either supply the District with the legal description of the easement (as-built) and shall pay the costs incurred by the District to do all title work, to prepare easement, and to file and record the legal easement prior to District final acceptance; or prepare, obtain and convey all said easements to the District at the developer’s sole cost.

### **3.2.7 As-Built Drawings**

Upon completion of the project, one (1) digital and two (2) paper copy sets of revised as-built drawings and specifications, and an additional set in a digital format compatible with the District’s future computerized design system, shall be provided to the District at the applicant’s expense. As-built plans must show all new water facilities and related appurtenances which, at a minimum, shall include the locations of all mains, valves, hydrants, and fittings giving sizes and types of each. The drawings shall show the exact location of water mains including distances of mains from property lines.

A registered Professional Engineer licensed in the State of Washington must stamp all drawings and specifications, including as-builts, and complete a Department of Health Construction Report form to be filed by the District.

### **3.2.8 Final Acceptance**

Upon completion of construction, applicants or their contractors shall notify the District and request a final inspection for approval of the project. The District will issue a Letter of Final Acceptance of the main extension, improvement or water facility, provided that:

- (a) The water main has been installed according to the approved plans and specifications;

- (b) Pressure and bacteriological tests have been passed;
- (c) All permit conditions have been satisfied;
- (d) All extension policy conditions have been fully satisfied;
- (e) All fees required by the District and other entities have been paid;
- (f) All easements are recorded at the county or shown on the face of the final plat map;
- (g) All necessary bonding is in place;
- (h) A new Mylar drawing is provided which reflects as-built conditions;
- (i) Digital copy of as-built water plan is provided on a flash drive;
- (j) “Bill of Sale” is executed and accepted by the District;
- (k) Submit a completed Department of Health “Construction Report for Public Water System Projects” to the District for filing.

The date of the letter will begin the period of warranty. The final acceptance shall not constitute acceptance of any unpaid for, unauthorized, defective, omitted, or non-conforming work or materials. Final acceptance shall not prevent the District from requiring the applicant to pay for, remove, replace, dispose, or add work or materials or prevent the District from recovering damages for any work or materials or lack thereof.

In the event that a letter of credit or similar financial instrument has been provided as a means of guaranteeing project completion, and at the District’s option, a Letter of Final Acceptance may be issued without meeting the conditions listed above. In order for this option to be exercised, the terms and conditions described in Section 3.2.9 must be met.

### **3.2.9 Letter of Credit**

If requested by a developer for his/her convenience, the District may elect to accept a letter of credit, or equivalent financial instrument, as a guarantee of payment for various purposes. These purposes may include, but are not limited to, payment of required fees, or completion of an extension project. However, nothing in this provision shall be interpreted as a requirement that the District accepts a letter of credit, for any purpose. If a letter of credit is used to guarantee payment, the following conditions must be met:

- Payment of Letter of Credit Processing Fee to the District;
- The letter of Credit must be issued by a financial institution acceptable to the District;

- The Letter of Credit must name the District as sole beneficiary of the funds described therein;
- If a Letter of Credit expires and the District has not made any draws upon the funds, the developer is not relieved of any obligations to the District.
- If the Letter of Credit is used to guarantee payment of fees, the District shall be authorized to redeem the full value of outstanding fees if all fees have not been paid within ninety (90) days.

### **3.2.10 Maintenance Bond**

Before the District will issue its letter of final acceptance, the developer shall provide an executed maintenance bond for ten (10) percent of the full value of the water facilities installed. Such value shall be determined by the District. The developer may post cash in lieu of bond, on the same terms and conditions as described herein. This bond shall:

- (a) Be on a District-furnished form.
- (b) Be signed by an approved surety (or sureties) that;
  - Is registered with the Washington State Insurance Commissioner, and
  - Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner.
- (c) Be effective for two (2) years from the date of the District's letter of final acceptance.

If at any time during the two-year period, the bond or cash in lieu of bond is used for payments, the developer shall, within two days of such payment, reinstate the value of the bond or cash in lieu of bond to an amount equal to ten (10) percent of the full value of the water facilities installed. If the value is not reinstated, the District may, at its option, redeem the bond.

The District may require sureties or surety companies on the bond to appear and qualify themselves. Whenever the District deems the surety or sureties to be inadequate, it may, upon written demand, require the developer to furnish additional surety to cover any remaining work.

### **3.2.11 Indemnity, Defend and Save Harmless**

A contractor or owner working for the District shall agree to indemnify and defend and to save the District harmless from any and all claims or liability for damages arising from acts done under the contract. Before commencing work the contractor shall furnish the District certificates of his comprehensive general and automobile liability and property damage

insurance, in limits acceptable to the District, protecting against all claims for personal injury or property damage, including coverage for underground collapse and explosion damage, arising during the course of the performance of said contract.

### **3.2.12 Bill of Sale**

The applicant shall provide the District with all applicable invoices and other information necessary for preparation of the bill of sale.

The District shall prepare the bill of sale transferring ownership of all installed water mains and facilities to the District. The bill of sale shall be signed by the applicant. The bill of sale shall describe lengths and sizes of water mains, size and quantities of services and hydrants, and the location in general terms, including the name of the plat, if applicable.

## **3.3 FINANCING and FEES**

### **3.3.1 Financing Methods**

Line extensions can be paid for in three ways:

- (a) The developer may obtain his/her own contractor to install the main to meet District specifications and pay the contractor directly. Upon completion of the work, and after approval by the District, the installation will be turned over to the District by means of a bill of sale.
- (b) A Local Utility District (LUD) may be formed to finance the extension (see Section 3.3.2).
- (c) In limited cases, and at the District's option, the District may construct the facilities or may contract for construction. The District will make an estimate of the total costs of the project. On receipt of the payment of that estimated amount by the developer, the District or its authorized representative will proceed with construction. Upon completion of the project, the customer will be either refunded or billed for the difference between the estimated amount and the actual cost of the installation. For jobs where the estimated cost of materials exceeds \$50,000, and the District is going out to bid, the District must call for public bids, and award the contract to the lowest acceptable bidder.

### **3.3.2 Formation of a Local Utility District (LUD)**

Property owners within a defined area may petition the PUD Commissioners to extend water mains to their properties by formation of an LUD, financing the extension by assessing benefited properties within the LUD area. All engineering, construction, administrative and other

costs, costs of easements, permits, environmental reports, and Shoreline Permits, are a part of the LUD costs.

The District will prepare a petition at no cost for property owners desiring to initiate the formation of a local utility district.

To the full extent required by and subject to the limitations imposed by applicable law (as amended from time to time), the Board of Commissioners shall determine whether or not to form local utility districts.

LUD formation must follow procedures described in the District's LUD Process Manual and applicable statutes.

Costs for tapping onto a main constructed under an LUD will be defined in the provisions of the LUD involved.

Under applicable law, certain properties within the boundaries of a local utility district may be exempt from assessment. In such cases, the District will grant an exemption, provided the property owner or his/her representative notifies the District in writing and provides evidence satisfactory to the District that the property qualifies for an exemption.

### **3.3.3 LUD Assessments**

For an LUD, each property included will pay an assessment set by the LUD process and designed to ensure customers pay an equitable share of system costs for supply, transmission, treatment, and local distribution lines. Assessments shall include cost of system construction together with any applicable System Development Fees (SDF) and, at the option of each assessed property owner, a Service Connection Charge. Assessments shall not be in lieu of any other applicable fees or charges payable as the result of customer service changes, water usage, or the formation of any future LUD.

Customers added after LUD process deadlines have passed (e.g. time expired, specified number of services added, etc.) will be assessed standard District Charges and Fees in effect at the time of the request for service.

Further information can be found in the RCW Title 54.

### **3.3.4 Plan Review Fee**

At the time an application is submitted for an extension or improvement, the applicant shall pay the District a Plan Review Fee (see Appendix B, Table B-5) to cover the cost up to two District reviews. If more than two (2) reviews are required for the same project prior to execution of an Extension Agreement, or if the scope or complexity of design requires unusually extensive review, an additional fee for non-standard engineering services may be charged.

If the District undertakes to provide engineering design services at the application stage, a fee may be charged for non-standard engineering services.

### **3.3.5 Extension Agreement Fee**

At the time an Extension Agreement is submitted for execution by the District, the applicant shall pay the District an Extension Agreement Fee to compensate the District for resources needed to participate in the project (see Appendix B, Table B-5).

### **3.3.6 Summary of Extension Fees**

In addition to fees charged for processing applications, Extension Agreements, and other District services, the Applicant will be charged the following Extension Fees, where applicable:

- (a) System Development Charge (General Facility Charge)
- (b) Account Service Charge

However, fees for properties located within LUDs are handled through the assessment process discussed above.

### **3.3.7 General Facilities Charge**

The General Facilities Charge is assessed by the District per ERU, payable to the District, and representing a New Customer's proportionate share of costs the District incurs in construction or acquisition of Water system general facilities, (i.e., source, storage, treatment, distribution, and transmission facilities); required to support the addition of the New Customers and other New Customers projected by the District to be added to its water systems under the District's current Water System Plan.

### **3.3.8 Non-standard Engineering Fees**

Engineering fees for non-standard engineering services shall be established in the manner described in Section 2.6.5 of this Policies and Procedures Manual for Non-standard Services.

### **3.3.11 Over-Sizing and Replacement**

In order to provide capacity for future customers or improve existing service on an economical basis, the District may require over-sizing or replacement of existing facilities in conjunction with construction of an extension or improvement. Such requirements may apply on, or adjacent to, a development or subdivision, or to facilities that are "off-site." The sizing required for project needs alone will be based upon the District's Standards and Specifications (Appendix A), or hydraulic analysis

acceptable to the District that has been conducted specifically for a proposed project.

In cases where fire flows required by applicable land use plans have changed since main construction, an applicant will be responsible for the cost of upgrading an existing main to meet required fire flows specified in the District's state-approved Comprehensive Water System Plan.

If the District requires over-sizing or replacement to accommodate needs not associated with the applicant's project the District may, at its option, participate in the associated costs. The District may not be in a position financially to support over-sizing or replacing facilities at the time an applicant desires to initiate a construction project. If the District determines that it cannot provide for over-sizing or replacement until a future date, an applicant for an extension or improvement may elect itself to install the required over-sizing and/or replacement and enter an agreement with the District for future reimbursement (e.g. when future customers are added).

The following guidelines will normally apply when over-sizing or replacement is involved with an extension or improvement:

- (a) Upon receiving an application for an extension or an improvement, the District will determine if over-sizing or proposed facilities or replacement of existing facilities, though not required for the new services, is best accomplished in conjunction with construction of the extension. The District's Water System Plan, the applicable land use plan, and the existing system deficiencies will be the primary factors in making this determination.
- (b) If over-sizing or replacement is required, an engineer's estimate will be made of the additional cost associated with the over-sizing and/or replacement. Depending on the circumstances, public bidding may be required to permit District participation. If over-sizing or replacement is required, compensation arrangements may be included in the Extension agreement.
- (c) The amount of reimbursement for replacement will depend upon the benefit received by the District, as determined by the District in its sole discretion, and will be determined on a pro-rated basis, based on the remaining useful life of the facilities to be replaced. The District will reimburse a fraction of the cost equal to the fraction of the useful life that has been expended since original installation. The useful life will be determined by the District, at its sole discretion.
- (d) The amount of reimbursement for over-sizing will be based generally on the following:

- (1) Mains: For pipes up to 4 inches larger in diameter than the District's design standard for the applicant's development/lot-reimbursable costs will consist of material cost differences for pipe, valves, and fittings. Reimbursable costs will also include increased material and construction costs (e.g. cost differentials for larger components, increased excavation, special bedding, testing, cleaning, etc.)
- (2) Other Facilities: Cost differential evaluations for providing larger, or replacement facilities will be conducted on a case by case basis and subject to negotiations between the District and the applicant.
- (3) Excluded Costs: Examples of costs that are specifically excluded from consideration include but are not limited to:
  - The cost of public bidding and preparation of documents for public bidding.
  - The engineering costs associated with new facilities, over-sizing or replacement.
  - Costs incurred in financing, bonding, or providing insurance for construction of oversized or replaced facilities.
- (e) The amount and general timing of reimbursement will be mutually agreed upon between the District and the applicant and included in the Extension Agreement. The methodology of payment will be selected by the District at its sole discretion and included in the Extension Agreement. Payment methodology will normally be chosen from one of the following options;
  - (1) Payment to the applicant upon acceptance of the extension or improvement.
  - (2) Credit against funds otherwise owed by the applicant to the District.
  - (3) Deferred to the future for payment in lump sum or by installment.
  - (4) A combination of the above.
- (f) Material invoices must be submitted to the District prior to acceptance of the project.

### **3.4 DESIGN**

#### **3.4.1 Standards and Specifications**

All water line extensions shall be designed and installed in accordance with the District's Standards and Specifications (Appendix A). However, strict application of the Standards and Specifications may be waived in certain instances, in accordance with Section 1.4 of this Manual.

### **3.4.2 Extension of Mains Along Property Frontages**

In order to provide for continued extension of the District's system beyond properties currently developed or under development, developers will be required to extend water mains along frontages associated with parcels, subdivisions, or developments. In individual cases, the requirements for length and location of mains along such frontages shall be guided by the District's Comprehensive Water Plan. Depending on the circumstances, reimbursement may be available following main installation, under the Districts' policies for the System Development Fee (see Section 3.3.7)

Applicants will normally be required to install a main along the entire length of any and all roads or developed public rights-of-way abutting the property being developed. In some cases, a developer will be required to extend a main across the property being developed to facilitate looping of the system, in addition to extension along frontages.

In the case of development of an individual parcel of land which cannot be subdivided under the terms of applicable zoning or land use regulations, and where the parcel abuts more than one established road or developed right-of-way, the applicant will be required to extend a main only along one side of the parcel. This shall be the longest side of the parcel that abuts a road or public right-of-way.

At the District's option, the requirement for extension along frontages may be modified or waived, provided that achievement of general policy goals and objectives of the District are not thereby impaired.

The District normally installs water mains on the north and east sides of a road or street. In some circumstances, therefore, the applicant will be required to install a water main across the street or road from their property.

### **3.4.3 Looping**

Looping of water mains may be required in order to satisfy pressure, fire flow, and system hydraulic requirements. In addition, looping may be desirable to promote system reliability. The determination of looping requirements shall be at the sole discretion of the District and will not exceed 200 feet of main per looping situation. In determining whether looping is required, the following factors shall be considered:

- The length of main that will be needed solely for looping purposes;
- Topographical constraints;
- Effects of looping on system hydraulics;

- The need for easements solely to support looping;
- Expected future development in the area, based on the applicable land use plan, as updated from time to time, municipal comprehensive plans if applicable, the District's Comprehensive Water Plan, and other available information.

If a looping requirement is imposed solely to benefit other properties or the District's system generally, then the District will reimburse the developer for any required looping over 200 feet per looping situation. However, if the looping requirement also provides a direct benefit to the property in question (e.g. to meet required fire flows), then this limitation will not apply, and the developer's responsibility will be determined by the District on a case-by-case basis.

#### **3.4.4 Fire Flow Not Altered by Sprinkler Systems**

The District encourages residential fire protection sprinkling systems. However, such systems will not be a basis for altering the District's design standards.

### **3.5 GENERAL CONSTRUCTION PROCEDURES**

#### **3.5.1 Technical Standards and Specifications**

Construction practices shall be in accordance with the District's latest Technical Standards and Specifications (Appendix A). However, strict application of the Standards and Specifications may be waived in certain instances, in accordance with Section 3.1.2.

#### **3.5.2 Approved Contractor**

All line extensions shall be installed by a licensed contractor approved by the District. Taps to a District main may be performed only by a licensed contractor approved by the District.

"Approval" of a contractor by the District means that the contractor has met certain minimum criteria relating to past performance, experience, or apparent ability to successfully perform the work required; it shall not be deemed to create or impose any warranty upon the District as to the said contractor or its workmanship, nor shall such approval relieve the customer or contractor of their responsibility to comply in all respects with District policies and specifications.

#### **3.5.3 Pre-Construction Conference**

The developer shall schedule a pre-construction conference with the District and contractor after the Extension Agreement has been executed. The contractor shall submit a materials list and a safety and traffic control plan, if needed, for District approval before or during this meeting.

### **3.5.4 Deviations**

The approved Extension Agreement construction plans shall be followed. No deviations will be allowed without request for change and approval in writing by the General Manager or his/her designee. The District reserves the right to order changes. The applicant shall be notified in writing of any changes.

### **3.5.5 Taps to Existing Main**

All taps of a line to the existing main must be made by District crews or under direct supervision of District personnel, with material supplied by the owner, contractor or the District. Payment must be made in advance for this work, and for any material required, if done by the District. Tapping an existing main without adhering to District requirements for advance notification shall result in a penalty being assessed against the applicant (see Appendix B, Table B-6).

### **3.5.6 Service Equipment**

If the owner is also constructing houses and will construct and complete houses at a rapid rate, the District, at its option, may require the owner to install the meters and service equipment coincidental with the installation of the main, or install the service with a meter yoke for later installation of the meter by the District. The service connection charge will be adjusted accordingly.

### **3.5.7 District Access**

During the period of construction, applicants and their contractors will provide access to District personnel (including personnel on contract to the District) as necessary, to ensure compliance with District requirements.

## **3.6 INTERIM CONNECTIONS**

### **3.6.1 Introduction**

In general, interim connections to the District's system shall be avoided. However, under certain circumstances overall District goals and objectives may be advanced by permitting connection to a District main or a non-District water system on an interim basis. Such an arrangement shall be permitted only when the District determines that the property in question will be served in the future by a District main abutting the property. The General Manager or his/her designee shall have the authority to allow an interim connection and administer an Interim Connection Agreement. The customer shall pay all of the costs and expenses associated with obtaining interim water service.

### **3.6.2 Interim Connection Agreement**

Any interim connection will require an Interim Connection Agreement (ICA) to be executed between the customer and the District. The ICA will specify the terms and conditions for the interim connection. These may include, but are not limited to, provisions designed to facilitate financing and connection to a main, at the time a main abutting the property is subsequently installed.

### **3.6.3 Fees and Charges**

Prior to execution of the ICA, the customer shall pay an ICA Processing Fee, (see Appendix B).

The applicant shall pay all other applicable fees to the District prior to execution of the ICA by the District. These fees include, but are not limited to, the SDF (GFC) and SCC.

### **3.6.4 Easements, Property Rights and Permits**

The customer shall obtain and maintain all easements, property rights and/or permits which are necessary or appropriate for interim water service. The customer must provide documentation of same as part of the ICA.

### **3.6.5 Termination of Interim Service**

Interim service shall be terminated whenever the public water system has been extended so that permanent public service is available to the property.

The ICA will be terminated whenever a property temporarily served pursuant to an ICA can receive permanent service by connection to the District's system abutting the property constructed by a capital construction project, without extending the District's system. The customer shall pay the cost of disconnecting the interim connection and reconnecting to the main, plus any other applicable charges.

Section 4  
Satellite System Management

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## **4.1 Introduction**

### **4.1.1 Background**

The District functions as a Satellite Management Agency (SMA) to assist water systems accomplish technical and administrative tasks, maximize water availability, and maintain satisfactory water quality. The satellite system program, through either ownership or contracting for a variety of services, provides for operation and maintenance of small and large water systems by the District. By operating multiple water systems, economies of scale make it possible to: (1) employ qualified personnel, (2) provide good system management and operation, and (3) meet stringent standards required by the federal Safe Drinking Water Act (SDWA) and the State of Washington.

The Satellite System Management Program enables either a private or public system to select a level of District service that will best accommodate their particular needs. In addition, the District's eligibility for State and federal funding assistance and its ability to issue bonds helps to assure reliable and high quality service at minimum cost for District owned systems.

This outline of the District's Satellite System Management Program provides customers with the philosophy, objectives, and procedures associated with available services.

### **4.1.2 Types of Service.**

The Satellite System Management Program provides three primary options of operation and assistance services for water systems:

- (a) Direct Service – ownership and operation by the District.
- (b) Contract Services – routine operation and maintenance, water quality monitoring, utility billings, and other periodic tasks for systems not owned by the District. Contract services are available to private and public systems at a rate commensurate with the service.
- (c) Support Assistance – one time or long-term support to systems requiring technical, professional, or special assistance on a more limited scale. Charges for support assistance are determined in advance, generally on a time and materials basis.

These three service options are designed to respond to differing water systems and to support a comprehensive program of water system management throughout the District's service area. Decisions on establishing a level of service will depend on individual system needs, plans for improvement, and growth pressures, as well as the ability of the District to provide desired services in a cost effective manner. Each situation will be carefully examined by the District and discussed with the applicant interested in satellite system service or support.

The District will perform Direct or Contract Satellite management only for systems that comply with its minimum health, safety, and water quality standards. Systems failing to meet minimum standards must be brought up to standards in accordance with District Satellite System Management policies.

Exhibit 4-1 presents a diagram of service application and review procedures, described below, which the District uses in evaluating requests for implementing any of the three service options. Some steps involved in the process are required regardless of which service is being requested. First is the initial contact between the applicant and the District. During initial contact, applicants can discuss needs with the District and receive a copy of the specific policies and procedures which pertain to their requests. The applicant's written letter of request will initiate the District's formal evaluation of system needs, capabilities, and deficiencies. The District will then request specific data or background information needed to survey the water system and evaluate the District's ability to implement one of the three service options.

#### **4.2 POLICIES and PROCEDURES FOR DIRECT SERVICE**

Direct Service requires the transfer of system ownership and operational responsibilities from either an existing or new system to the District. The Direct Service option enables the District to assume complete responsibility for water systems at any location throughout the District's service areas. Water systems adjacent to or within a water district or municipality's service area will be directed to approach that water district or municipality for direct service before submitting a request to the District. Under the Direct Service option, the applicant and system customers are subject to all the policies, procedures, standards and specifications set forth in this Policies and Procedures Manual. Water rates and charges will be imposed as applicable. Depending on the amount of system upgrade work and other expenses associated with system transfer to the District, an additional assessment may be levied.

The District may be required to assume specific financial or regulatory liabilities for systems that transfer ownership. The interests of all citizens, therefore, must be considered for any proposed action.

Systems that will be transferred to District ownership (Direct Service) must also meet minimum construction and reliability standards. Different criteria will be applied for Group A and B systems as appropriate.

#### **4.2.1 Conditions**

The District shall establish, as a part of such utility Satellite Water Systems, which are separate and apart and remote from each other, under the following conditions:

- (a) Consideration by the District of a proposed Satellite Water System shall be instituted by the application of a group of water users or a water purveyor within the service area of the proposed Satellite Water System.
- (b) If a proposed Satellite Water System is in such proximity to an existing District or satellite system that it could reasonably qualify under District policy as an extension of or merger with such existing system, it shall not qualify for consideration as a Satellite Water System under this Section.
- (c) Satellite Water Systems may consist of new construction by the District, or the acquisition of existing or new systems, or the acquisition and improvement of existing systems, or any combination thereof. In any case, however, the system shall be required to meet the District's standards for water systems and shall be operated, insofar as reasonably possible pursuant to the general policies and procedures of the District's Water Utility, except as otherwise provided herein.
- (d) Each Satellite Water System shall be self-supporting and the financial condition of any existing District water system shall not be adversely affected as a result of the establishment or operation of the Satellite Water System.
- (e) The applicant must possess water rights adequate to supply the project, and these water rights must be transferred to the District.

#### **4.2.2 General Policies and Procedures**

The general policy and procedures for implementing the Direct Service option are as follows:

- (a) Direct service can be provided for both Group A and B systems.
- (b) Purchase of private water systems is at the District's discretion and will require a financial feasibility analysis and must be based on an assessed value of the system.

- (c) Systems that are certified to meet District, all local health districts, and Washington Department of Health (DOH) standards during construction will not be subjected to the survey and upgrade process. Systems that may desire Direct Service from the District at some point in the future should meet the following requirements during design and construction.
- The system should be designed and constructed in accordance with the Standards and Specifications of the District (Appendix A).
  - The design and monitoring of construction for all new systems should be coordinated with the District.
  - Prior to transfer of ownership of a new system to the District, the designer of the system must certify that it has been built in accordance with the approved design.
- (d) For systems that have not been certified as being constructed in accordance with District standards, a survey and engineering evaluation will be conducted and a schedule will be developed to accomplish system upgrades which are required to meet applicable District, Local, State, and federal standards. Certain improvements, especially deficiencies related to water quality, safety and system reliability, will be required to be completed prior to or in conjunction with system transfer to the District.
- (e) Capital improvements and purchase costs will be financed by the system's owner(s)/customers through rate surcharges, assessments, GFCs, and/or District arranged financing. District financing options may include State and federal grants, cash contributions, Local Utility District (LUD) bonds, or similar financing arrangements.
- (f) Major system improvements may require the formation of an LUD or similar financing arrangement.
- (g) An estimate of the cost of required capital improvements will be provided to and agreed upon by the satellite system's owners before the District assumes ownership or operational responsibilities. All systems not installed under the certification process outlined above will be handled on a case-by-case basis to determine charges for the preliminary survey and engineering evaluation.
- (h) The District's attorney will establish the appropriate authorization and legal instruments required for the transfer of system ownership to the District.

### **4.2.3 Review and Approval Procedures**

- (a) The applicant for a proposed Satellite Water System shall advance to the District the estimated costs for all preliminary and full studies undertaken to determine the feasibility of such a proposed system.
- (b) A preliminary feasibility study shall be performed to establish the system's capabilities, deficiencies, and compliance with appropriate regulatory and operational criteria. The study also will be used to determine the estimated costs of needed system improvements, and anticipated operation and maintenance expenses. The intent of this preliminary feasibility study is to attempt to identify at an early stage any major factor which renders the proposal not feasible. If the Manager finds from the preliminary study that the proposal is not feasible, the proposal shall be rejected.
- (c) A meeting or other appropriate method will be used to review the preliminary feasibility study results and preliminary cost estimates with the satellite system's existing owner(s)/customers. The owner(s)/customers may either withdraw the request for Direct Service or continue the process by authorizing the District to prepare a full feasibility study to more accurately determine the work and costs required to bring the system up to required standards.
- (d) If the preliminary feasibility study does not cause a rejection of the proposal, and upon the advancement of costs, the District may undertake a full feasibility study to investigate in detail all issues which may affect the feasibility of the proposal. The intent of the full feasibility study is to add to the information developed in the preliminary feasibility study sufficiently to allow for a final determination as to the feasibility of the proposed Satellite Water System.

The District feasibility study will include a detailed analysis of the system's operation, required capital improvements, and projected cost of operation and maintenance. It will also contain a preliminary financing plan for improvements and proposed rate structure based on:

- Minimum improvements required to meet quality, safety, and reliability standards.
- Improvements required to upgrade the system to the Standards and Specifications of the District.
- Source, storage, metering, fire flow, and other desired improvements.

- (e) For existing systems, after a review of the full feasibility study is conducted with the owner(s)/customers, they may withdraw the request for service or with the assistance of the District, initiate proceedings to transfer ownership.
- (f) Improvements required to upgrade the system to District standards (particularly those associated with quality, safety, and reliability), will be completed prior to or in conjunction with system transfer. Some improvements may be deferred until normal repair or replacement occurs.
- (g) If capital costs for necessary improvements can be financed reasonably by the owner(s)/customers, then the transfer of ownership may be contractually established. A list of items necessary to accomplish a transfer of ownership may include but is not limited to:
  - Bill of Sale
  - Title Report and Property Deeds
  - Assignment of Easement and Franchises
  - New Easements, if required
  - Assignment of Water Rights
  - Authorization to Collect Rates and Fees
  - Hold Harmless Clause
  - List of Owners, Customers, and Addresses
  - Maps, Records, Equipment Manuals and Data, and Other Information
- (h) If necessary and found to be economically feasible, the District Commissioners may create an LUD in accordance with Title 54 RCW.

Once an LUD is formed, ownership of specified facilities, equipment, and data will be transferred to District ownership.

- (i) New systems, whose initial design, construction, and approval have been conducted in accordance with the District's design standards and inspection requirements, will not require a preliminary survey or engineering evaluation. The transfer of ownership can occur either contractually or by LUD formation as described above. The system must be certified in accordance with Chapter 246-290 WAC to verify that it was built and approved in accordance with the requirements of the DOH, all local health districts, and the District prior to transfer of ownership.

#### **4.2.4 Submittal to Commission**

A completed full feasibility study, together with the recommendations of the staff, may be submitted to the Commission for its consideration and

determination as to the establishment of the proposed Satellite Water System and any conditions thereof.

#### **4.2.5 Refund of Advances for Feasibility Studies**

In the event acquisition of an existing Satellite Water System is approved by the Commission and funds to finance its acquisition and/or construction (including the cost of the feasibility studies) are received by the District, then the advances for its feasibility studies shall be returned to the applicant.

#### **4.2.6 Agreements and Conveyances**

Satellite management, when approved by the Commission, shall be implemented by agreements and conveyances in a form acceptable to the District and prepared by District staff at the expense of the applicant.

#### **4.2.7 Rates, Fees and Charges**

Rates and other charges pertaining to the establishment and/or operation of a Satellite Water System shall be such as to reflect the need that such system be self-supporting.

Engineering fees for non-standard engineering services shall be established in the manner described in Section 2.6.5 of this Policies and Procedures Manual, for non-standard services.

### **4.3 POLICIES and PROCEDURES FOR CONTRACT SERVICES**

A service contract is utilized to establish the frequency, duration, cost, and specific responsibilities of the District in performing services. Services can be contracted on a continuous basis to provide routine system operation and maintenance, periodic well performance monitoring, required water quality monitoring, periodic equipment maintenance, scheduled repair activities, on-call emergency assistance, utility billing services, and/or other tasks.

#### **4.3.1 Conditions**

Listed below are the major policy and procedural considerations for contract services:

- (a) System improvements may be required to eliminate deficiencies associated with system reliability, safety, and water quality. Improvements required by the District will be completed prior to the District initiating service unless the District agrees to accomplish improvements as a part of the contract.

- (b) Contract services will be limited to systems where such services are cost-effective for the District.
- (c) Financing for system improvements is the applicant's responsibility.
- (d) The District will only provide services to systems where facilities are located on property owned by the system, public rights-of-way, utility easements, or where authorization for unrestricted access to all facilities that may require servicing, maintenance, repair or replacement, can be obtained.
- (e) If the applicant intends to expand the system's service area, the District must approve of the expansion and/or be given the option to discontinue contract services.
- (f) They must designate a reasonably available individual to be an official contact with the District.
- (g) The District must receive, as appropriate, the legal authority from the applicant to contract, assess costs, and be held harmless from service activities during the normal course of operations.

#### **4.3.2 Review and Approval Procedures**

- (a) Once applicants have requested Contract Service assistance, they will be required to pay a fee to the District for the cost of conducting a preliminary feasibility study. The District must receive this survey fee and all requested system data before the District will conduct a preliminary feasibility study of the system. The study is designed to identify all existing material defects, public health deficiencies and operational problems.
- (b) The District will provide the applicant a list of all required improvements with an estimate of the costs associated with those improvements.
- (c) After reviewing the preliminary feasibility study results and evaluating the cost estimates, the applicant may either withdraw the request for Contract Service or authorize the District to establish firm costs for the particular details of requested service. When determined, firm costs will be reviewed with the applicant.
- (d) If the costs are acceptable, the applicant will complete specified system improvements and enter into a contract with the District which specifies the details, frequency, duration, and costs of the service program.
- (e) If the applicant withdraws the request for service at any time in the process, the District will retain the preliminary feasibility study fee.

- (f) The General Manager shall have the authority to execute a service contract on behalf of the District.

#### **4.4 POLICIES and PROCEDURES FOR SUPPORT ASSISTANCE**

The Support Assistance Program provides general assistance for improving water utility service within the District's service area. Primarily, the program is designed to support and assist smaller water utilities. Services may be provided either on a one time or continuous basis.

Support assistance includes such items as operator training, information system support, and purchase of equipment and supplies on a cooperative basis. Volume buying can reduce many of the costs of operating a small water utility.

There are several categories of services that the District can provide on a one-time basis. Cost associated with providing these services can be established on a time and materials basis or through a lump-sum contract. Examples of services include:

- Loan equipment or supplies to a system to handle a special circumstance.
- Provide engineering and/or technical expertise to a system that lacks necessary staff for certain tasks.
- Provide financial management/grant procurement assistance.
- Develop water system computerized maps.

In addition, there are several categories of continuous service that the District can provide including, but not limited to:

- Leadership and support to smaller utilities to ensure that its views are considered in formulating local and state regulatory actions.
- Administration of programs for joint purchasing of equipment and supplies to achieve economies of scale for smaller utilities.
- Provide technical support programs for operator training.

##### **4.4.1 Conditions**

The support assistance program relationship is one that will not impact on a utility's wish to remain autonomous and operate at existing expenditure levels. The District is willing to evaluate any form of assistance to help utilities improve their level of service.

##### **4.4.2 Review and Approval Procedures**

- (a) The District and the applicant will execute either a formal contract or written agreement which will specify the exact responsibilities, staff, equipment, and other details required of the District in providing assistance.

- (b) The contract or agreement will establish the charges associated with providing service.
- (c) The General Manager shall have the authority to execute a contract or agreement for support assistance, on behalf of the District.

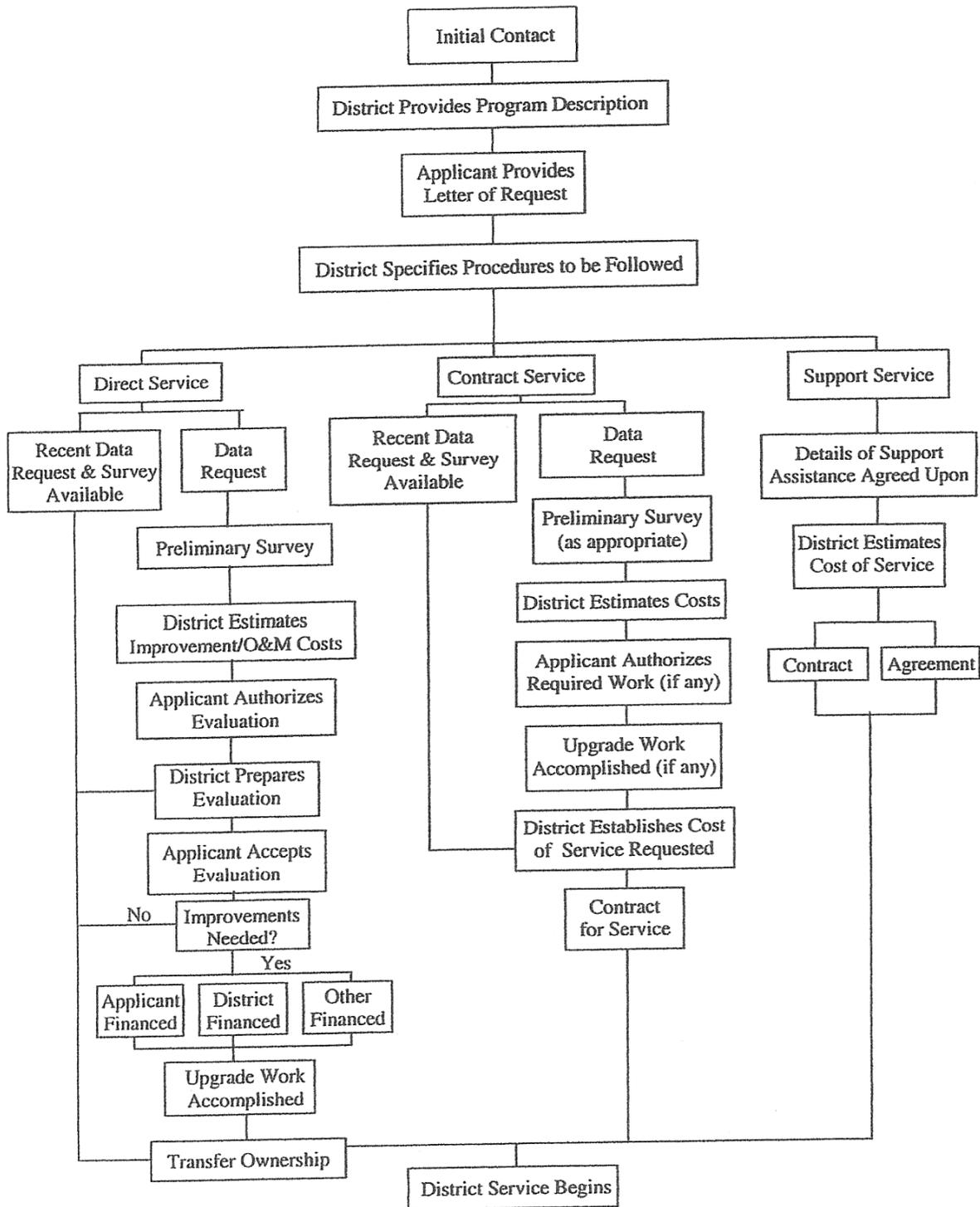


Exhibit 4.1 Catallite System Program Service Application and Review Procedures

Appendix A



Thurston PUD

Specifications and  
Standards for Design and  
Construction

2020



Signed by Lee H. Odell, PE  
March 24, 2021

Thurston PUD  
1230 Ruddell Rd SE  
Lacey WA 98503  
360-357-8783 or 866-357-8783  
[www.ThurstonPUD.org](http://www.ThurstonPUD.org)

# Appendix A Standards and Specifications for Design and Construction

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## **A1 Introduction**

This Section outlines the general and specific construction requirements for water systems operated and maintained by or for the District. The District will continue development of standards for all satellite systems owned by the District.

Construction will meet the state and county minimum requirements for construction where the water system is located.

For water systems located in Pierce County, Pierce County Coordinated Water System Plan regulations must be followed, including Pierce County Code Chapter 17C.60.165 (fire flow) and Chapter 19D.130 (design standards)

# Thurston PUD

## Design and Construction Standards

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### **1. Project Review Procedures**

Most system modification projects shall be subject to plan and report preparation and review procedures, as required by the Department of Health (DOH), as the majority of system upgrades will be reviewed by DOH. Improvements such as backup generators, new sources, treatment, disinfection, and storage are all projects which require DOH review and approval. Construction of distribution mains that have been identified in previous water system plans may be installed by TPUD without project specific review and approval. These projects may be developed by the District or by other entities. In either case, plan development and review shall adhere to the following procedures:

1. All plans for distribution mains shall bear the seal of a licensed professional engineer in the State of Washington.
2. Plans prepared by others, not directly for the District, shall be reviewed by the District for compliance to a) the size and alignment planned in the earlier WSP, b) compliance with details and specifications outlined in the District's construction standards, c) compliance with DOH standards, and d) compliance with other construction standards and normal practices within the industry.
3. The District shall issue written comments to the plan preparer, if necessary, or shall similarly issue written approval of the construction plans. No construction shall be permitted prior to said written approval.

### **2. Policies and Requirements for Outside Parties**

All prospective developers who desire to obtain service from any of the District's systems shall do so under the planning guidelines set forth in the WSP for the individual system and according to the development and construction standards of the District. Other specific requirements for non-District sponsored expansion of a system include the following:

1. All required engineering for development of main extension plans shall be prepared by the developer's engineer, at no cost to the District.
2. Construct all necessary improvements designed in 1. above and as approved by the District, at no cost to the District.
3. Provide written certification from the developer's engineer that all construction has been completed in accordance with the approved plans.
4. Provide sealed as-constructed documents for the completed installation.
5. Provide successful bacteriological tests following installation.
6. Provide evidence of successful flow testing, if applicable.

7. Prepare, sign, and record any easements, bills of sale, and related documents required for placement of the installed improvements within the ownership of the District and for the District to properly manage and operate said improvements.
8. Pay all review, inspection, and connection fees, as well as special assessments, if any, related to the project in accordance with the District's fee schedule and as reasonable and customary.

### **3. Design Standards**

System design standards for various aspects of water system development and operation are taken into consideration by the District. Following is a summary of the applicable guidelines and regulations used.

#### **3.1 Water Quality Parameters**

Primary and secondary drinking water standards are established by the Washington State Department of Health through and in conjunction with the Environmental Protection Agency. Through WAC 246-290, specific procedures and frequencies are established for monitoring and testing of a variety of contaminants ranging from naturally occurring minerals (such as iron and manganese) to manmade pollutants (e.g. Pesticides, petroleum products, and sewage).

#### **3.2 Average and Maximum Daily Demands**

Values should be determined by actual meter readings. For new systems, analogous water systems should be used to estimate the values.

#### **Peak hour demand**

Peak hour demand criteria is taken from the "waterworks standards for group a public water systems". The standards establish expected peak hour demand based upon empirical data obtained from existing water systems in Washington State and as reported in various publications for water systems nationwide. Peak hour demand (PHD, or sometimes MID) is the flow volume required, usually during brief periods of the morning and evening, when water use by the community is at its highest (morning showers, evening cooking, washing, etc.) PHD is a function of the number of houses connected to the system and is a result of coincident schedules of the members of those households. PHD is not expected to vary significantly between systems, whether or not services are metered, since peak hour use is a "needs" driven quantity rather than an "elective" use of water.

#### **Storage Requirements**

Storage requirements are taken from the standards cited earlier. Storage is a combination of a variety of types of storage including equalizing storage (that storage required to buffer peak demand from system supply capacity), standby storage (that volume required to provide a degree of reliability), fire protection, and operational storage (the volume required to operate a reservoir which can include overboard protection, well pump cycling, dead storage at the base of the reservoir, etc.). Each of these types of storage is discussed in detail for individual systems in the water system plans for each water system.

### **Fire Flow Requirements**

The District serves water systems in several counties and multiple jurisdictions. Fire flow requirements vary between jurisdictions. Fire flow is not required for most the District water systems as the systems are typically small and rural. Generally, local Fire Marshals do not require fire flow for low density, small, or rural development. Specific requirements for fire protection are addressed in each of the water system plans.

For water systems located in Pierce County, Pierce County Coordinated Water System Plan regulations must be followed.

### **Minimum System Pressure**

Minimum system pressure is established by DOH at 30 pounds per square inch, available at the service meter or property line under PHD conditions.

### **Minimum Pipe Size**

Existing distribution mains vary widely from system to system but are generally 2-inch to 12-inch in diameter. New construction and required upgrades to the system will be made with a minimum of 6-inch diameter pipe per the criteria established in the waterworks standards.

### **Telemetry Systems**

Most systems owned or operated by the District do not contain, nor have a need for, telemetry systems. Some of the larger systems have been equipped with auto-dialers to signal power outages or other emergencies. New construction will assess the need for telemetry and remote annunciation using the criteria outlined in the waterworks standards.

### **Backup Power Requirements**

All systems with "closed" booster pump stations are required by the waterworks standards to have a backup power supply. The District has provided backup power for many of its systems but not for all. While not necessarily required to install back up power on all existing systems, the District has embarked on a program to install backup power when customers from owned water systems request a special assessment to do so. Major renovations of systems which include power upgrades and pump house reconstruction, are also including installation of a transfer switch and generator receptacle. All new construction will address backup power per the waterworks standards.

### **Valve and Hydrant Spacing**

Hydrants are not required for systems without fire flow requirements, as is the case for most of the District systems. Where required, new hydrants and drafting ports at storage reservoirs will be installed per local fire marshal requirements.

Mainline valves in new construction are installed at a maximum spacing of 1,000 feet. A minimum of two valves shall be installed at every tee and three valves shall be installed at every cross.

#### **4. Construction Standards**

TPUD has developed system-wide standards for construction including standard specifications, construction details, and general construction requirements. All construction, whether undertaken by the District or by public bid, include these standards as conditions of the contract.

#### **5. Construction Certification Procedure**

All completed construction projects shall be inspected and certified by the design engineer. In addition, the District shall monitor construction performed by public bidding to ensure that contract requirements and construction standards are being met. The design engineer shall also be required to provide a degree of construction observation, as necessary, in order to certify that the completed project meets the requirements of the final approved design. At a minimum, contractors shall provide proof of disinfection and successful coliform test results. Contractors shall also call for and conduct a pressure test, when specified, that shall be witnessed by the design engineer and the District. All construction contracts shall include stipulations that the contractor maintain one set of fully completed and accurate as-constructed documents to record any deviations from the contract plans or to note the discovery of below grade utilities or other structures. Successful recording of said documents shall be required for final payment to the contractor. No deviations from the approved plans shall be allowed without prior approval from the District, the design engineer, and DOH, where appropriate.

# Thurston PUD (District)

## General Construction Standards

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1. General Conditions
  - 1.1. Instructions to Bidders
    - 1.1.1. Request for Bids
    - 1.1.2. Select Bid List
    - 1.1.3. Qualified Bidders
    - 1.1.4. Intent of Specifications
    - 1.1.5. Specifications
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3. Construction Specifications
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- 3.2. Foundation
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  - 3.10. Door
  - 3.11. Hardware
  - 3.12. Keying
  - 3.13. Freeze Protection
  - 3.14. Well Head Construction
  - 3.15. Design/Construction Specifications and Standard
4. Appendices
- I Construction Contract/Bid Packet
  - II Notice of Award
  - III Notice to Proceed
  - IV Design/Standard Construction Specifications and Standard
  - V Standard Drawings

# Thurston PUD

## General Construction Standards

---

### 1. General Conditions

1.1. Instruction To Bidders - All contractors or sub-contractors wishing to perform work for the District are hereby instructed that as a precondition for bidding on such work they shall, in accordance with these general construction standards:

- a) Submit a Small Work Application found on the District's website at [www.ThurstonPUD.org](http://www.ThurstonPUD.org) and request to be approved as a District bidder.
- b) Thoroughly review the latest version of the District's general construction standards and all provisions thereof and all additional specifications included therein by reference.
- c) Receive written approval and acceptance from the District as a qualified bidder.

All contractors shall comply with all fair labor practices and state statutes. Each bidder and subcontractor are required to be properly registered with Washington State Department of Labor and Industries (over \$500.00 of work) prior to acceptance of bid. No bidder may withdraw a bid for at least thirty (30) days after the scheduled time of receipt of bids except as noted in the instruction to bidders. The owner reserves the right to reject any or all bids or to waive any irregularities or informalities.

1.1.1. Request for Bids - Plans, specifications and instructions may be obtained at the PUD Headquarters, 1230 Ruddell Rd SE, Lacey WA 98503, phone number 360-357-8783. The District will invite "qualified bidders" to bid various construction jobs as they become available.

1.1.2. Select Bid List - The District will, from time to time, solicit apparent qualified contractors to ascertain their interest in bidding District work. The District will maintain a list of "qualified bidders." The addition or removal from the District's list of qualified bidders shall be at the sole discretion of the District.

1.1.3. Qualified Bidders – Construction contracts shall be awarded to the qualified bidder submitting the lowest, responsive and best bid. During the District's evaluation of each bid, the District shall determine, at its own and sole discretion, whether a bid is responsive and adequate to perform the work and what bid is the lowest, best and acceptable to the District. Approval or non-approval of bidders, or bid proposals, shall be at the sole discretion of the District. The District's evaluation of bidders qualifications will be based upon, but not limited to, prior work experience, credit worthiness, industry reputation and the District's evaluation of the contractor's ability to read, evaluate, and follow the plans and specifications as

well as the District 's evaluation of the prospective bidder's ability to perform the work in accordance with the required schedule. Any bidding contractor must examine the site and all related physical conditions and judge for themselves as to the location and character of the proposed work, amount, and quality of the materials required and the work to be done, and other features encountered. If there is any doubt or obscurity as to the meaning of any part of the plans or specifications, it shall be brought to the attention of the District prior to bidding or execution of change order so that any necessary explanations or corrections may be made before submitting the bid. Failing such inquiry, the District's interpretation of the meaning shall be final and non-disputable. The District reserves the right to reject all bids and not award a contract or deem any bid unacceptable.

1.1.4. Intent of Specifications - It is the intent of these specifications to fully delineate the scope of work to be performed and to form the basis for a construction contract. All work performed for the District must in every detail comply with these specifications; any deviation must be pre-approved as specified in section 2.5 below. Any specification or requirement perceived to be inadequate or inappropriate must be clarified in writing prior to commencing any work. Failure of any bidder to request such clarification shall indicate bidder's acceptance of the District's interpretation of those specifications.

1.1.5. Specifications - Each bidder shall review and understand the "standard specifications for municipal public works construction," latest edition thereof, prepared by Washington State Chapter of American Public Works Association (APWA), and revisions and supplements thereto. Said standard specifications are made a part of these construction standards by this reference and hereby included as a part of and a requirement hereto. Should any conflict exist or develop during the course of the work, the District standard specifications shall prevail unless changed or clarified by a change order or addendum as described in section 2.5 below.

1.2. Design Engineering Drawings - For projects that include design engineering drawings as provided by the District's licensed design engineering consultant, "design engineer"; such drawings shall be considered a part of these specifications and shall be identified as an exhibit to the subject contract. The water system shall be constructed according to the approved plans. Any deviation from the approved plans will require approval from the design engineer and the health department. Should any conflict exist or develop during the course of the work, these District standard specifications shall prevail unless changed or clarified by a change order or addendum as described in section 2.5 below.

1.3. Codes - Bidders are notified that they must carefully examine the plans, special, supplemental and standard specifications, and familiarize themselves with all state, city, county, and other laws pertaining to this improvement. Where design engineering drawings and these specifications fail to address the requirements of any applicable state, local or duly authorized jurisdiction, the requirements and codes of the subject

governing authority shall prevail. Contractors must also examine and judge the locations and character of the proposed work, the amounts and quality of the materials required, and the work done, and other features encountered. If there is any doubt or obscurity as to the meaning of any part of the plans and specifications, it must be brought to the attention of the design engineer in writing in order that the necessary explanations or corrections may be made before submitting the bid.

- 1.4. Contract - The bidder that is awarded the contract will be required to enter into a written contract with the District. The contract must conform to the blank form attached hereto. See appendix ii. Prospective bidders are advised to fully comprehend the provisions of this contract before submitting bids;
  - 1.4.1. Notice of Award – The District will provide a written notification of the acceptance of the proposal.
  - 1.4.2. Contract Document – Final Contract will be signed by bidder and returned to the District.
  - 1.4.3. Notice To Proceed - The District will provide a written notification within 10 days of receipt of an executed contract and the District's verification of contractor having met all conditions of these construction standards shall issue a "notice to proceed". See appendix ii.
  - 1.4.4. Work Schedule - Contractor shall, within 15 days of notice of award, provide owner with a schedule of their intended progress.
  - 1.4.5. Time of Completion - All work as required under these contract documents, shall be completed within 150 calendar days of the date of notice to proceed unless otherwise specifically stated in the contract. Receipt of such notice to proceed shall be considered day one (1) unless otherwise specified. See appendix ii. The stipulated time shall allow for all equipment and component delivery and sufficient time for obtaining permits, installation and construction. The contractor shall diligently pursue completion of the project within the time specified or as such time as may be extended in accordance with these standard specifications.
  - 1.4.6. Shut Down - Any shut down of the work once a notice to proceed has been issued including shutdowns for weather, strikes or unforeseen conditions, will not constitute an extension of contract time unless specifically agreed to in accordance with section 2.5 below.
  - 1.4.7. Liquidated Damages - Should the contractor not complete the project within the time specified or as extended above, the District may, at their sole discretion, deduct as liquidated damages, \$100 per day for each day after the completion date that the project remains substantially incomplete. Said liquidated damages are not punitive but reflect actual costs to the District from not having the facilities available by the contract date.

- 1.5. Submittals - Submittals for all equipment or devices must be submitted to the District and approved by the District prior to use in execution of the work. Such submittals must include, at the minimum: manufacturer; model and or identification numbers; descriptive brochure; repair maintenance and parts information.
- 1.6. The District Standard Details - To facilitate and standardize construction, the District has created a series of standard construction details, see appendix IV; figures 1 through 26. All construction work performed for the District must fully comply with the District's standard details unless specifically changed per section 2.5 below.
- 1.7. Safety - The contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the contract. The contractor shall take reasonable precautions for the safety of, and shall provide reasonable protection to prevent damage, injury or loss to:
  - a) All employees on the job and other persons who may be affected thereby;
  - b) The work and materials and equipment to be incorporated therein, and
  - c) Other property at the site or adjacent thereto.

The contractor shall give notice and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons and property and their protection from damage, injury or loss. The contractor shall promptly remedy damage and loss to property caused in whole or in part by the contractor, a sub- subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the contractor is responsible except for damage or loss attributable to acts or omissions of the owner or design engineer or by anyone for whose acts either of them may be liable and not attributable to the fault or negligence of the contractor. All application, material handling, and associated equipment shall conform to and be operated in conformance with OSHA/WISHA safety requirements.

- 1.8. Traffic Control - Contractor shall provide traffic control plan(s) as required in accordance with APWA standards.
- 1.9. Locate Service - Contractor shall call underground locate at 1-800-424-555 a minimum of 48 hours prior to any excavation.
- 1.10. Insurance - Contractor shall provide owner with proof of all insurance as may be required by all current rules and regulations. Such insurance shall include, but not be limited to the following:

- a) Workman's Compensation Insurance: the contractor is required to furnish to the owner written affidavit from his carrier showing his compliance with the provisions of the Washington worker's compensation act. The minimum limits of liability under worker's compensation shall be as follows:

State - Statutory  
 Federal - Statutory  
 Employer's Liability - \$1,000,000  
 Benefits Required By Union Labor Contracts - Comply With Local Union  
 Wage Scale

- b) Contractor's Comprehensive General Liability Insurance: the contractor shall obtain and keep in force during the term of the contract and until final acceptance, comprehensive general liability insurance including coverage for completed operations, and comprehensive automobile liability insurance with not less than the following limits of liability. Policy shall include premises - operations, independent contractor's protective products and completed operations and broad form property damage coverage.

Commercial General Liability:	
Bodily injury and property damage each occurrence	\$1,000,000.00
Aggregate:	\$2,000,000.00
<hr/>	
Aggregate Products And Completed Operations:	\$2,000,000.00

- c) Aggregate products and completed operations insurance shall be maintained for a minimum period of two (2) years after final payment and the contractor shall continue to provide evidence of such coverage to the owner on an annual basis.

- d) Insurance Coverage Certificates. Prior to the commencement of work, the developer shall furnish to the owner acceptable proof of insurance on a form acceptable to the owner. All insurance certificates must have the project title and address. All insurance certificates shall specifically require forty-five (45) days' prior notice to the owner of cancellation or any material change. Owner shall be named as an additional insured on all certificates of insurance.

Contractor shall require all subcontractors to maintain insurance coverage that meets the minimum requirements of this section.

- 1.11. Owner Rights and Obligations - The owner shall furnish and pay for surveys and a legal description of the site. The contractor shall be entitled to rely on the accuracy of information furnished by the owner but shall exercise proper precaution relating to the safe performance of the work. Except for permits and fees which are the responsibility of the contractor under the contract documents, the owner shall secure and pay for other necessary approvals, easements, assessments and charges required for the construction, use or occupancy of permanent structures or permanent changes in existing facilities.

1.11.1. Owner's right to stop the work if the contractor fails to correct work which is not in accordance with the contract documents, the owner may issue a written order to the contractor to stop the work, or any portion thereof, until the cause for such order is eliminated; however, the right of the owner to stop the work shall not give rise to a duty on the part of the owner to exercise this right for the benefit of the contractor or any other person or entity.

1.11.2. Owner's right to carry out the work if the contractor defaults or persistently fails or neglects to carry out the work in accordance with the contract, the owner after 10 days' written notice to the contractor, and without prejudice to any other remedy the owner may have, may make good such deficiencies and may deduct the reasonable cost thereof, including owners expenses and compensation for the third party services made necessary thereby, from the payment then or thereafter due the contractor.

1.12. Pre-construction Meetings - A pre-construction meeting shall be held with the District's project manager and design engineer prior to the start of construction.

Workmanship and Inspections - Workmanship shall be of the best quality and none but competent mechanics shall be employed and shall be under the supervision of a competent foreman; and all completed work shall present a neat and proper appearance. All workmanship shall be in accordance with applicable local jurisdictions and shall comply with the most current copy of the state of Washington standard specifications for road, bridge and municipal construction, Department of Health regulations and American Water Works Association standard specification. All work and materials shall be subject to inspections at any and all times by the District's design engineering or architectural representative, and or the District's project manager. Should the contractor elect not to appear on the job when only subcontract work is being performed, contractor shall, by letter to the District's project manager, delegate this responsibility to one person in each subcontractor firm. Delegation of such authority will not relieve the contractor the responsibility for all work and material furnished, nor shall this release the contractor of his obligations, or liability under the contract and the Contractor's bond.

1.13. Materials - All materials must be of the highest industry standards and shall meet the quality requirements herein specified, and on the project drawings, specifications, or an approved equal. All materials shall be new, of the best quality, and free from defects, and must at least conform to all requirements of AWWA and APWA/WSDOT standard specifications latest version thereof. Each type of materials shall be of the same make and quality. All electrical materials, equipment and devices shall be approved by the Underwriters' Laboratory, Inc. for the purpose for which they are used. All plumbing and piping equipment shall meet the Appropriate American Water Works Association Standards.

Water mains larger than 2" and smaller than 14" in diameter shall be PVC AWWA C900 class 200. All water lines 2" or smaller shall be PVC schedule 80. All water mains 14" diameter and larger shall be ductile iron cement mortar lined thickness class 50.

All distribution system gate valves shall be resilient wedge, NRS (non-rising stem) with a-rings seals. Valve ends shall be mechanical joint or ANSI flanges. Valves shall conform to AWWA C509-80. Valves shall be Mueller, N&H, Claw, Kennedy or approved equal.

All valves inside the pump house 3" and smaller shall be bronze gate or ball valves. All valves 4" and larger shall conform to AWWA C509-80. All valves inside the pump house shall have hand wheels installed.

1.14. Substitution - In order to establish a basis of quality, certain materials or articles are specified by designation one or more manufacturers' names, brands or numbers. It is not the intent of the specifications to exclude other materials or articles that measure up to the standard of those specified. If the bidder desires to bid on materials or equipment other than those specified, he/she must obtain written approval from the District prior to bidding and submit complete data and samples as may be required to the District prior to bidding. Such samples must be submitted to the District at least six (6) working days prior to bid opening. Requests shall be in writing and in duplicate. Approved materials or equipment will be added to contract document by addenda.

1.15. Guarantee - The contractor shall be responsible for and guarantee that all items installed and workmanship performed by the contractor meet with the requirements of the plans and specifications, are first class in every respect, and that the contractor shall make good any defects or inoperable conditions which may develop within one year from the date of final acceptance.

The contractor shall furnish to TPUD any guarantee or warranty furnished as a normal trade practice in. Connection with the purchase-of any equipment, materials or items used in the construction of the project.

Final acceptance of the project shall not constitute acceptance of any unauthorized or defective work or material. TPUD shall not, after final acceptance, be barred from requiring the contractor to remove, replace, repair or dispose of any unauthorized or defective work or material or from recovering damages for any such work or material.

1.16. Definitions-

Owner:

Thurston PUD (District)  
1230 Ruddell Rd SE  
Lacey, WA 98503  
(360) 357-8783

Contractor: The party having submitted a bid acceptable to the District and having

executed a construction contract for the completion of a specific project.

**Design Engineer:** The licensed professional design engineering firm or individual designated by the District as the technical consultant responsible for the design, supervision and certification of the subject work, "design engineer."

**Contract Document:** The executed contract document as defined in section 1.4 of this document including all referenced design engineering drawings and or exhibits and all provisions of the latest edition of the District general construction standards.

**Work:** All construction improvements and related labor, supplies or subcontracts necessary to fully complete the project as defined in the contract document.

**Billing Period:** The District billing period shall commence on the first day of any month and end on the last day of said month.

## **2. Construction Contracts**

All District construction contractors shall be designated as one of the following three types of contracts:

- a) **New Construction** - All construction of new buildings and/or water systems are expected to fully comply with the design engineer's drawings and these specifications.
- b) **System Rehabilitation** - All contracts for system rehabilitation work shall include the requirement to bring all affected areas up to these District's general construction standards and the project design engineer's or architectural drawing.
- c) **General Repairs** - Any District contract for general repairs shall be for only the work specifically delineated and shall not require bringing any other part of the system up to the District's construction standards.

2.1 **Contract Administration** - All District construction contracts shall be administered by the District's designated construction administrator. The District may engage an outside design engineer to design and/ or supervise various portions of the work and be responsible for certification and acceptance by Washington State DOH. However, the District's project manager shall have the final authority relative to the overall project acceptance and authorization for payment.

2.2. **Contract Change Orders** - No change to the project shall be undertaken and will not be paid for by the District unless a properly executed change order has been signed by both parties prior to commencement of the work or change.

2.3. **Addendum** - Any addendum issued by the District shall be deemed a part of the contract whether or not cost changes are involved. If cost changes are involved, authorization of and payment for same shall be automatically provided for under section 2.8, below.

2.4. Exhibits - All exhibits referred to in the contract shall be considered a part of the contract and the District's general construction standard shall be a part of all contracts.

## 2.5. Payment for Work

2.8.1. General Contract - All contractors performing work under section 2.1, 2.2, or 2.3 defined above will be paid in full, or if in part, in a timely manner each month. Preconditions for said payment are as follows:

- a) Contractor shall, prior to the first payment request, provide owner with a cost breakdown for the project, to be used for billing purposes.
- b) In requesting payment, whether payment in full or monthly progress payments, contractor expressly warrants that he has paid all employees, payroll taxes, subcontractors and or suppliers as well as applicable taxes, permit fees or other cost attributed to the work. Should contractor, in any way, fail to comply with this provision, contractor specifically agrees to hold owner harmless relative to any resultant claim.
- c) All work to be considered completed must be certified as completed by the District's project manager by the end of the billing period and a payment request submitted by the contractor by the last day of the billing period.
- d) All work completed, and certified completed by the District's project manager, by the first of any month will be paid by the 15th of the same month.

2.8.2. Progress Payment - When the duration of any project is longer than one billing period, contractor at his own discretion may request monthly progress draws. The preconditions for said draws are as follows:

- a) Comply with all conditions of 2.8.1.a above.
- b) Provide owner, by the 1st of each month, with a percentage of completion tabulation of the amount of payment requested using the format of the cost breakdown as defined on 2.8.1.a. above.

2.8.3. Retention - Owner shall hold retainage in the amount of five percent (5%) of all payments authorized. Said retainage shall be retained by the owner and paid to contractor 30 days after final completion of the work and acceptance of same by the owner. Thirty-day period and acceptance by owner will not commence until all guarantees, instructions, as built drawings and requirements of the District's general construction standards have been met.

2.8.4. Payment For Change Orders – All change orders shall upon their execution by the parties in accordance with 2.5 above become part of the contract and shall be

paid for in accordance with the above provisions 2.8.

2.8.5. Payment Or Contractors, Subs And Supplies - It is, and shall remain, the obligation of all contractors to pay their subcontractors, suppliers, taxes, insurance and other obligations and hold the owner harmless with respect to any claims, liens, suits or other demands. In requesting any final or progress payment, contractors may expressly warrant and certify that they have complied with this obligation and agree to indemnify and hold owner harmless for any such claim that may arise whether during the progress of the work or after final acceptance and payment.

### **3. Construction Specifications**

- 3.1. Building Construction - Prevent collection of surface water on site and control drainage on and adjacent to site to prevent damage to the project or neighboring projects during construction. Erosion control measures shall include staked straw bale filters, fabric filter fences and or such other measures as may be required to properly control erosion. Said measure shall follow the design engineer's recommendation and details shown on the plan sheets. See figures 21 and 22.
- 3.2. Foundation - The building slab must bear on firm undisturbed earth below organic surface soils to an elevation below frost penetration. Foundation slab shall have #4 rebar placed horizontally in a 24" grid pattern. The 6" raised foundation edge shall have one #4 rebar -placed horizontally and continuously at the top of the wall and 1/2" anchor bolts placed 4' on center. See figure 3.
- 3.3. Framing - All framing shall comply with the local jurisdiction requirements and the UBC. Use 6"x8" door headers at exterior walls. All wood in contact with concrete shall be damp proofed with 15# felt paper, sill plate gasket and pressure treated with waterproof preservative. Bolts and nuts bearing against wood shall be provided with flat cut washers. Plates shall be anchored into concrete with 1/2" round anchor bolts @ 4 feet on center. See figure 1.
- 3.4. Roofing - All structures shall be roofed with pre-design engineered manufactured trusses at 24 inches on center, 7/ 16 OSB sheeting, 15# felt paper and 20 year, 3-tab composition shingles with continuous ridge vent and a 4" roof vent for exhaust fan. Aluminum, white gutters and down spouts shall be installed where appropriate. See figure 1.
- 3.5. Floor Drains - Floor drains shall be installed in all TPUD structures and shall be constructed as detailed in figure 24. Floor drains shall be "piped to daylight" or to a dry well as detailed in figure 25.
- 3.6. Backwash, Discharge, Scuppers - All relief, overflow and or discharge lines shall be piped into a separate scupper and connected into the floor drain system. All piping discharge into said scupper shall be constructed with a minimum- 1" air gap, see figure 25.

### 3.7. Electrical

- 3.7.1 Electrical Service - All District facilities shall be supplied with underground electrical service. Service panels shall be sized to accommodate all currently anticipated equipment and shall have the capability of adding sufficient breakers to increase the total load by 1/3. Electrical service, where emergency generators are provided, shall include switching capabilities as provided.
- 3.7.2 Electrical-Buildings - All installation of electrical systems and/ or electric heating equipment and other electrical devices shall be as per manufacturers requirements and shall conform to Underwriters Laboratories standards and all local codes. Interior light fixtures shall be ceiling mounted and accept 100-watt incandescent bulbs and all lighting shall be controlled by a wall switch. Submittals for all electrical devices shall be provided per section 1.5. Electric heater shall be 1500-watt wall mounted forced air heater, controlled by a thermostat. A ceiling exhaust fan shall be installed and connected to a timer to provide air circulation.
- 3.7.3 Emergency Generators - Generators when specified shall be sized to operate all potential pumps and equipment simultaneously unless otherwise specified. The type of generator installed must be approved by the District. All generators shall be controlled by an automatic switching system designed to switch to emergency power immediately upon any power failure. Generator controls shall include, but not be limited to an automatic auto dialer or other device to provide the District's office with at least the following conditions:
- Switch to emergency power
  - Well pump failure
  - Low water conditions

All District generators shall be automatically operated by propane fuel. Propane tanks for generator operation shall be sized to provide a minimum of seven (7) days operation under severe weather conditions and shall be place a minimum of 10' from any building on a concrete pad and shall otherwise conform to all applicable codes. All generator and propane tank installations shall be fenced in compliance with these specifications.

- 3.8. Insulation - All pump houses and the District's facilities shall be insulated with R-19 insulation in the walls and R-30 in the ceiling as a minimum.

### 3.9. Painting

- 3.9.1 Structure Painting - All structures shall be painted with a low luster, latex, and exterior paint with mildew resistant additives. This paint is to be used on all exterior and interior wood surfaces. All interior and exterior surfaces shall be covered with a minimum of two coats. The exterior base color shall be a neutral

beige or gray and the trim color shall be white or off-white, or as approved by the District's Director of Field Operations. All wood surfaces in the interior shall be painted with two coats and of the same white or off-white color used on the exterior trim.

3.9.2 Steel Reservoir Painting - The interior and exterior shall be painted with a fast curing epoxy paint that conforms to AWWA standard d 102- 78 for "painting steel water tanks" unless otherwise specified. All interior paint shall be certified with an NSF 60-61 listing.

3.9.2.1 Interior Coating: Base coat shall be "TNEMEC" series FC20 at 4-6 mils dry film thickness. Finish coat shall be "TNEMEC" series FC20-AA83 at 4-6 mils dry film thickness. The interior shall have a total finished dry film thickness of not less than 8 mils.

3.9.2.2 Exterior Coating: Base coat shall be "TNEMEC" series 161 of fc20 at 4-6 mils dry film thickness. Finish coat shall be "TNEMEC" series 73 (semi-gloss) at 3-5 mils dry film thickness. The exterior shall have a total dry film thickness of not less than 9 mils. Color shall be selected by the owner from color chips furnished by the contractor.

The tank shall be field sand blasted to near white prior to painting. The surface preparation shall be done in accordance with the paint manufacturer's specifications.

The contractor shall provide the following to the District's project manager or designated design engineer for approval prior to commencing fabrication.

1. Satisfactory evidence of the interior paint systems approval for potable water use.
2. The paint manufacturer's material specifications and system application instructions for all surfaces.

3.10. Door - the entry door shall be 3' x 6'8" metal doors with locking hardware. The contractor will be provided with a District pump house key for purposes of having the hardware keyed to the District's standard key.

3.11. Hardware - all door hardware shall be Kwikset model 400 t us 3, or approved equivalent. All locks shall be keyed to the District's keying and system. Contractor is to coordinate keying with the District's project manager.

3.12. Keying - all fences, buildings or facilities required by the construction documents to be keyed shall be keyed to the District's system. Contractor shall coordinate with the District's project manager to accomplish same.

- 3.13. Freeze Protection - protect exposed sections of water piping, shut-off valves, pressure reducers and other plumbing elements from freezing by using heat tape controlled by an automatic thermostat, appropriate insulation and protective covering shall be applied over the insulation and heat tape to prevent rain saturation and or rodent infestations.
- 3.14. Well Head Construction - All District wells are to be constructed according to AWWA standards and these specifications using a pitless adapter. See figure 2.
- 3.15. The District's Design/Construction Specifications and Standard can be found in Appendix IV

#### **4. Appendices**

- I Construction Contract/Bid Packet
- II Notice of Award
- III Notice to Proceed
- IV TPUD's Standard Construction Details
- V TPUD's Standard Construction Details

## APPENDIX II

### NOTICE OF AWARD

Notice of Award of Contract: (name & #)

Dear \_\_\_\_\_,

Thank you for bidding on contract # \_\_\_\_\_, for \_\_\_\_\_.  
You have been awarded the contract for this project in reference to your provided bid dated \_\_\_\_\_.

Attached is the contract for the above referenced project. Please be sure to review the contract and sign page 7, "Attachment 4: Contract" and return an **original** copy to the PUD office as soon as possible. If you require an original signed copy of the contract be returned to you for your records, please sign and return two copies of "Attachment 4: Contract" to the PUD. Otherwise, we will email a signed copy once the contract is completed.

**Please note:** per PUD policy, we require an original signed contract page; we cannot accept a scanned and emailed or faxed copy; please either mail or drop off at the PUD office. Thurston PUD Office: 1230 Ruddell Rd. SE, Lacey WA 98503

Once we receive the signed contract, we will review & sign the contract, issue a purchase order (PO), and issue the Notice to Proceed. You will receive a copy of the signed and executed contract and PO with the Notice to Proceed, work cannot commence until the notice is given.

Your contact for the job is \_\_\_\_\_, 360-357-8783  
ext. 125, email [\\_\\_\\_\\_\\_@thurstonpud.org](mailto:_____@thurstonpud.org).

Please provide your timeline/dates when the project can be completed.

Please let me know if you have any questions.

## **Appendix III**

### **NOTICE TO PROCEED**

Notice to Proceed: (name and #)

Dear \_\_\_\_\_,

Please accept this e-mail as your Notice to Proceed on the \_\_\_\_\_, project number \_\_\_\_\_.

Attached you will find a copy of PO # \_\_\_\_\_ for the work and a copy of the signed contract for your records.

Please be sure that you coordinate, at least 5 working days in advance, with \_\_\_\_\_, to schedule the date(s) of work and system shutdown(s) if required.

We require giving our customers at least 3 working days advanced notice for a scheduled outage.

\_\_\_\_\_ contact phone number is (360) \_\_\_\_\_.

Please contact the District with any questions you may have.

Thank you,

Appendix IV



Thurston PUD

Design/Construction  
Specifications and Standards

2020



Signed by Lee H. Odell, PE  
March 24, 2021

Thurston PUD  
1230 Ruddell Rd SE  
Lacey WA 98503  
360-357-8783 or 866-357-8783  
[www.ThurstonPUD.org](http://www.ThurstonPUD.org)

**THURSTON PUD  
GENERAL PROVISIONS AND DESIGN STANDARDS FOR DEVELOPER AND  
DISTRICT CONTRACTS  
2020**

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## **GENERAL PROVISIONS AND DESIGN STANDARDS FOR THE WATER DISTRIBUTION SYSTEM**

The Public Utility District No. 1 of Thurston County (District) General Manager has the right to require, add, modify, or delete any requirements (s) he deems necessary.

### **1. GENERAL**

These provisions cover the construction of water distribution mains of 24-inch and smaller diameter for privately financed projects in which the developer shall make all necessary arrangements to pay the construction costs directly to the Contractor. The developer must complete District's "Developer Extension Agreement" if applicable, and have it approved by the Manager before any work is started. However, if these provisions are part of a "Public Works Contract", they must be approved by the District's Board of Commissioners. The "notice of award" signed by the District Manager followed by a "notice to proceed" must be completed before any work can commence.

Please note that if not specifically covered in this DEA, then the *WSDOT Std. Specifications for Roads, Bridges, and Municipal Construction 2008* or current edition shall govern; Provided that the General Manager has the right to modify if (s) he deems necessary.

All pipe, fittings, valves, hydrants and other materials installed under these specifications are intended to form a durable section of the distribution system of ample strength capacity and provide the highest quality potable water. All materials must meet the District's standards as described within this document.

**Payment for Services**—the District's policy applies to all owners, contractors and developers that are petitioning the District to install water service connections, main extensions, and setting of meters, shall pay all costs prior to installation or scheduling of work activities. You will then be placed in a rotation on a first paid, first serve basis as work allows. The District usually schedules the work activity within two weeks, however, circumstances out of the District's control may prevent it from meeting this goal, and it may result in a longer period of time for commencement of work activities. The Director of Field Operations or Manager will make every effort to schedule the work as soon as possible on behalf of the owner, contractor or developer's schedule.

It is our Policy to eliminate dead end water mains wherever possible. All water mains must be looped or tied together from at least two directions to provide equal flow of water. This will increase the gallons per minute available for fire flow and help eliminate chlorine residual problems along with improving water quality. Blow offs are to be installed where ever looping is not able to be completed.

There shall be no unauthorized use of District fire hydrants during construction. Please see page 54 for hydrant meter regulations.

### **2. WORK QUALITY**

All the work shall be performed in a responsible, serious and skillful manner. First class work according to the true intent of the Drawings and Specifications as interpreted by the DEA & Specifications District's Inspector is required. The Inspector's decision as to the true intent of the Drawings and Specifications shall be final.

### **3. SUPERVISION OF CONTRACTOR'S EMPLOYEES**

The Contractor shall keep a competent person at his/her work site, as required under W.A.C. 296-155-650, to inspect the work and to supervise the conformance of the Contractor's operations within the regulations of the W.A.C.

### **4. CHARACTER OF CONTRACTOR'S EMPLOYEES**

The Contractor shall employ only competent and skillful persons to do the work and whenever the Inspector administering the contract shall notify the Contractor in writing that any person on the work is, in his/her opinion incompetent, disrespectful to other workers District staff or the public in general, or otherwise unsatisfactory, the Contractor shall forthwith discharge such persons from the work and shall not again employ them on this contract.

### **5. QUALITY AND CARE OF MATERIAL**

Any and all material necessary for the construction if applicable, any part of the improvements specified herein shall be of domestic manufacture and comply with the "The Buy America Act", and "The Buy American Act" and shall be new and of high quality and acceptable to the District's Inspector. The Contractor shall take care of, and be responsible for, any loss or damage from any cause to any materials delivered at or in the vicinity of the work to be used by him/her thereon in connection with this contract prior to its completion.

### **6. INSPECTION**

#### **A) THE WORK**

All materials furnished and work done shall be subject to inspection.

The Inspector monitoring the contract shall at all times have access to the work wherever it is in progress or being performed, and the Contractor shall provide proper facilities for such access and inspection. Such inspection shall not relieve the Contractor of the responsibility of performing the work correctly, utilizing the best labor and materials in strict accordance with the Specifications of this Contract. All material or work approved and later found to be defective shall be replaced without cost to the District.

#### **B) INSPECTOR'S AUTHORITY**

The District Inspector shall have power to reject materials or workmanship, which does not fulfill the requirements of these Provisions or Specifications, but in case of dispute, the Contractor may appeal to the Director of Field Operations of the District monitoring the contract, whose decision shall be final.

Nothing herein contained, however, shall be taken to relieve the Contractor of his obligations or responsibilities under this Contract.

### **7. ASBESTOS CEMENT PIPE**

When the contract drawings specify or it is otherwise necessary for the contractor to come into contact with or work on asbestos cement pipe, he/she shall comply with the procedures as required by W.A.C. 296-62 and W.A.C. 296-65. For information and notifications forms on the proper removal and packaging of asbestos materials contact the Puget Sound Air Pollution

Control Authority in Seattle at 206-344-7330 or 1-800-552-3565.

## **8. SAFETY AND HEALTH PROVISIONS**

The Contractor shall at all times have sole responsibility for the safety and health standards at the work site and the District assumes no responsibility. The Contractor shall exercise adequate precautions for the safety and health of all persons, including employees, and Subcontractor's employees, in the performance of this contract and shall comply with all applicable provisions of federal, state, county, and municipal safety and health laws and regulations. It is the Contractor's responsibility to furnish safety equipment or to contractually require Subcontractors to furnish adequate safety equipment to properly perform their work responsibilities.

If the District's Inspector witnesses a safety violation, he will advise the contractor first. It is the Contractor's responsibility to make any necessary corrections. Failure to correct safety violations shall be grounds for the District to notify the appropriate State or other authority to stop work on the project.

Any of the above actions by employees of the District shall in no way relieve the Contractor of his/her responsibility to provide for the safety and health of all persons, including his/her employees and the employees of the Subcontractor.

## **9. INDEMNIFICATION**

The Contractor acknowledges that pursuant to the terms of this agreement, the Contractor is totally responsible for the safety of persons and property in the performance of this Contract. To the greatest extent allowed by law, the Contractor assumes the risk of all damages, loss, cost, penalties and expense and agrees to indemnify, defend and hold harmless the District, from and against any and all liability which may accrue to or be sustained by the District on account of any claim, suit or legal action made or brought against the District for the death of or injury to persons (including Contractor's or subcontractor's employees) or damage to property involving contractor, or subcontractor(s) and their employees or agents, arising out of and in connection with or incident to the performance of the Contract except for injuries or damages caused by the sole negligence of the District. In this regard, Contractor recognizes that Contractor is waiving immunity under Industrial Insurance Law, title 51 RCW. This indemnification extends to the officials, officers and employees of the District and also includes attorney's fees and the cost of establishing the right to indemnification there under in favor of the District. Provided, however, this provision is intended to be applicable to the parties to this agreement and it shall be interpreted to allow a Contractor's employee to have a claim or cause of action against Contractor except insofar as may be necessary to effectuate the indemnification herein given.

## **10. PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE**

The Contractor shall procure and maintain for the duration of the Agreement, insurance against claims for injuries to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the Contractor, their agents, representatives, employees or subcontractors.

**No Limitation.** Contractor's maintenance of insurance as required by the agreement shall not be construed to limit the liability of the Contractor to the coverage provided by such insurance, or otherwise limit the Owner's recourse to any remedy available at law or in equity.

## **A. Minimum Scope of Insurance**

Contractor shall obtain insurance of the types described below:

1. Automobile Liability insurance covering all owned, non-owned, hired and leased vehicles. Coverage shall be written on Insurance Services Office (ISO) form CA 00 01 or a substitute form, providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage.
2. Commercial General Liability insurance shall be written on ISO occurrence form CG 00 01 and shall cover liability arising from premises, operations, stop gap liability, independent contractors, products-completed operations, personal injury and advertising injury, and liability assumed under an insured contract. The Commercial General Liability insurance shall be endorsed to provide the Aggregate Per Project Endorsement ISO form CG 25 03 11 85. There shall be no endorsement or modification of the Commercial General Liability insurance for liability arising from explosion, collapse or underground property damage. The Owner shall be named as an insured under the Contractor's Commercial General Liability insurance policy with respect to the work performed for the Owner using ISO Additional Insured endorsement CG 20 10 10 01 and Additional Insured-Completed Operations endorsement CG 20 37 10 01 or substitute endorsements providing equivalent coverage.
3. Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.
4. Builders Risk insurance covering interests of the Owner, the Contractor, Subcontractors, and Sub-subcontractors in the work. Builders Risk insurance shall be on a all-risk policy form and shall insure against the perils of fire and extended coverage and physical loss or damage including flood and earthquake, theft, vandalism, malicious mischief, collapse, temporary buildings and debris removal. This Builders Risk insurance covering the work will have a deductible of \$5,000 for each occurrence, which will be the responsibility of the Contractor. Higher deductibles for flood and earthquake perils may be accepted by the upon written request by the Contractor and written acceptance by the Owner. Any increased deductibles accepted by the Owner will remain the responsibility of the Contractor. The Builders Risk insurance shall be maintained until final acceptance of the work by the Owner.

## **B. Minimum Amounts of Insurance**

Contractor shall maintain the following insurance limits:

1. Automobile Liability insurance with a minimum combined single limit for bodily injury and property damage of \$1,000,000 per accident.
2. Commercial General Liability insurance shall be written with limits no less than \$1,000,000 each occurrence, \$2,000,000 general aggregate and a \$2,000,000 products-completed operations aggregate limit.
3. Builders Risk insurance shall be written in the amount of the completed value of the project with no coinsurance provisions.

## **C. Other Insurance Provisions**

The insurance policies are to contain, or be endorsed to contain, the following provisions for

Automobile Liability, Commercial General Liability and Builders Risk insurance:

1. The Contractor's insurance coverage shall be primary insurance as respect the Owner. Any insurance, self-insurance, or insurance pool coverage maintained by the Owner shall be excess of the Contractor's insurance and shall not contribute with it.
2. The Contractor shall provide the Contracting Agency and all Additional Insureds with written notice of any policy cancellation, within two business days of their receipt of such notice.

Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of contract, upon which the Contracting Agency may, after giving five business days notice to the Contractor to correct the breach, immediately terminate the contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the Contracting Agency on demand, or at the sole discretion of the Contracting Agency, offset against funds due the Contractor from the Contracting Agency.

All costs for insurance shall be incidental to and included in the unit or lump sum prices of the contract and no additional payment will be made.

### **Contractor's Insurance For Other Losses**

The Contractor shall assume full responsibility for all loss or damage from any cause whatsoever to any tools, Contractor's employee owned tools, machinery, equipment, or motor vehicles owned or rented by the Contractor, or the Contractor's agents, suppliers or contractors as well as to any temporary structures, scaffolding and protective fences.

### **Waiver of Subrogation**

The Contractor and the Owner waive all rights against each other, any of their Subcontractors, Sub-subcontractors, agents and employees, each of the other, for damages caused by fire or other perils to the extent covered by Builders Risk insurance or other property insurance obtained pursuant to the Insurance Requirements Section of this Contract or other property insurance applicable to the work. The policies shall provide such waivers by endorsement or otherwise.

### **F. Acceptability of Insurers**

Insurance is to be placed with insurers with a current A.M. Best rating of not less than A:VII.

### **G. Verification of Coverage**

Contractor shall furnish the Owner with original certificates and a copy of the amendatory endorsements, including but not necessarily limited to the additional insured endorsement, evidencing the Automobile Liability and Commercial General Liability insurance of the Contractor before commencement of the work. Before any exposure to loss may occur, the Contractor shall file with the Owner a copy of the Builders Risk insurance policy that includes all applicable conditions, exclusions, definitions, terms and endorsements related to this project.

### **H. Subcontractors**

Contractor shall ensure that each subcontractor of every tier obtain at a minimum the same insurance coverage and limits as stated herein for the Contractor (with the exception of Builders

Risk insurance). Upon request, the Owner, the Contractor shall provide evidence of such insurance.

## **11. OBSTRUCTION OF PUBLIC THOROUGHFARES**

Whenever, during the course of construction, it becomes necessary because of the nature of the work, for the Contractor to barricade any street, or any part thereof, or to place any obstruction which will impede the flow of traffic in any public thoroughfare, then the Contractor shall be required to give notice of the intended interruption at least (5) working days prior to such barricading or obstruction of any thoroughfare.

Such notice shall be given to, but not limited to, appropriate departments of governing authority of the County.

Where such obstruction or interruption to traffic interferes with normal usage of thoroughfares along scheduled routes of local transit companies, then such notice shall also be given to the companies, citing the thoroughfares to be affected, the nature of the obstruction and the period of time involved. The Contractor shall maintain during all phases of construction the access for local traffic and emergency vehicles.

The posting of flagmen, advance warning signs, barricades, traffic cones, flashers, etc., shall be the responsibility of the Contractor and shall be in accordance with the current "Manual on Uniform Traffic Control Devices for Streets and Highways" as accepted by the Washington State Department of Transportation.

The Contractor shall be responsible for all necessary detour signs and cones, and shall provide and place flashers and barricades within the project area and shall coordinate with the District Inspector all matters pertaining to the movement of vehicular and pedestrian traffic past the project area. In addition, the District Inspector shall be notified a minimum of three (3) working days in advance of the date and time that implementation is to be made for all detours, closures, and other activities involving the disruption of travel of pedestrian or vehicular traffic.

There shall be safe walkways provided and maintained at all times for pedestrians, subject to the approval of the Inspector.

Whenever, in the opinion of the Inspector, traffic conditions dictate, a uniformed officer shall be employed to control traffic until the Inspector determines that there no longer exists any traffic problem.

## **12. WORKING DAYS AND NON-WORKING DAYS**

A working day shall be Monday through Friday, 8:00 a.m. to 4:30 p.m. Any changes to this must have prior approval from the District Manager or Director of Field Operations. A non-working day is Saturday, Sunday, or legal District holidays.

## **13. WORK ON NON-WORKING DAYS**

Work on a non-working day will require that the District have five (5) full working days notice.

All work on a non-working day will require the District's Inspector and other District personnel, depending on the nature of the work, at their current overtime rates or the overtime rates.

All work on legal District holidays will require the District's Inspector and other District

personnel, depending on the nature of the work, at their current overtime rates of pay.

The District will give the final approval for work on a non-working day based on the availability of personnel.

#### **14. CLAIMS AND PROTESTS**

If the Contractor considers any work required of him/her to be outside the requirements of the contract, or considers any record or ruling of the Inspectors of the District as unfair, he/she shall ask for written instructions or decision immediately, and then file a written protest with the District against the same within five (5) days thereafter. Otherwise, the Contractor will be considered as having accepted the required work record or ruling.

#### **15. EXTRA WORK**

No charge to the District for extra work or any other charge in the contract will be allowed unless the extra work or change has been authorized in writing by the District Manager and unless the compensation or method of determining the compensation is stated in such written authority and agreed upon by all parties prior to completion of the extra work.

The District reserves the right to furnish any necessary materials, which were not included in the Drawings or Specifications as it deems advisable. The contractor shall have no claims for costs and profit on materials furnished by the District.

The Contractor's cost records pertaining to work paid for by the District shall be open to inspection or audit by representatives of the District during the life of the contract and for a period of not less than three (3) years after the date of acceptance thereof. The Contractor is required to retain such records for that period. Where payment for materials or labor is based on the cost thereof to forces other than the Contractor, the Contractor expressly guarantees that the cost records of such other forces shall be open to inspection and audit by representatives of the District on the same terms and conditions as the cost records of the contractor. If an audit is to be commenced more than sixty (60) days after the acceptance of the contract, the Contractor will be given a reasonable notice of time when such audit is to begin.

#### **16. PLANNING THE WORK**

The Contractor shall have a plan and schedule of his/her work. This plan and schedule must be approved by the Water District Inspector. A minimum of five (5) working days notice shall be given by the Contractor to the District Manager/Director of Field Operations prior to commencing work.

Such a plan shall cover but not be limited to the following points:

- a. The work shall be divided into sections in such a manner as to permit each section to be completed and cleaned up in the shortest time possible. The water main construction, once started shall continue until completed in its entirety without delay.
- b. The plan shall provide for the least interference with normal street traffic and access to abutting property.
- c. A study shall be made of the points at which heavy flushing flows may be disposed of. Such flows in the new mains shall be in the amounts 100 GPM in four-inch mains, 220

GPM in six-inch mains, 400 GPM in eight-inch mains and 900 GPM in twelve-inch mains. The Contractor shall provide tees and temporary blow-off valves and piping or temporary hydrants if necessary to discharge such flows at suitable points at no charge to the District

- d. Where a new main is replacing an existing main, all existing hydrants and customer services must be kept in use until the new main has passed the sanitary tests. The services can then be transferred to the new main and the new hydrants placed in service and the existing line abandoned. Follow the District's Disinfection Plan for this water system.
- e. The Contractor shall verify the location and elevation of all other utilities, including the existing water main to be connected to, sufficiently in advance of approaching them with the water main construction so that corrections in vertical and/or horizontal alignment may be accomplished if necessary.

If extreme weather conditions or other unforeseen circumstances are deemed by the Inspector to be unsuitable for proper installation of water mains in accordance with these provisions, the work shall not start or shall be interrupted until conditions have improved sufficiently as to allow the work to progress without delay until completed.

Contractor delays resulting from work required to be completed by District personnel, such as shutdown or tapping of existing mains, or installation of water services before street repairs, shall be considered by the Contractor in his/her schedule.

**17. WORK DONE BY THE DISTRICT** The developer shall perform or contract all work within the public rights-of-way of the water system. The District will provide the Points of Connection for the Developer's Contractor to match depth and grade. The connection shall not be made by the Contractor until all District provisions have been satisfied.

The Contractor will furnish all material and labor necessary to provide the required taps for testing and sterilizing. Water for testing and sterilizing will be furnished without charge to the Contractor.

DEA & Specifications Purity samples shall be collected and submitted to the testing lab by the District at the developer/contractors cost.

## **18. COORDINATION**

The Contractor shall diligently comply with the following requirements:

- a. Cooperate in planning and layout of the work well in advance of operations.
- b. Inform other Contractors of job requirements at proper time to prevent delay or revisions.
- c. Be informed of the requirements of other Contractors and the District and check his/her own work for conflicts with the work of other Contractors and that of District's crews.
- d. Insure delivery of materials and performance of work on coordinated schedule with other Contractors.

## **19. INSTRUCTIONS TO CONTRACTOR**

All instructions will be given by the District's Manager or his authorized agents (Director of Field Operations or Inspectors). No other instructions shall be recognized.

## **20. EXAMINATION OF DOCUMENTS AND SITE**

The Contractor shall exhibit that he/she has carefully examined all contract documents and site conditions, and understands the character, quality and quantity of work called for and all conditions of the contract. The Contractor shall carefully compare and check all documents for omissions and discrepancies. This coordination shall proceed each phase of the work and omissions and discrepancies shall be reported promptly to the District Manager or Inspector.

## **21. DRAWINGS**

The Contractor understands and agrees that the work herein described and shown on the Drawings shall be complete in every detail, even though the specifics of each required procedure or item is not explicitly mentioned. The Contractor will be liable to provide all labor and materials necessary for the completion of the work intended to be included and described in this contract. The Contractor shall not avail himself/herself of any unintentional errors or omissions that may exist herein or on the Drawings and shall notify the District of any perceived errors or omissions.

Anything mentioned in the Specifications and not shown on the Drawings and anything on the Drawings and not mentioned in the Specifications shall be of like effect and shall be understood to be shown and/or mentioned in both. In case of differences between Drawings and Specifications, the Specifications shall govern. In addition, in the event of any conflict between the Special Provisions and the Technical Provisions, the Special Provisions shall control. In case of discrepancy of figures between Drawings, Specifications or both, the matter shall immediately be submitted to the District Manager for his decision. Discrepancies shall not be adjusted by the Contractor, save only at his/her own risk and expense. The Manager shall furnish from time to time such detailed drawings and other information, as he/she may consider necessary.

## **22. EXISTING UTILITIES AND FACILITIES**

All design drawings for new facilities, and the requirements for notification, locating/marketing, protection and repairing of existing utilities and facilities shall be in accordance with RCW 19.122. As provided in the law, the contractor is responsible for maintaining all utility locate marks for 45 days before placing a call for renewed locate marks.

The developer/engineer shall contact all private and public utilities and show on the Drawings only those utilities within the project limits indicated as existing by the various utilities. When other utilities are replacing their existing utilities, District requires two to three feet clearance from its utilities.

It shall be the Contractor's responsibility to locate or have located in the field all existing underground utilities. Dial before you dig "811"

Existing utilities shown on the Drawings are not necessarily all utilities in the area and are only a guide. Exact locations must be determined in the field by the Contractor.

Once the utilities have been located, it shall be the Contractor's responsibility to maintain locations throughout the duration of the contract.

If the Contractor damages a utility, which has been properly located, the Contractor shall be responsible for all costs associated with the repair. Should the Contractor accidentally damage an underground facility, which is incorrectly located (as defined by Chapter 19.122 RCW) by the District, then the damage will be repaired at no cost to the Contractor. If requested, the contractor shall be required to dig up and expose utility. The Contractor shall have no claim for additional compensation or time against this contract due to improper location of utilities.

The Contractor shall not install any water facilities closer than ten (10) feet horizontally from sanitary sewers, five (5) feet from power lines and three (3) feet from all other utilities. All utility crossings shall have one (1) foot vertical clearance, with the exception of sanitary sewers, which shall only be crossed over by water mains with a minimum vertical clearance of 18 inches. Any variance of the above will require prior approval of the District Manager or his representative and be in accordance with the State's Pipeline Separation Design and Installation Reference Guide.

The Contractor shall assume all responsibility and expense for damage to existing improvements on or adjacent to the work site caused by his/her operation. The Contractor shall provide for the protection of poles, overhead and underground lines, concrete curbs, and existing structures at his/her own expense and shall be responsible for the expense of all necessary repairs.

The risk of loss resulting from changed or differing site conditions as defined in Revised Code of Washington Section 19.122.040 is the responsibility of the Contractor or his/her successors in interest.

When boring under an existing asbestos cement (AC) water main the following requirements will apply: 1) a section of the AC main will be replaced with either ductile iron or C900 PVC main of the same size if the vertical clearance from the top of the bore hole to the AC pipe is less than two (2) feet for Class A soil, less than three (3) feet for Class B soil or less than four (4) feet for Class C soil, 2) the length of the replacement pipe shall be at least 12" each side of the crossing bore hole, 3) a minimum of four (4) feet of replacement pipe.

### **23. CLEARING AND GRUBBING**

This item shall consist of clearing and grubbing, ahead of trench excavation, all areas with trees, stumps, brush, roots, vegetation, rubbish, and other objectionable material.

The limits of clearing as well as grubbing operations, are dependent to a considerable degree upon the Contractor's operations and it shall be his/her responsibility to determine these limits providing he/she does not go beyond right-of-way or easement lines. The clearing and grubbing shall be at least the width of the trench plus that needed for placement of material excavated from the trench.

Trees, shrubbery, and flower beds designated by the Inspector shall be left in place and care shall be taken by the Contractor not to damage or injure such trees, shrubbery or flower beds by any of his/her operations. If the Contractor damages or destroys said items which he/she has been directed to preserve, he/she shall replace it in kind acceptable to the Inspector, and guarantee the item to live for a period of one (1) year.

The refuse resulting from the clearing and grubbing operation shall be hauled to a waste site secured by the Contractor and shall be disposed of in a legal manner as to meet all requirements of state, county and municipal regulations regarding health, safety, and public welfare.

## **24. ALIGNMENT AND GRADE**

The proposed pipe alignment and grade is detailed on the accompanying contract Drawings.

Alignment and grade shall be taken from survey stakes provided by the developer's engineer, and placed at a maximum of 50 feet apart by a licensed professional surveyor or at his/her direction. Stakes shall be offset and shall have a lath guard stake showing the cut or fill to flowline of the pipe and finished grade. The District Inspector will check the staking prior to construction. A cut sheet shall be provided showing cuts to flow-line grade, finished grade and all other applicable information

Each installed pipe shall be checked for line and grade before proceeding with the next pipe.

Line and grade may be taken from curb or pavement when such structures parallel the work and shall conform to elevations and distances shown on the Drawings.

Revision of pipe alignment and/or grade may be required by the Inspector in the field should obstructions or unsuitable conditions be encountered, or an obviously more suitable location is evident.

## **25. INTERFERENCE**

The Contractor shall inform the railroads of any possible interference to insure that their facilities are properly protected during the water main construction.

All shrubbery, trees and private improvements adjacent to the work shall be carefully protected from damage.

Where the pipe is to be laid in a non-surfaced area, shrubbery and private improvements shall be removed, properly cared for and replaced upon completion of the work.

Where lawns are destroyed, four inches of topsoil shall be placed, rolled, and sod laid, all in accordance with the Inspector's approval. Arrangements shall be made by the Contractor with the Inspector to insure the success of the lawn. In lieu of the above, allowances can be made for grass seeding or hydro-seeding with prior approval of the District Manager. The construction site must be videoed or have pictures taken before and after the work.

## **26. TRENCH EXCAVATION**

All trenches shall be sufficiently true to line and grade to permit accurate alignment of pipe and shall clear the side of the pipe to permit proper tamping of the pipe bedding.

The minimum trench width shall be the nominal pipe diameter plus 16 inches. The maximum trench width shall be as required in Section 7.09.1 of the most recent WSDOT/APWA Standard Specifications.

The Contractor shall provide sloping-benching, or shielding for trench protection in accordance with WAC 296-155. This includes excavations that require entry by District crews to perform construction-related work. See Section 8, Safety and Health, of these technical specifications.

Pavement cuts shall be held to the minimum width required by the work and shall present uniform

lines. T-cut needed before permanent paving per WSDOT's or the County's specification requirements whichever jurisdiction is applicable.

If the District's Inspector deems the trench bottom to be unsuitable for supporting the pipe, the unsuitable material shall be removed and disposed of and Control Density Fill (CDF) and gravel or crushed rock placed for pipe bedding as directed by the Inspector.

Excavation at pipe joints shall be of ample size to permit inspection of all joints.

Pipe laying operations in certain areas may necessitate temporary removal of mail boxes, private driveways, drains, service lines, conduits, etc., to facilitate construction. In the event that the Contractor finds it necessary to remove the above mentioned items, it is to be particularly understood that it will be his/her responsibility to restore these items in a manner equal to their original condition and satisfactory to the Inspector. The Contractor shall maintain adequate temporary provisions for domestic deliveries, utility service and access to firefighting equipment.

The preceding requirement will be the same for any temporary removal of road culverts, whether under State, County, City, or private jurisdiction.

The Contractor shall keep the dust from his operations under control at all times to prevent a nuisance.

All stumps within four feet of the pipe shall be entirely removed.

Boulders and rocks shall be entirely removed or cut to full trench width and twelve inches below grade.

Where pipe is to be laid on fill, all topsoil and debris shall be removed from the existing ground and the fill made of suitable material thoroughly compacted to pipe grade by methods approved by the Inspector.

The Contractor shall provide all necessary bridges for the proper handling of traffic over the trench and shall provide access to private property where required.

The Contractor shall provide adequate cross drainage and prevent flooding of the trench.

**27. MATERIALS**

All materials shall be new, free from defects, of current approved manufacture, and of the quality specified or shown below.

DISTRICT FURNISHED MATERIALS (if applicable)

Materials supplied by the District will be furnished to the Contractor and will be picked up by the Contractor at the District's office or, if approved by Manager, the District shall make arrangements to have materials delivered. The Contractor will be required to sign a receipt for all materials supplied to him/her by the District.

Once the Contractor has received the materials, he/she will be fully responsible for control and security of the materials until formal final acceptance of the contract.

## A. PIPE

All ductile iron pipe shall conform to the latest revision of the ANSI/AWWA C151 and ANSI/AWWA C104 Specifications, Class 50 (CL52 for fire hydrant and fire line), except as these Specifications may be modified in the Special Provisions.

Only ductile iron pipe manufactured by U.S. Pipe and Foundry Company, Pacific States Cast Iron Pipe Company, Griffin Pipe Company, or American Pipe Company are acceptable.

SPECIAL NOTE: All gaskets furnished with pipe shall be styrene butadiene rubbers (SBR), unless specified otherwise by the Manager. When necessary, "Nitrile" (NBR) gaskets deemed will be required. When NBR gaskets are required they must be color-coded and/or marked in color so as to be easily identifiable as nitrile. All gaskets must conform to ANSI/AWWA C111-72 or the latest revision thereof. The gasket requirements for the specific project will be indicated on the face of the plan for the project.

## B. DOMESTIC DUCTILE OR EPOXY-COATED DUCTILE IRON FITTINGS:

All domestic (USA-made only) ductile iron fittings shall conform to the latest ANSI/AWWA C110 Specifications or ANSI/AWWA C153 for Mechanical Joint Compact Ductile Iron Class 350 fittings. All fittings shall be epoxy-coated ductile iron or have cement-mortar lining conforming to ANSI/AWWA C104. Mechanical joint glands supplied with the above domestic "ductile iron" fittings shall be ductile iron in accordance with the above specifications

### SPECIAL NOTE:

See note above under subsection A.

The end flanges of flanged gate valves shall conform in dimensions and drilling to the Standard ANSI B16.1 for cast iron flanges and flanged fittings, Class 125 unless specifically provided otherwise in plans or supplementary specifications. The bolt holes shall straddle the vertical centerline.

Gate boxes, manhole rings and covers and special castings shall be in accordance with drawings attached or as specified herein.

Fire hydrants and other restrained joints will be restrained by the use of "Megalugs" as manufactured by EBAA Iron, Inc., or approved equal, or where installation calls for FIELD LOK gaskets for 4" to 12" pipe as approved by District's Inspector.

## C. GATE VALVES

All gate valves shall conform to ANSI/AWWA Standard C509 or latest revision, Gate Valves for Ordinary Water Service, as manufactured by Mueller or AVK only with the following Modifications:

1. All gate valves shall be AWWA approved resilient wedge gate valves.
2. All gate valves shall be non-rising stems, furnished with O-Ring stem seals. Number, size and design shall conform to Section 3.12 of the AWWA Standards for gate valves.
3. All gates shall have square operating nut which operates left (counter clockwise) to open.
4. All gates, 20-inch or larger, shall be horizontal stem, equipped with machine cut cast

steel gears, extended type grease case, position indicators and bypass, all in accordance with the AWWA Specifications.

#### D. BUTTERFLY VALVES

All butterfly valves shall conform to AWWA C504-80 for Rubber Seated Butterfly Valves, Class 150B. The butterfly valves shall be Mueller or AVK "Linesal III". Butterfly valve installation must be approved for use on project by the District.

#### E. VALVE BOXES AND COVERS

Cast iron valve boxes and lids shall be as indicated on the attached Water District drawing. USA—Seattle/Tacoma style. All buried valves shall be provided with a valve box and lid with a PVC pipe as necessary. The Contractor shall maintain the location and provide access to all valves within the project. No valve shall remain buried during construction. The fire lines require a locking valve box type Tyler 6855.

#### F. TAPPING SLEEVES

Tapping sleeves shall be mechanical joint type or stainless steel (Romac, Smith Blair or Ford is acceptable), whichever type is specified on the plan.

The cast iron, mechanical joint sleeves shall be Model H-615 or H-619 manufactured by Mueller Company, or approved equal, and only when approved by District Manager to be used if the above cannot be used.

#### G. MECHANICAL JOINT RESTRAINT

Mechanical joint restraint shall be incorporated in the design of the follower gland and shall include a restraining mechanism which, when actuated, imparts multiple wedging action against the pipe, increasing its resistance as the pressure increases. Flexibility of the joint shall be maintained after burial. Glands shall be manufactured of ductile iron conforming to ASTM A536-80. Dimensions of the gland shall be such that it can be used with the standardized mechanical joint bell and tee-head bolts conforming to ANSI/AWWA A21.11 and ANSI/AWWA C153/A21.53 of the latest revision. Twist-off nuts, sized same as tee-head bolts, shall be used to insure proper actuating of restraining devices. The mechanical joint restraint device shall have a working pressure of at least 250-PSI with a minimum safety factor of 2:1 and shall be EBAA Iron, Inc., MEGALUG or approved equal.

#### H. T-HEAD BOLTS

Unless specified otherwise, all T-head bolts and nuts supplied for mechanical joint fittings, valves, sleeves, couplings, hydrants, tapping sleeves, etc., shall be made of high-strength, low alloy steel, conforming to ANSI/AWWA C111 Corrosion-resistant steel ("Cor-Ten"), or ductile iron of ASTM A536 specially alloyed and heat treated conforming to ANSI/AWWA Standard C111/A21.11.

## I. TIE RODS

Tie rods and nuts for hydrant laterals, etc., shall be made of high strength, low alloy steel conforming to ANSI/AWWA C111 ("Cor-Ten"), unless specified otherwise in the Drawings or Special Provisions.

## J. CONCRETE WORK

All work shall be completely "formed" except where otherwise noted on the Drawings, and all concrete shall have a strength of not less than 1800 PSI at seven days and 3000 PSI in 28 days. No concrete shall contain less than six sacks of cement per cubic yard.

The size of concrete thrust anchors will depend upon existing soil conditions and shall be as determined by the Water District Inspector. Concrete for anchoring up to 8-inch pipe fittings and valves shall be thoroughly mixed in clean containers at the job site or mixed at a batch plant. Concrete for anchoring fittings and valves 12 inches and greater shall be supplied from an acceptable batch plant.

All thrust anchors shall be supported by bearing satisfactory to the Inspector before any concrete is poured. Follow AWWA standard detail.

## **28. CONNECTIONS**

The contractor shall furnish temporary bracing material and incidental material as well as labor for trenching, backfilling and making connections to existing pipe lines.

The Contractor shall provide written documentation that 1) flushing has occurred and samples taken are satisfactory, 2) disinfection has been performed and bacteriological samples are negative, 3) a pressure test has been completed and accepted by the District's inspector, and 4) any other requirement by the District's Inspector prior to District's allowing the Contractor to make connection to the public water system under the observation of the District's Inspector.

Where the connection to an existing water main requires interruption of service to the area, the customers affected shall have a minimum of **72 hours advance notice, no connection shall commence after 12:00 p.m.** The Contractor and District's Inspector shall set the connection date. All fittings and materials necessary to complete the connection must be available at the job site for inspection and approval prior to setting the connection date.

The Contractor shall have all material and equipment required on the site of the work and crews organized to carry each connection through as a continuous operation before shutting down any pipe in service.

Should the Contractor cancel or fail to show for a mutually agreed upon scheduled work, he/she shall pay the District for cost incurred resulting from preparation and response for that work.

In all cases, operations of valves on mains in service and notification of customers will be done by the District or as directed by the District's Inspector.

Where connections are made to existing asbestos cement (transite) mains, sand shall be placed under the A.C. main before backfilling the trench. The connecting ductile iron pipe shall be properly supported to prevent settlement.

The Contractor shall notify affected customers of any water shut-downs.

## **29. INSTALLATION INSTRUCTIONS FOR PUSH-ON JOINT PIPE**

Any foreign matter in the gasket seat shall be removed; the gasket shall be wiped clean, flexed and then inserted in the socket in accordance with the manufacturer's recommendations.

As the gasket fits snugly in the gasket seat, it may be necessary to smooth out the entire circumference to remove any bulges, which would interfere with the proper entry of the spigot end. A thin film of food grade lubricant shall be applied to the surface of the gasket after it is in place, and to the spigot end of the pipe to be joined. Excess lubricant shall not be used beyond where the pipe will contact the gasket and only lubricant, as supplied and labeled for potable use by the pipe manufacturer, shall be used. The lubricant shall be stored in a container with a tight fitting cover and shall be applied to the gasket with a small sponge or brush. The container shall be kept closed and if the lubricant becomes contaminated with foreign material, it shall be discarded.

The spigot end of the pipe shall be clearly marked to indicate the depth of the bell socket and wiped clean, lubed and placed in approximate alignment with the bell of the pipe to which it is joined. The pipe shall then be inserted into the bell until the spigot end is in contact with the bottom of the bell socket.

Field cut pipe may be used; however, the outside of the cut end should be tapered back about 1/4-inch at an angle of 30 degrees with the center line of the pipe, care being used to remove any sharp edges which might injure or roll the gasket. All pipe must have a minimum of 36" of cover and a maximum of 48" of cover.

## **30. LAYING OF PIPE**

The Contractor shall provide all tools and equipment required in quantity and capacity sufficient to carry out the work promptly and safely.

The interior of all pipe, fittings, valves, and hydrants shall be cleaned of all foreign matter before they are laid in place and special attention be given to spigot ends and bells to see that no matter that will adversely affect the jointing is present.

The work shall be so arranged that bells are laid in the direction of progress, and on any appreciable slope, bells shall face up grade.

Pipe in and out of fittings shall be at least 10 feet long unless shown otherwise on the drawings or as required by the Inspector.

The interior of the pipe shall be protected from the entrance of trench water at all times, maintaining pumps at the bell holes if necessary until the joints are made up.

At all times when no laying is in progress, or other conditions warrant as determined by the District Inspector, open ends of pipe and fittings shall be plugged watertight to prevent the entrance of foreign matter or water into the pipe.

## **31. TESTING**

As each valved section is completed, all points where pressure reaction and movement may occur, shall be properly anchored, braced or shackled prior to pressure testing.

The Contractor shall furnish and assemble all testing equipment including measuring devices and shall furnish all labor required for testing. The District will not furnish test gages.

Upon completion of construction, the line shall be filled slowly by the District's Inspector, allowing an adequate amount of time for the disinfection of the newly constructed main. The pressure test shall be conducted a minimum of 24 hours after the filling of the pipe. The test pressure shall be 100 PSI over static (150 PSI minimum) shall be for a duration of one hour unless specified otherwise in the Special Provisions. There shall not be an appreciable or abrupt loss in pressure during the test period. The allowable leakage shall be specified in A Guide for the Installation of Ductile Iron Pipe published by the Ductile Iron Pipe Research Association.

While under test pressure, the entire installation shall be carefully examined for defective material and joint leaks.

Following the pressure test, flushing and residual test will be conducted. Then a purity test will be administered. Purity samples shall be collected and submitted to the testing lab by the District at the developer/contractors cost.

Local distribution pressure or test pressure shall not be applied to the newly installed water main unless the Inspector is present.

Defective material furnished by the Contractor or furnished in good condition by the District and damaged after acceptance by the Contractor shall be replaced by the Contractor at his own expense.

Defective material furnished by the District and discovered before final acceptance will be replaced with sound material by the District, but the Contractor shall remove the defective material and install the new material at his own expense.

If it is necessary to replace defective material, the pressure test shall be rerun after such replacement.

After the steps listed above have been completed, if applicable the District will schedule a fire flow test at its convenience.

## **32. DISINFECTION**

In laying of distribution pipelines, care shall be taken to insure that the interior of the pipe is kept free of foreign matter or trench water. As the pipe is laid in the trench, dry calcium hypochlorite shall be placed in each length of pipe in quantity sufficient to produce a chlorine residual of no less than 10 PPM in the filled line after the required 24-hour retention period.

The Inspector may require the Contractor to swab the inside of each pipe length with a chlorine solution prior to laying the pipe. This requirement will depend on the time of year, usually May through September, or condition of piping interior.

Upon completion of construction, the line shall be filled slowly by the Inspector and a pressure test conducted. The chlorinated water resulting from the initial filling shall be retained in the line for a period of not less than 24-hours, after which the contractor, under the direction of the District's Inspector, will remove the chlorinated water, de-chlorinate the water by approved methods, and thoroughly flush the line. The first set of bacterial test samples will be taken 24-hours after the initial flushing. A second set of bacterial test samples may be taken after a minimum of 48-hour retention period of the water remaining in the pipe after the initial flushing.

Should the samples not test free of coliform bacteria, the line shall be disinfected again and re-flushed, at the expense of the Contractor, until two successive satisfactory samples are obtained.

Forty-eight (48) hours is the minimum time required by the bacteriological laboratory to process samples.

### **33. SALVAGED MATERIAL**

By the request of the District, Contractor may be required to deliver to the District yard those materials requested, at no expense to the District.

### **34. SERVICES AND SAMPLE STATIONS**

Corporation stops with brass pipe stubs will be installed by District crews at selected points along the mains for use as sample stations, air release, and points to apply test pressure. The sample stations will be removed by District crews after bacterial tests and pressure tests are completed unless the stations can be used for new water service laterals.

The water main Contractor shall provide the necessary excavating required for removal of all the corporations and stubs not designated for services.

Where existing services are to be transferred from old to new mains, the work of the Contractor shall be so planned and coordinated with the District's work such that customers will be shut off as briefly as possible. Contractor is also required to notify customers **72 hours in advance** of water outage.

Where water service lines are installed by the Contractor, the lines shall include all work from the tap on the water main to and including the connection to existing property side service pipe. If existing property side service exists, the service line shall terminate at the tail of the meter setter. The work includes the service corp, pipe, fittings, meter, meter riser and meter box. If any adjustments are required to the service installation because of surface grade changes or other conflicts, the work shall be performed by the Contractor at no cost to the District.

### **35. TRENCH BACKFILL**

#### General

Prior to backfilling all form lumber and debris shall be removed from the trench.

Backfill shall be selected excavated material free of rocks over six inches, wood, trash, concrete, asphalt or other unsuitable material.

Excavated material, which will not readily compact to form solid, dense backfill, will be rejected

by the Inspector.

Surplus suitable material from other parts of the job can be used as backfill when available.

CDF and gravel shall be furnished to make up any deficiency in the available excavated material. CDF and gravel shall be specified by Section 9-03.12(2) of the 1988 WSDOT/SPWA Standard Specifications, or as approved by the Inspector.

Backfill between bell holes or joints may be started as soon as the joints are made up, but all joints shall be left exposed until after the inspection and pressure test or approved by Inspector. The District’s Inspector or Director of Field Operations will determine if Native Backfill is not approved for anything over 6 inches.

Under Private Improvements

Private driveways, road entrances, etc., shall immediately be backfilled and compacted as required herein to provide access to residents at all times.

Backfill materials to be placed where private roads, shoulders, driveways, parking lots, sidewalks, etc., will be constructed or reconstructed over the trench shall be full depth bank run sand and gravel or crushed rock, as specified by the most recent WSDOT/APWA Standard Specifications, Section 7.09.3.Inside State, City or County Right-of-Way

The Contractor shall inform himself/herself of the requirements of the State, City or County with respect to backfill material under roadway surfaces, shoulders, etc.

**36. COMPACTION OF TRENCH BACKFILL**

The Contractor shall compact the backfill by use of approved methods. Water main trenches backfill may be compacted in successive layers of loose materials not more than 24 inches in depth by use of a tractor mounted compactor such as a “Hopak” or the equivalent. When portable, hand operated air or gasoline driven compactors are used, the backfill shall be placed in successive horizontal layers of loose material not more than 6-inches in depth and regardless of the method used by compacted to at least 95 percent of maximum density. Maximum density shall be determined by The Washington Densometer Method or as required by the Inspector.

The Contractor shall provide the District with compaction test results for all trench backfill at points along the construction as designated by the Inspector. The compaction tests shall be performed by the Washington State Certified Testing Laboratory.

The Contractor shall inform himself/herself of the additional or different methods of compaction inside State, County or City dedicated rights-of-way.

Hand operated mechanical tampers shall be impact type air or gasoline driven as approved by the District’s Inspector. The Contractor will be required to adjust gate valve boxes to the finished paving grade upon completion of the paving. These will include existing boxes affected by the water main construction and/or new paving and new boxes installed by the Contractor or the District which lie within the water main construction and/or new paving. Where gate valve boxes are located in the unpaved areas of the project, the Contractor will be required to adjust the boxes to the final contour of the ground. Meters, yokes and boxes shall be adjusted by the District at the

expense of the developer or as directed by the Inspector with the District Manager's approval.

Where hydrants do not conform to final paving grades or ground contours in accordance with District Drawings, the developer will be required to have his Contractor remove said hydrants and install the proper bury hydrants or extensions, as determined by the District's Inspector.

**37. OFF-SITE CLEAN UP**

All loose surface-stones two inches in diameter or larger shall be removed from the top of the trench and roadway after the backfill has been firmly compacted.

Shrubbery, fences, private improvements, lawns and surfaces disturbed shall be restored to a condition equal to or better than its original condition.

Surplus excavation, pipe line material, tools, temporary structures, and rubbish shall be removed and disposed of by the Contractor, and the construction area shall be left clean at the end of each day to the satisfaction of the District's Inspector.

All the off-site clean up and repair work shall be completed prior to placing the new water mains into service.

**38. ROADWAY REPAIR**

No pavement shall be cut unless shown on the prints. A copy of the right-of-way permit from County or the City will be available per contractor's request. Any cutting of the pavement will only be permitted when granted permission by the local authority.

After backfilling, a temporary patch of cold mix asphalt shall be placed on road or street crossings and driveways until the permanent paving patch can be placed.

All roadway or traveled surfaces shall be restored to their original condition or better to the extent required by local authority. Videos or pictures must be taken before work begins.

The Contractor shall inform himself of the requirements for street surface repairs in public roadways and shall make all necessary arrangements with the proper authority for such repairs all public and private roadways shall be permanently repaired prior to placing the new water mains into service. Pavement restoration will include alligator cracking, etc., not ditch line of new water main only.

If a jurisdiction has a 5-year moratorium of no cuts into new roadway pavement, the Owner/Developer shall be responsible for any penalty cost if it is required for road cuts prior to 5 years.

**39. USE OF PORTION OF IMPROVEMENT**

The District reserves the right to use for service and distribution purposes, any portion of this improvement which has been sufficiently completed. Such use shall not be construed as acceptance of any part of the work or as a waiver of any claim the District may have against the Contractor.

#### **40. GENERAL SERVICE INSTALLATION REQUIREMENT FOR NEW PLATS**

No service installations shall be started until the bacteriological samples are approved. The heavily chlorinated water from the new main(s) shall be de-chlorinated by the Developer.

The Developer shall complete grading of the right of ways to within 6" of the sub-grade, prior to service installation. All roadways and easements required for access to the service locations shall be maintained to be passable by automobile traffic.

Disposal of all soils removed from service & meter trenches is the responsibility of the Developer. They are to be left on site, at a location to be coordinated by the District and the Developer.

The Developer is responsible for **marking** underground utility lines and conduits on the project. The Developer is responsible for **repairing** any unmarked underground utility structures damaged in the course of installing services or meters.

When excavating around, or exposing any District structure in a new plat, the District Inspector in charge of the project shall be notified, to ensure that the integrity of the installations are maintained.

The Developer shall, upon request by the District, excavate the sample station locations for removal by District personnel.

The Developer shall coordinate with the District Manager or the District's Inspector to determine appropriate service stub locations.

#### **41. WATER SERVICE LOCATIONS**

Service locations shall be marked with the following staking plan:

A hub & stake at the meter location, marked with the letters W-MTR, the lot number it will serve, and the finished grade. The top of the stake shall be painted blue, or marked with a blue ribbon.

A hub & stake, offset no less than 5 feet and no more than 10 feet behind the water meter location, marked with the letters W-MTR, the finished grade at the meter and the lot number it will serve.

Lot lines shall be indicated with a lot corner stake, and a 10 foot offset stake, marked with the lot numbers.

Radius hubs shall be installed for all Cul-de-sacs, and left in place until service installations are complete.

#### **42. PLACEMENT OF METERS**

Water meters shall be located in the right of way, in front of the lot being served. Meter locations that cannot meet this requirement must be approved by the District Manager.

All meters installed on adjacent lots shall be positioned the same distance from the edge of the pavement.

If property corners are used by other utilities, the service may be located in the center of the lot.

Meter line-setter service splitters, whenever possible, shall be used at property corners in order to be able to serve two properties. When a fire hydrant is set at a property corner, water service shall have five-feet of separation.

Meters shall be laterally offset a minimum of 2 feet from the lot corners and 5 feet from Fire Hydrants.

Where possible, the meter shall be located between the road and the sidewalk. When the sidewalk meets the curb or roadway, meters shall be located behind the sidewalk.

Whenever possible, to reduce the amount of trenching, services shall be installed in common trenches that serve adjacent lots.

Avoid locating meters in proposed driveways, or other paved areas.

Water service pipes shall not be located parallel with and within 10 feet of any existing or proposed sanitary sewer line, manhole, transformer, vault, or utility pedestal. Water service pipes shall not be located parallel with and within 5 feet of any existing or proposed electrical conduits, cables, street lighting poles, gas pipes, or communication cables.

Meter locations shall be placed no closer than 3 feet to any other utility trench running perpendicular to the water service line.

Developers are responsible for mis-marked lots, incorrect grades, incorrect meter locations, and **will be charged for** any changes made after installation is complete. Developers are also responsible for changes in grade made by landscaping contractors or any other sub-contractor.

Developers are responsible for damages to property by Contractor or subcontractors after installation.

**43. LANDSCAPING AND CLEARANCE REQUIREMENTS**

GENERAL

- No improvements (building, wall, fence, rockery, tree, bush, structure, etc.) will be allowed that block, restrict or impede access to the water facilities.
- The ground around the water facilities needs to remain at the original grade unless approved by the District.
- No trees can be planted over or within 5 feet of water mains. Large trees at full growth need to be planted over 8 feet away from water mains.
- Where trees will be large (over 20 feet tall) at full growth and are planted near water facilities as described below, vertical root barriers need to be placed.

WATER METERS

- Meter box is to be placed at the property line.
- Meter box is to be set level at final grade.
- Keep grass, gravel, beauty bark or other landscape materials off of the meter box.
- Low growing shrubs need to be planted and kept trimmed to allow a minimum of 3 feet of clearance from the meter box.
- Larger shrubs and trees need to be planted no closer than 8 feet from the meter box.

- All structures, plants, fences, etc. need to be installed or trimmed to allow a minimum of 6 feet of overhead clearance in a 3-foot radius around the meter box.
- Fences near the meter box may only be adjacent to one side of the box. The remaining 3 sides need to maintain a minimum 3-foot clearance.
- Keep objects such as trash cans, flower pots, bird baths, etc. off of and away from the meter box.
- Any change to customer grade or landscaping at the meter box may require District inspection and approval.

#### FIRE HYDRANTS

- Fire hydrants are to be placed in accordance with the Fire Marshal's requirements.
- Fire hydrants need to be set with the breakaway flange at or slightly above final grade.
- Landscaping around hydrants must maintain a minimum of 18 inches between the discharge ports and ground level.
- All structures, plants, fences, etc. need to be installed or trimmed to allow a minimum clearance of 3 feet around the hydrant, and larger plants or trees need to be planted at least 8 feet away.
- All structures, plants, fences, etc. need to be installed or trimmed to allow a minimum of 6 feet of overhead clearance in a 3-foot radius around the hydrant.
- No shrubs, trees, fences or obstructions can be on the street side of the hydrant.
- There is to be no parking or obstructions within 10 feet of the hydrant on the street edge.

#### VALVE BOXES

- Valve box is to be set level at final grade with "ears" facing in the same direction as the water main.
- Keep grass, gravel, beauty bark or other landscape material off of the valve box.
- Low growing shrubs need to be planted and kept trimmed to allow a minimum of 3 feet of clearance from the valve box.
- Larger shrubs and trees need to be planted no closer than 6 to 8 feet from the valve box depending on the anticipated full growth size.
- All structures, plants, fences, etc. need to be installed or trimmed to allow a minimum clearance of 3 feet around the valve box.
- All structures, plants, fences, etc. need to be installed or trimmed to allow a minimum of 6 feet of overhead clearance in a 3-foot radius around the valve box.
- Keep objects such as trash cans, flower pots, bird baths, etc. off of and away from the valve box.
- Do not landscape in a manner that will block the view of the valve box from the street.

Public Utility District No. 1 of Thurston County  
**DESIGN AND CONSTRUCTION SPECIFICATIONS FOR DEVELOPERS &  
CONTRACTORS**  
**2019**

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**Public Utility District No. 1 of Thurston County  
DESIGN AND CONSTRUCTION SPECIFICATIONS  
FOR DEVELOPERS & CONTRACTORS**

**1. DEVELOPER PLANS**

The Public Utility District No 1 of Thurston County (District) General Manager has the right to require, add, modify, or delete any requirements he deems necessary.

*PLANS MUST BE PRESENTED FOR APPROVAL PRIOR TO COMMENCEMENT OF WORK*

- A) Right-of-way lines and widths for proposed road and side streets.
- B) Label all streets, adjoining subdivisions, and easements with dimensions.
- C) Water main line locations shall clearly show dimensions from street center lines or from property lines.
- D) Show existing and proposed fire hydrants. The Fire Marshall shall designate the location of all new and relocated fire hydrants. Final design drawings shall have the Fire Marshall's signature of approval before construction can start.
- E) Include size, type, and pipe classification for each run of pipe.
- F) All pertinent fixtures shall be identified with size and type.
- G) All blow-offs for sampling will be charged to the Contractor. It will be the Contractor's responsibility to disconnect.

**2. INSPECTION & INSPECTORS**

- A) The cost of all District Inspectors will be at a current hourly rate. The Inspector shall be present during all phases of the installation of the water system; any overtime shall be at a two-hour minimum.
- B) A **Pre-Construction Meeting** will be required prior to the commencement of the work. This meeting will include introduction of District project staff including the Inspector, discussion with the project staff, contractor, utility companies and permitting agencies of any concerns, and a general walk through of the proposed job. Written meeting minutes must be taken.
- C) The District's Inspector is not a safety inspector, however, if he determines that inspection is needed in any areas, he can make the contractor meet safety requirements.
- D) A 72-hour notice shall be given to the District before a District Inspector is needed on-site of the project. If a District Inspector is scheduled to the project site by the developer or contractor and a last minute cancellation for his services is made, a \$100 charge will be applied to the developer or contractor, whichever is appropriate.
- E) As-built measurements must be taken daily and a copy given to the District's Inspector.

### **3. SURVEYING**

Survey control and field staking shall be established by the Developer/Contractor or the District's Engineer depending on whether the water system work is under a Developer or District contract. Water main alignment offset stakes or marks shall be set at no more than 50-foot intervals. Water main grades may be required to be shown on the offset stakes/marks, and intermediate stakes as needed, for large water main installations or where known utility line conflicts exist.

The Contractor shall provide all other intermediate measurements; horizontal, vertical and construction or control staking as needed for his operation.

### **4. WATER MAIN DESIGN**

Capacity: Minimum design capacity for water mains serving single family residential areas shall be 1,000 GPM over and above average maximum demands at the farthest point of the installation.

*Policy to eliminate dead end water mains:* During new construction main extensions, whenever possible, all water mains must be looped or tied together from at least two directions to provide equal flow of water. This will increase the gallons per minute needed for fire flow and help eliminate chlorine residual problems, improving water quality and provide reliability to the water system infrastructure. If a new dead end main is installed where a loop is not possible then a flushing station must be installed at the end of the main, this installation must include adequate drainage. See standard drawings for drawings.

Minimum design capacity for fire flows serving buildings other than single family dwellings shall be determined by the fire marshal.

Minimum pipe size is 8-inch. Pipe shall be ductile iron of domestic manufacture, Class 50 pursuant to ANSI A21.50 and AWWA C-150 or C900 PVC.

Maximum design velocity during fire flows shall not exceed 7.5 feet per second during peak day demand.

Whenever possible, maximum deflection by fitting is 45°. Successive bends shall be separated by straight runs not less than ten (10) diameters in length.

### **5. CONNECTION TO THE EXISTING WATER SYSTEM & SYSTEM MATERIALS**

All connections to the existing water system shall be accomplished by District unless approved otherwise by the District

(a) Water Mains: Water mains shall be constructed and tested in accordance with Section 7-11.1 through 7-11.5 (02) of the Standard Specifications. Bacteriological test samples will be taken by the District, but at the Contractor's expense. Purity samples shall be determined as acceptable by the testing lab before connections are made to the existing water system. All of the following will be inspected by District Inspectors after the successful installations are completed.

(b) Pipe for Water Mains: Pipe for water mains 6-inch and larger shall be ductile iron and shall be thickness Class 50 or greater, with Tyton or approval equal joints or C900 PVC. Pipe shall be cement lined in accordance with A.S.A. Specification A 21.4-1964. All fire lines and fire hydrant pipe shall be Class 52.

(c) Pipe Fittings for Water Mains: Pipe fittings for water mains shall be short body, ductile iron, for 150 PSI working pressure. They shall be mechanical joint conforming to AWWA Specifications C153.

(d) Valves: Gate valves shall be the standard used in this District. A by pass line may be required in certain instances on valves larger than 8-inch.

(e) Sufficient valves shall be provided on water mains so that inconvenience and sanitary hazards will be minimized during repairs. Valves should be located at not more than 300- foot intervals in commercial areas and at approximately 600-foot intervals in other areas.

(f) Approvals for purity sample tests shall be delivered to the District before any connection to the water system is made.

## **6. GATE VALVES**

Gate valves shall conform to the latest AWWA standards.. Rated for cold water, 200 P.S.I. working pressure. They shall be non-rising stem, counter clockwise opening, mechanical joint ends (except 6-inch valves on fire hydrant lines, which shall be M.J. joint by flange) valve stems shall be provided with o-ring seals and shall be AWWA approved. District requires that all valves smaller than 12-inch shall be R.S.G.V. Twelve inch and larger will be R.S.G.V. or Butterfly R.S.V. B3211. Approval of materials must be obtained from the District for each job before commencing work.

## **7. VALVE BOXES**

Valve boxes shall be installed over valve operators. Boxes shall be two piece, adjustable, cast iron (with extension pieces, if necessary). Top Section 045/046 lid. Commonly called Seattle or Tacoma top and lid.

The letters “ww” shall be cast in relief in the top. Valve operating nut deeper than 40 inches must use valve nut extension.

Fire Systems must have locking top & lid (Tyler) 6855.

## **8. VALVE MARKERS**

Shall be placed on the pavement curbing where valves are located outside of the surfaced area.

## **9. WATER SERVICES**

Installation shall be the sole responsibility of District and charged at the current established rates. Exception to this being a certified contractor who must be approved by District.

Where possible, water services shall not exceed one-hundred (100) feet in length between the water main and the structure or appliance receiving water. Water service lengths greater than 100 feet shall require approval of the Director of Field Operations or General Manager. Additionally, service lengths between 150 and 225 feet shall require permitting and installation of a RPBA (reduced pressure bypass assembly) and annual testing; service lengths over 225 feet shall require a main line extension and installation of the RPBA and automatic flushing system with drainage system; service lengths greater than 350 feet shall require installation of a looped water main (minimum 8-inch ductile iron or C900 PVC) adequate for future fire flows, an automatic flushing system, and a water sample station on all dead end mains longer than 225 feet. All water services over 150 feet in length shall require a Temporary Service Agreement between the owner and the District prior to installation of the water service. All required private easements shall be the responsibility of the property owner not the District.

Water services shall be 1-inch IPS, SDR 7, 200 PSI, ASTM D2239 polyethylene pipe with a meter riser installed per the District standard single water service detail drawing. 1-1/2 inch and 2-inch water services shall be CTS, SDR9, 200 PSI, ASTM D2737 polyethylene pipe with a meter riser ~~38~~ shown on the

District's standard water service detail drawing.

The water service piping shall be one continuous piece, without joints, between corporation stop to meter riser assembly. All connections to plastic tubing type services shall be made by using ¾" and 1" compression fittings or Ford brass fittings. The 1½ inch and 2-inch service connections shall be made with compression fittings or Ford Brass fittings. All service material shall be brass.

Water services shall be installed a minimum of three (3) feet below finished grade. Service pipe shall be wrapped with 12 gauge copper tracing wire, extending from the main to the meter box. Tracer wire shall be attached to the saddle and extend a minimum of 12 inches into the meter box. Water Services shall extend to the property line, and be fitted at that point with a meter setter and vault. Connections to existing water mains shall be wet taps through a tapping saddle and tapping valve and shall be made by the District:

## **10. CONCRETE THRUST BLOCKING AND MECHANICAL JOINT RESTRAINTS**

Mechanical joint restraints ("megalugs" by EBBA Iron or equivalent) shall be used in lieu of thrust blocks on all mechanical joint fittings (bends, tees, crosses, pipe ends). However, when connecting to existing water mains, thrust blocks will likely be required because lock joint gaskets may not be installed in the joints of the connected water main.

The District's engineer or inspector will make the determination if thrust blocks are required and the blocking will normally be shown on the project plans.

Concrete thrust blocking shall be in accordance with the details shown on the Plans. Place 4 mil plastic between concrete blocking and fittings. No concrete is to get on bolt threads. Concrete shall be cured for at least two days prior to any pressure test of the pipe.

For pipe adjoining the mechanically restrained fittings, field lock gaskets shall be installed in pipe joints in accordance with the District's Standard Details 1 through 4.

Full sized concrete ecology blocks are acceptable where temporary thrust blocking is required.

## **11. FIRE HYDRANTS**

**General:** All hydrant lateral pipe shall be Class 52 or greater ductile iron with mega lugs on the valve follower and hydrant follower. Place one-inch washed rock around hydrant weep hole, then place 6 mil plastic sheeting over the washed rock before placing the backfill around the hydrant. All fire hydrants shall be buried to grade within three (3) inches of the marked bury line on the hydrant.

Fire hydrants shall comply in all respects with latest A.W.W.A. (502), UL (246), & FM (1510) specification [removed "C-502."] Having a working pressure of 250 pounds P.S.I. and a hydrostatic test pressure of 500 pounds P.S.I. Hydrants shall be – 5-1/2 inch main valve opening, two 2-1/2 inch N.S.T. Hose Nozzles, one 4-1/2 inch N.S.T. Pumper Nozzle, fitted with Storz adapter, 4 foot bury, 6 inch M.J. Bottom Connections or flange connection, 1-1/4 inch operating nut. Open left, painted X-3472 CASE YELLOW (high grade alkyd-type, high gloss enamel intended for use on primed exterior and interior wood or metal). Repainting of hydrants may be required by the District Inspector.

They shall be of a compression type design with the main valve opening against the pressure and closing with the pressure. Hydrants shall be of dry top design complete with weather seal on one piece bronze operating nut, self-lubricating sealed oil reservoir to provide positive continuous lubrication. Reservoir to be factory pre-filled with the proper type and amount of oil. All threaded and bearing parts metal to metal, metal to rubber in the bonnet section shall be automatically and fully lubricated each time the hydrant is cycled, full opened to full closed. The bonnet casting of the fire hydrant shall be a one-piece casting forming an integral lubricant reservoir with a minimum of two "O-RING" seals at the base of the

bonnet. Lubrication of the hydrant shall be through a filler plug located in the bonnet of the hydrant, through which level of the lubricant can be checked. Lubrication shall not be through a fitting in the Operating Nut. All hydrants shall be of the traffic type, and shall be provided with a Two piece breakable Flange and with a Breakable Stem Coupling.

The Breakable Stem Coupling shall be made of stainless steel and shall be of the Torque-Diverting Type. Breakable flanges shall be of the 8-bolt design. Breakable bolts or Breakable Lugs are NOT ACCEPTABLE. Breakable stem couplings made of CAST IRON or of ALUMINUM are NOT ACCEPTABLE. A main valve Travel Stop shall be provided in the Shoe as an integral part of the Shoe. The internal ferrous surfaces of the Shoe shall be epoxy lined with a two part Thermo setting epoxy. All hydrants shall be furnished with a minimum of two drain valves and the drain valve facings shall be made of either rubber or a polyethylene material.

The drain valve facings shall be retained in position by stainless steel screws. The Seat Ring shall thread into a bronze drain ring forming an all-bronze drainway. All pressure seals shall be rubber "O-Rings". The area of the lower stem, which is reduced in diameter, shall be sealed away from moisture by means of compression of the rubber main valve "O-Rings". All barrel flanges shall be an integrally cast part of the upper and lower barrels with the exception of those breakable flanges which are designed to break on traffic impact. All lower Bury castings shall be one piece up to and including a 6-foot Bury Fire Hydrant. The operating nut, Thrust collar, and Treaded Stem drive shall be one piece bronze. A friction reduction agent shall be located between the Thrust collar and hold down nut in the Bonnet section. All internal bronze parts shall contain less than 16% ZINC. All bolting material below ground shall be of full 3/4 inch diameter. If the bolt is less than 3/4 it shall be made of Silicon Bronze or 303 Stainless steel. If the lower barrel is made of Ductile Iron, then all below ground connecting parts, including the shoe, shall be of Ductile Iron. A raised bury line shall be integrally cast on the lower barrel to indicate ground line for proper hydrant setting.

There shall be no springs used in the internal construction of the hydrant.

For all Fire Hydrants, the finished landscaping must match the bury line just below the flange as indicated on fire hydrants. All hydrants must be cleaned and painted if necessary.

District will perform hydrant flow tests unless otherwise agreed to by the District. The District shall designate the hydrant(s) that will be tested.

Fire hydrants shall comply in all respects with latest A.W.W.A. (502), UL (246), & FM (1510) specification [removed "C-502."] Having a working pressure of 250 pounds P.S.I. and a hydrostatic test pressure of 500 pounds P.S.I. Hydrants shall be – 5-1/2 inch main valve opening, two 2-1/2 inch N.S.T. Hose Nozzles, one 4-1/2 inch N.S.T. Pumper Nozzle, fitted with Storz adapter, 4 foot bury, 6 inch M.J. Bottom Connections or flange connection, 1-1/4 inch operating nut. Open left, painted Sherwin Williams PPG-95-8002. Repainting of hydrants may be required by the District Inspector.

**Stainless Steel Stem**—The stem is made of stainless steel, having optimum elongation and tensile resistance capabilities.

The stainless steel stem threads are rolled in a separate cold pressing process in order to maintain the stainless steel structure and increase its strength. Furthermore, this method ensures smooth thread edges and consequently low operating torques.

The Stainless Steel stem is 100% lead free.

**Body and Bonnet Assembly**—The effective assembly of the valve body and bonnet ensures a durable tightness. A round rubber bonnet gasket fits into a recess in the valve bonnet preventing it from being blown out by pressure surges.

Stainless steel (304) bonnet bolts are countersunk into the valve bonnet and body of the valve. Encircled by the bonnet gasket and sealed with hot melt. Thus there is no risk of corrosion, as the bolts are not exposed to the medium or soil. Furthermore the bonnet bolts do not require re-torquing to ensure a proper seal of the bonnet and valve assembly.

Warranty--Ten-year warrant that covers both the cost of the defective valve and the reasonable cost to either repair or replace the defective valve.

## **12. SINGLE FAMILY RESIDENTIAL**

All new single family dwellings shall have a public fire hydrant within three hundred fifty feet of its normal access from public right-of-way; maximum spacing shall be six hundred feet.

## **13. RESIDENTIAL ESTATES**

Residential estate zone, which shall have a public hydrant within three hundred feet of its normal access from public right-of-way maximum spacing, shall be six hundred feet.

## **14. BUILDINGS**

All new building in commercial, industrial and apartment (including duplex) shall have a public hydrant within two hundred feet of its normal access from public right-of-way.

## **15. LATERAL SPACING**

Lateral spacing of fire hydrants shall be approved by the fire marshal, and predicated on hydrants being located at street intersections.

## **16. SPECIAL REQUIREMENTS**

All buildings other than single family dwellings, which are located such that any portion is more than one hundred fifty feet in vehicular travel from a street property line, shall provide fire hydrants connected to the water system. The lead from the service main to the hydrant shall be no less than six inches in diameter. Any hydrant leads over fifty feet in length from water main to hydrant shall be no less than eight inches in diameter. Provisions shall be made wherever appropriate in any project for looping all dead end or temporarily dead end mains.

## **17. WATER METERS**

All primary meters will be provided by the District as part of the GFC fees and Service Connection charges. All meter installations larger than 3" will require an isolation valve to be installed immediately downstream of the meter, and enclosed in the meter enclosure.

## **18. WATER METER YOKES**

Yokes with check valve assembly, for 5/8 x 3/4 inch meter shall be the standard. 1 inch meters shall be fitted with angle stops and angle checks. 1-1/2 and 2 inch, fitted with angle stops and angle checks. Mueller manufactured. The meter box shall be made of concrete or plastic and shall be of sufficient depth to expose the bottom pipe and allow a minimum of 10 inches from the top of the meter to the bottom of the lid.

## **19. VAULT COVERS**

Valve box and vault covers shall be designed to carry the appropriate traffic loadings. When located in the street section, they shall be designed to carry H-20 loading.

## **20. BLOW OFF ASSEMBLY**

Blow off assembly shall be installed as per the District standard 2-inch blow off-assembly detail drawing. No assembly shall be installed closer than 18 inches from or further than three feet from the end of the pipe.

## **21. BEDDING**

Bedding material shall be placed a minimum of four inches under, around and to a level of six inches above the top of the pipe. Where in the opinion of the District existing backfill material may be used. Where the excavation is required below the normal grade line because of poor soil conditions, the base shall be course sand or crushed rock. Bedding material shall be course sand. Compaction of the trench backfill must be by mechanical tamping to a density of 95% as required by the District. All road crossings must conform to County specifications.

## **22. UNDERMINING OF ASBESTOS CEMENT WATER MAIN**

District requires that when an existing asbestos cement (A.C.) water main is undermined by more than 3 lineal feet, one full stick of A. C. pipe from joint to joint must be replaced with ductile iron or C900 PVC pipe with Smith Blair or Romac compression couplings.

A District Inspector shall be on-site when an AC main is exposed and during any AC main replacement. When AC main is undermined and not replaced with ductile iron or PVC pipe, the backfill shall be controlled density fill (CDF); otherwise, sand or crushed rock backfill can be used. All new water main has to be disinfected before it is placed in service.

When the work is being done by the District, any costs associated with replacing the disturbed AC pipe shall be estimated by the District and collected as a deposit prior to commencement of construction. Any difference between actual costs and the deposit shall be collected or refunded.

When other utilities are replacing their existing utilities, District requires a minimum of two feet of vertical clearance from its facilities.

## **23. GENERAL REQUIREMENTS & PROJECT COMPLETION**

Finishing and cleanup shall be accomplished without additional compensation. All manholes and catch basins shall be kept clean during the entire period of construction. The contractor shall provide dust control at all times.

Upon completion, the District will make a final walk through inspection after all the landscaping and paving has been completed. Checks will be made to see that all the valves are open, properly placed to final grade with operating nuts within 40 inches of the surface. (Note on As-built the length of extensions used). Finishing and cleanup shall be accomplished without additional compensation.

All fire hydrants set to bury line grade. All services set to grade, boxes intact and to grade. Pressure test and purity samples have passed and the hydrant flow test completed. District will need a total of six copies of the final As-built.

Existing asphalt, concrete payments, or bituminous surfacing disturbed by the work shall be replaced as

per appropriate jurisdiction specifications.

The District will not accept new water facilities as having been completed until final inspection and acceptance by the District.

## 24. MINIMUM UTILITY LINE SEPARATION REQUIREMENTS

Minimum Utility Separation Requirements

	Separation (feet)*							
	Electric U/G	Gas	Water Main	WW Force	WW Gravity	Storm Sewer	Structure	Major Vegetatio
District Water Main	5	3	2 to 3	10	10	4	10	10

\* Horizontal distance from District water main for parallel utility lines or objects  
 WW = waste water

Vertical separation from all utilities shall be not less than 18 inches unless approved by the District.

## 25. FIRE SYSTEMS

The District General Manager has the right to require, add, modify, or delete any requirements he deems necessary.

The District allows two types of fire protection systems.

- Separate dedicated fire system connected independently to the water system and detached from any other water service.
- Residential fire sprinkler systems (single-family homes and duplexes only).

### A. Dedicated Fire Systems

All fire suppression water systems are required to have:

1. A separate connection and service to the distribution system
  - a. Each fire suppression system shall be connected to the public water system with service lines the same size as the system feed line;
  - b. Fire connections are dedicated to suppressing fire only and no other use is authorized and violators penalized;
  - c. Valves shall be provided at the tap onto the supplying water main which shall have a complete valve box providing access to operate the valve with a lockable lid.
2. A backflow assembly commensurate with the degree of hazard
  - a. All fire suppression water system connections to the District mains shall be protected with a backflow assembly. Fire protective systems shall be protected with a Double Check Detector Assemblies (DCDA) or with a Reduced Pressure Detector Assemblies (RPDA) based on the degree of hazard at the discretion of District, who's decision is final;
  - b. Backflow assemblies protecting fire systems shall be installed in a meter box (2" or less in size) or concrete vault (larger than 2") at the property line or easement line;
  - c. Fire sprinkler systems shall have a pipe-length distance of one hundred (100) feet or less between the supplying water main and the (Christmas tree) riser

- distribution point;
- d. Backflow assemblies shall be placed on private property and are owned and maintained by the owner of said property;
  - e. It is the responsibility of the property owners to properly maintain the backflow assembly and comply with the State of Washington and District standards.
3. Protection of the Backflow Assembly
    - a. Fire suppression service line meters 2" and smaller shall be in a meter box providing minimum clearances specified herein;
    - b. Fire suppression service line meters larger than 2" shall be enclosed in an approved enclosure providing minimum clearances specified herein. Vault installations shall conform to District standards;
    - c. Vented assemblies (RPBA's & SRPVB's) require drains below the assembly piped or mechanical pumped to atmosphere with pipe capable of exceeding 120% of the maximum flow available through the service line without flooding or affecting the assembly;
    - d. Backflow assemblies larger than 2" shall be firmly supported from a stable floor;
    - e. Backflow assemblies located higher than five feet from level ground surface shall have a platform constructed to L&I standards with an applicable building permit for purposes of testing and maintenance of the valve;
    - f. All enclosures of backflow assemblies shall have access through doors that swing away from the valve and are wider than the assembly is long.
  4. Use Meters
    - a. Fire suppression systems 2" and smaller shall have a meter on the service line before and within 18" of the backflow assembly;
    - b. The meter shall be located at or as near as possible to the property line or easement line;
    - c. Meters shall be Sensus© SR II® Radio-Read meters that reads in cubic feet with the capability to easily transmit the reading to the public street;
    - d. Systems over 3" may use approved proportional detection meters for fire suppression only. These proportionate meters shall be a part of the assembly;
    - e. Proportionate meters shall be the nominal size as the bypass and mounted on and within the bypass;
    - f. Where radio reads are not possible, such as within buildings, accessible meter touch pads shall be provided at an elevation of 5 feet above the floor.
  5. Permits and Inspection during installation
    - a. A permit to install a fire suppression system and/or a fire suppression system is required by and obtainable from the front counter of the corporate offices of the District;
    - b. District will provide an inspector at the owner's expense to observe the fire suppression system installation up to and including the Post Indicator Valve (PIV). The PIV is to be located as directed and approved by the Fire Marshal of the appropriate jurisdiction.
  6. General requirements
    - a. Post indicator valve (P.I. valve) shall be at least 20-feet away from a flammable building. Non-flammable building P.I. valve may be installed in wall. Note: Contractor must obtain approval from fire district or department. The installations must have a valve off the water main flanged to the tee; also all fire systems must use approved backflow protection, commensurate with the degree of the hazard. This should be taken into consideration when designing fire sprinkler systems. All pipe shall be Class 52.
    - b. Fire line responsibility:
      - All 1"-3" fire lines with District meters—maintenance responsibility ends at the meter.
      - All 4"-12" fire line connections maintenance responsibility ends 10' from main line tee or at right-of-way property line. If P.I. valve is located nearer than 10' to tee, then maintenance responsibility ends District side of P.I. valve.
      - All gate valves must have a valve box with locking lid (Tyler 6855 spec).

- c. Fire systems are to be protected with double check detector assemblies or with reduced pressure detector assemblies, both are required to have a bypass meter -- Sensus Iperl meter with one cubic foot increments and approved radio read. The touch pad is required to be installed in the vault lid. If the system is in a building the pad must be installed in an outside wall no higher than 5'.

## B. Residential Fire Sprinkler Systems

Voluntary residential (single-family homes and duplexes) fire sprinklers systems were encouraged through House Bill 1295 effective in 2011. The District prefers installation of a multipurpose, flow-through system for residential customers but will consider variations to the concept of a dedicated fire sprinkler system (Refer to *Washington Water Utilities Council, Guide for Water Utility Managers and Governing Bodies on Residential Fire Sprinkler Systems, October 2008*).

The District favors the use of a multipurpose, flow-through system that uses the same water service and household plumbing to supply the fire sprinklers and the various domestic water uses in the home. The District will have final approval of what system and configuration is allowed. Minimum requirements for a flow-through system are:

### Flow-Through System

1. The standard service will involve a 1-inch service line and a full ¾-inch meter. The service and meter size will be determined by the fire flow demand as provided to the District and other factors such as system pressure, length of the service line, elevation change from water main to the home and available fire meters.
2. All in-home fire sprinkler piping must terminate at a fixture getting regular domestic use to insure flow through all parts of the in-home system.
3. Backflow prevention will not be required except in special circumstances.
4. All system components must be UL and NSF approved.
5. District staff must have access to the residence to verify that these requirements are met and confirm that all system inspection fees are paid.

All applicable provisions under Dedicated Fire Systems above, such as meter, meter box and permit requirements, still apply to these flow-through systems.

## 26. HYDRANT METER REQUIREMENTS

### 1 Temporary Water Service

At the District's discretion, temporary water service may be provided to accommodate special needs for water at a fixed site on a short-term basis (e.g. on-site needs for construction activities). Temporary water service may be provided from a District main or from a fire hydrant specifically designated for this purpose by the District (see Section 2.9.2). Only District personnel are authorized to install a connection to a District main or fire hydrant for this purpose.

Temporary service may be authorized for a period not exceeding six months at a time. Upon expiration of the initial six-month period, a customer may request an extension of temporary service for one additional six-month period. No more than one extension will be granted, unless authorized by the General Manager.

A customer obtaining temporary water service will not be required to pay a SCC, or SDF. However, a customer obtaining temporary water service will be required to pay a deposit for the estimated costs of installation and removal of the equipment required for temporary service, as well as a damage or security deposit. In addition, temporary service will be metered and the customer shall be required to

pay both a meter-reading charge and a charge for water usage in accordance with the appropriate rate schedule (see Appendix B, Tables B-6 to B-8). Arrangements for metering and billing will be established on a case-by-case basis.

Upon termination of temporary service, the District will disconnect the temporary water service and take possession of the associated District equipment, or, if appropriate, convert the temporary service to permanent water service. Following disconnection or conversion, and payment of all outstanding charges for water usage, the District shall return any surplus of installation and removal charges that exceed the actual costs incurred by the District. In addition, the District shall refund any damage or security deposits, less the amount needed to replace or repair District equipment. However, in the event the customer fails to pay outstanding charges for water usage, the District may retain an amount equal to such outstanding charges.

## **2 Hydrant Use**

A hydrant meter deposit is per PUD rates (\$1500.00 in 2020) and consumption based rates will be paid.

No person shall operate or tamper with a fire hydrant connected to the District's water system, without the express written approval of the District or, in the case of an emergency threatening life or property, the approval of an authorized representative of the appropriate fire department. In addition to the penalty established in Section 2.7.1, any person violating this provision shall pay for the amount of water used, as estimated by the District and based on the applicable rate schedule.

At the District's discretion, authorization may be granted to take water from a fire hydrant connected to the District's water system. Procedures for authorizing use of fire hydrants shall be as follows:

- (a) When a customer desires to use a fire hydrant for Temporary Water Service (short-term water service at a fixed site) the procedures in Section 2.9.1 shall be followed. The customer shall utilize only the hydrant specifically designated by the District for this purpose, and will obtain water through a separate valve installed by the District on that hydrant.

## **27. CROSS CONNECTION CONTROL**

### **A. BACKFLOW PREVENTION**

#### **1. GENERAL**

Backflow Prevention, or Cross Connection Control is for protection of water quality and is regulated by WAC 246-240-290 and administrated and enforced by the District. The policies, procedures, and criteria for determining appropriate minimum levels of protection shall be in accordance with the Accepted Procedure and Practice in Cross Connection Control Manual – Pacific Northwest Section American Waterworks Association, Seventh Edition or any superseding edition.

All irrigation systems, new commercial water services, commercial services for building remodels and special residential services must have approved backflow assembly protection, commensurate with the degree of the hazard.

Fire sprinkler systems shall have backflow protection commensurate with the degree of the hazard, but a minimum of a Double Check Detector Check Assembly is required on all new fire systems.

NOTE: All Backflow protection must be checked for flow as needed for sprinkler system designs.

The District's General Manager has the right to require, add, modify, or delete any backflow protection requirements (s)he deems necessary.

#### **4. INSPECTIONS**

1) All Backflow Assemblies installed are to be inspected by District.

## 5. TESTING

- 1) All backflow assembly installations will be the customer's responsibility to have the assembly tested by a Backflow Assembly Tester (BAT) certified in Washington by the state Department of Health.
- 2) All backflow assemblies require testing within a twelve month period conducted by a current and valid Backflow Assembly Tester (BAT) certified in the State of Washington by the Washington State Department of Health using proper equipment calibrated within the last twelve months of test date.
- 3) Waivers signed by the customer and on record with the District only allows for thirty (30) days for test reports to be submitted to the District. After the thirty-(30)-day deadline, all testers with outstanding waivers will be notified and have seven (7) days after the date of notification to turn in any outstanding test reports. After that time, the District will pull the waiver on the account and notify the customer directly. If a company or tester is continually submitting test reports late with "waiver tests" they run the risk of removal from the Districts tester list.

## 6. REPAIRS

- 1) All Backflow assemblies failing a Backflow Assembly Tester's (BAT) exam shall be repaired by a certified plumber with a backflow assembly endorsement by Washington State Labor and Industries.

### B. ***BACKFLOW ASSEMBLIES***

#### ***Reduced Pressure Backflow Assembly (RPBA) and Reduced Pressure Detector Assembly (RPDA)***

1. Shall be installed in a horizontal configuration; unless approved for alternate configuration by State of Washington Department of Health.
2. Shall be installed a minimum of twelve (12) inches above atmospherically drainable grade.
3. An assembly installed more than five (5) feet above floor or ground level must have a permanent platform under it for the tester and/or the maintenance person to stand on. The platform must comply with all applicable safety standards and codes in effect and be covered by a properly executed building permit.
4. These valves do drip or spit from time to time. Adequate air gapped drain basket shall be installed and properly directed to a daylight drain or pumped drain capable of flows equal to the capacity of the service.
5. If anchoring to wall is necessary, there must be that at least six (6) inches of clearance between the wall and the assembly unless the testers or maintenance position is designated on that side, when a minimum 36" is required with clear access to and from the designated position.
6. All backflow assemblies shall be accessible for testing and maintenance.

***Double Check Valve Assembly (DCVA) and Double Check Detector Assembly (DCDA)***

1. Shall be installed in a horizontal configuration unless approved for alternate configuration by State of Washington Department of Health and the approval of the Cross Connection Control Department of the District.
2. Isolation valves and test cocks shall be accessible for testing and maintenance.
3. On fire systems double check detector assemblies or reduced pressure detector assemblies are required. Please check with the cross connection control department before installing.

***Spill Resistant Pressure Vacuum Breakers (SRPVB)***

1. Installation shall be approved by the Cross Connection Control Department.
2. Shall be installed in the approved orientation only.
3. Isolation valves and test cocks shall be accessible for testing and maintenance.

***Atmospheric Vacuum Breaker (AVB)***

1. AVB's are an approved assembly for backflow prevention except in specific applications which must be reviewed and approved by the Cross Connection Control Department prior to installation. Only for non-pressure backflow.

**C. *INSTALLATION REQUIREMENTS FOR BACKFLOW ASSEMBLIES***

1. Landscape Irrigation systems using Double Check Valve Assemblies (DCVA) in- ground for irrigation systems or Spill-Resistant Vacuum Breaker Assembly (SRVBA)/ irrigation systems
  - a. Shall be installed in an approved configuration;
  - b. Adequate space is required for DCVA's installed in a box below ground. Adequate room for both testing and maintenance shall be provided;
  - c. The following are the recommended minimum sizes for a box for below-ground DCVA installation:

i. ¾" to 1" Assemblies	10"x13"
ii. 1¼" to 2" Assemblies	14"x20"
  - d. The DCVA shall be installed with the test cocks facing up or to the most available side;
  - e. DCVA's shall have six (6) inches of clearance below the valve. There shall be adequate drainage material below the valve (drain rock, gravel, pea gravel);
  - f. DCVA shall not be more than twelve (12) inches from the top of the box;
  - g. Three (3) inches of room shall be provided on the ends of the valve so that shut off ball valve can be accessed.

2. Pressure Vacuum Breaker Assemblies (PVBA)
  - a. A PVBA shall only be installed in a vertical configuration a minimum of twelve (12) inches above the highest downstream piping
3. Atmospheric Vacuum Breaker (AVB) – special approval required
  - a. An AVB shall be installed only in a vertical configuration, at least six (6) inches above all downstream piping (highest point of use);
  - b. No control valve shall be installed on the downstream side of an AVB. The AVB shall be pressurized for no more than twelve (12) hours in any twenty- four (24) hour period.

# Thurston PUD

Providing Safe, Reliable, Affordable & Sustainable Utility Service to Our Customers

STANDARD DRAWINGS

OCTOBER 26, 2020



SIGNED: \_\_\_\_\_

*Lee Hunter O'Reilly*

DATE: \_\_\_\_\_

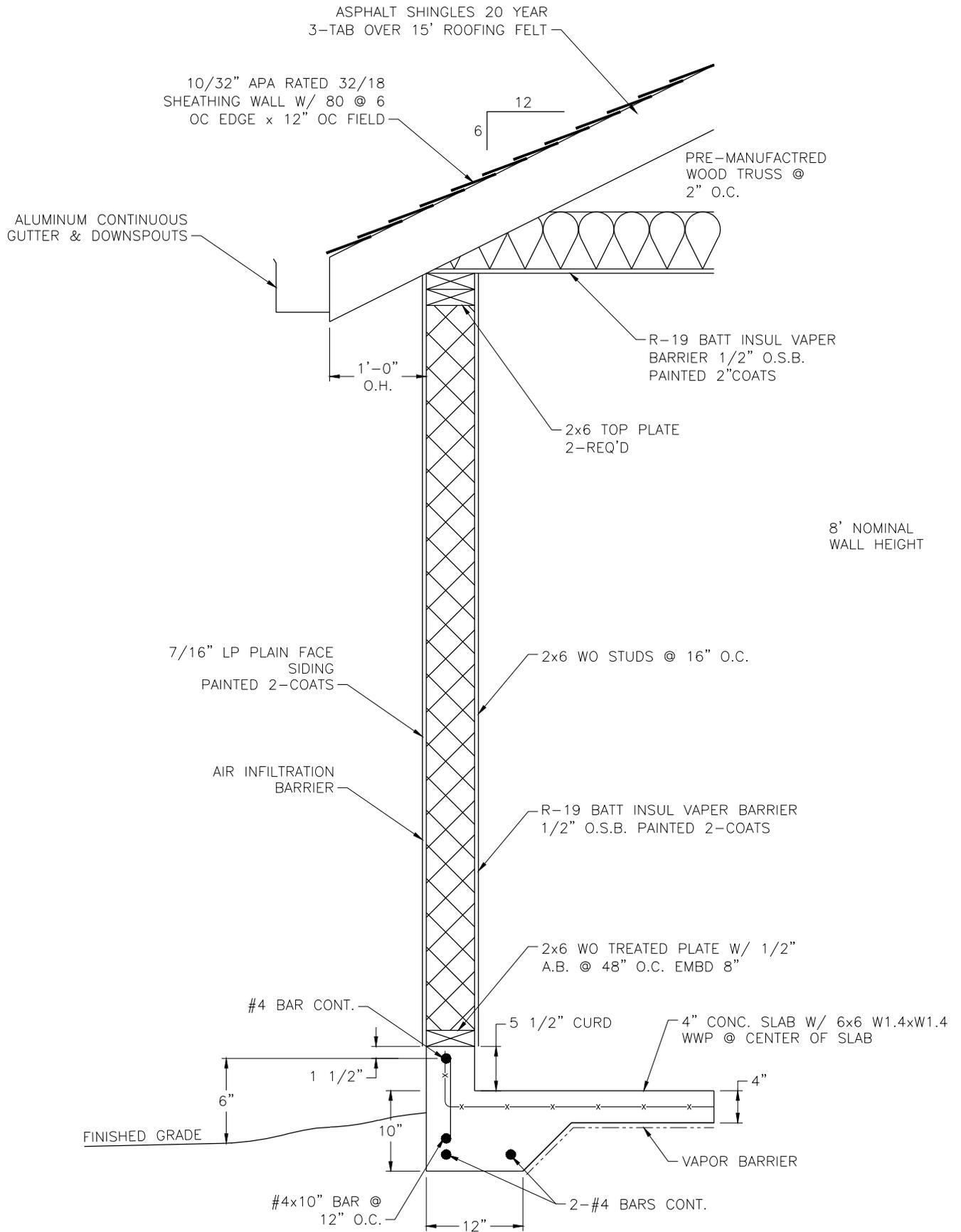
*10-26-2020*



Providing Safe, Reliable, Affordable & Sustainable Utility Service to Our Customers

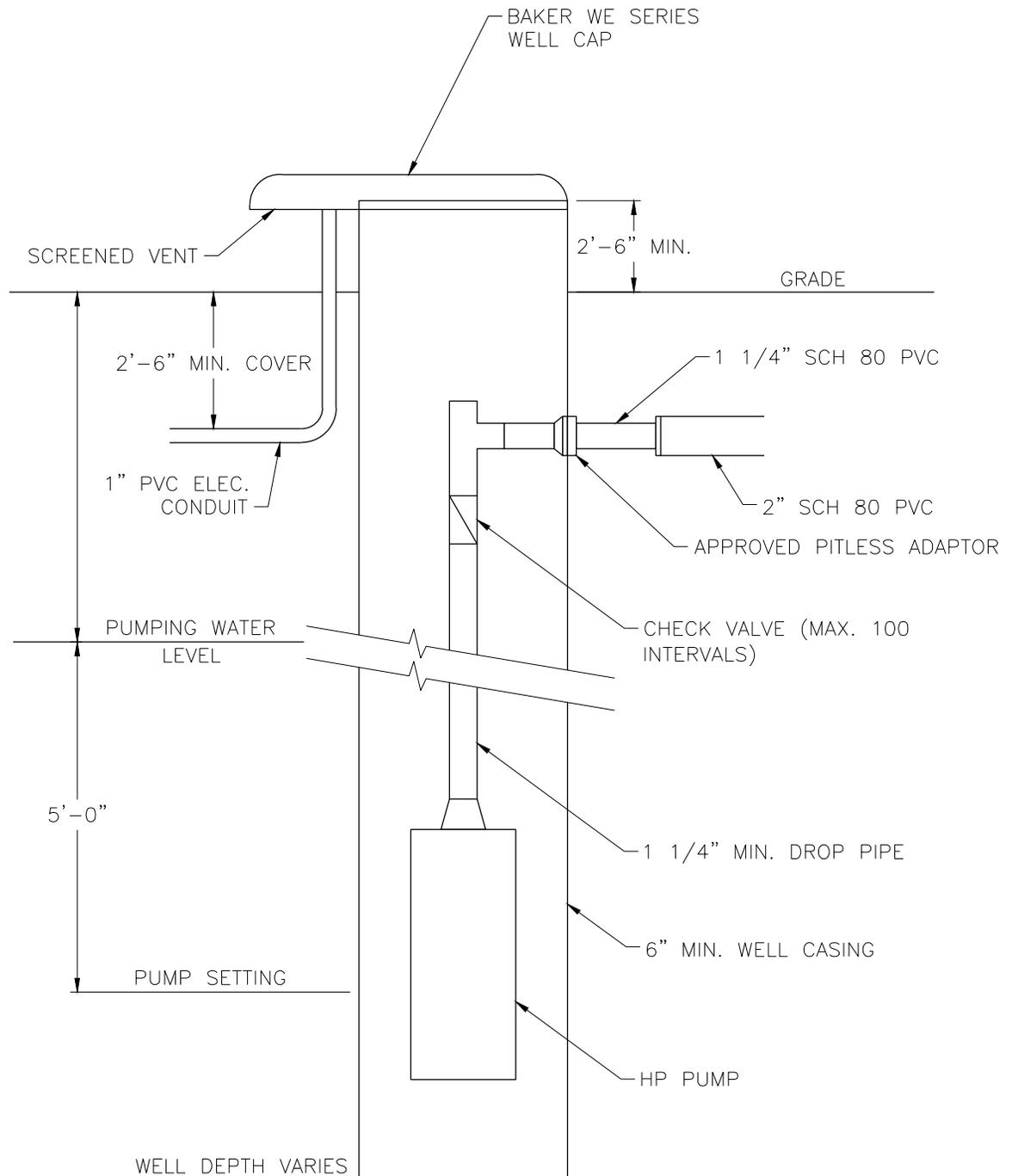
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THURSTON PUD STANDARD DETAIL

FIGURE 1 - PUMP HOUSE CROSS SECTION



WATERTIGHT WELL CAPS SHALL COMPLY WITH WATER SYSTEMS COUNCIL (WSC) STANDARD PAS-2, "STANDARD FOR WATERTIGHT CAPS".

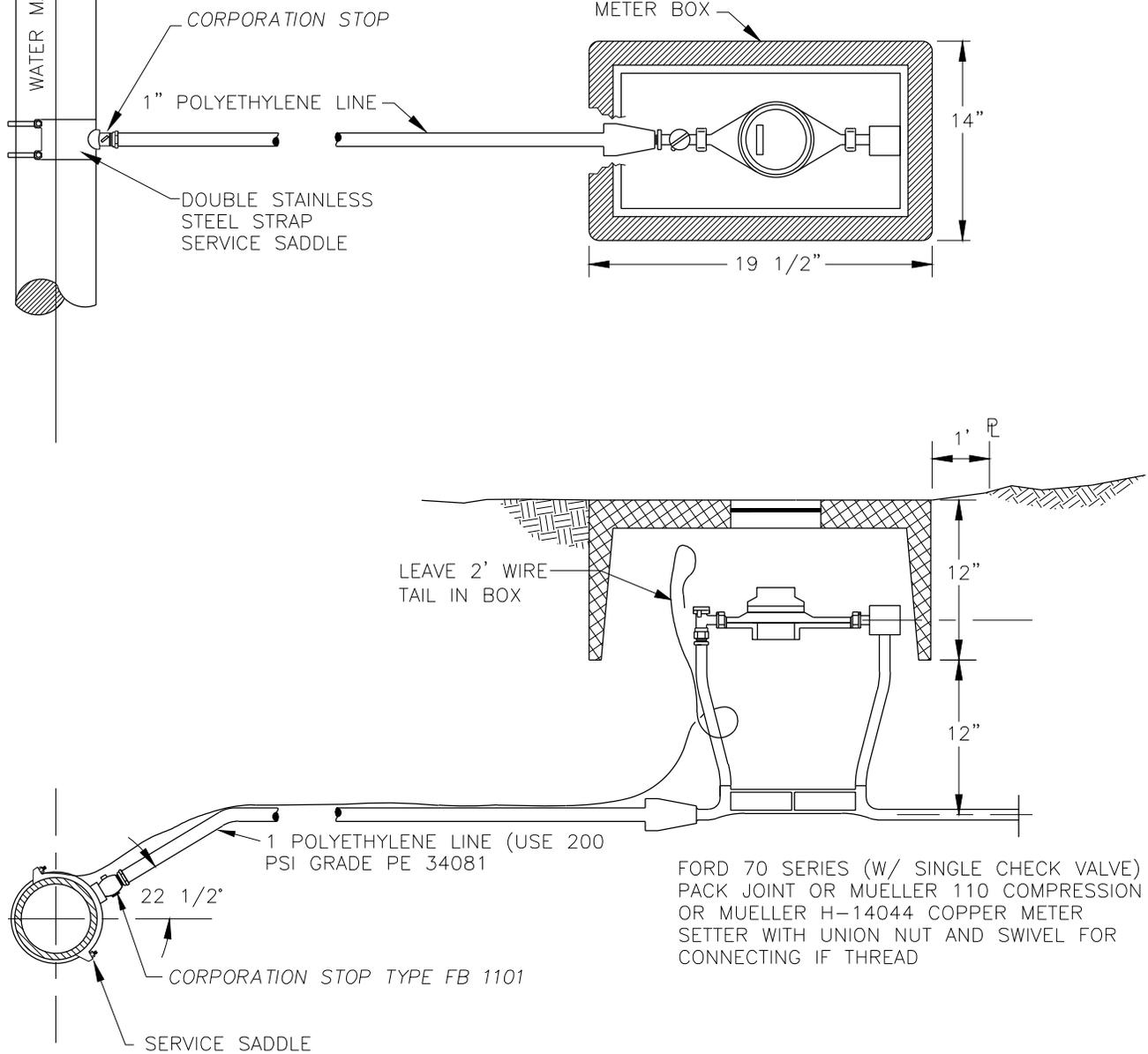
PITLESS ADAPTERS AND UNITS SHALL COMPLY WITH PART 3.2.7.4 OF THE TEN STATE STANDARDS, AND WITH NSF STANDARD #56 OR WSC RECOMMENDED STANDARDS PAS-1. WATERTIGHT WELL CAPS SHALL COMPLY WITH WSC RECOMMENDED STANDARDS PAS-2.

PITLESS ADAPTERS AND WELL CAPS SHALL BE ADVANCE MORRISON, AMERICAN GRANBY, INC., BAKER MFG. CO., CAMPBELL MFG. INC., MERRILL MFG., OR APPROVED EQUIPMENT MEETING THE ABOVE REQUIREMENTS.

THURSTON PUD STANDARD DETAIL

FIGURE 2 - WELL HEAD DETAIL FOR PITLESS ADAPTER

Meter Box Standard Installation:  
 Carson Standard Meter Box #1015-12 with flush cover  
 with reader lid #1025-5 or equivalent



NOTES:

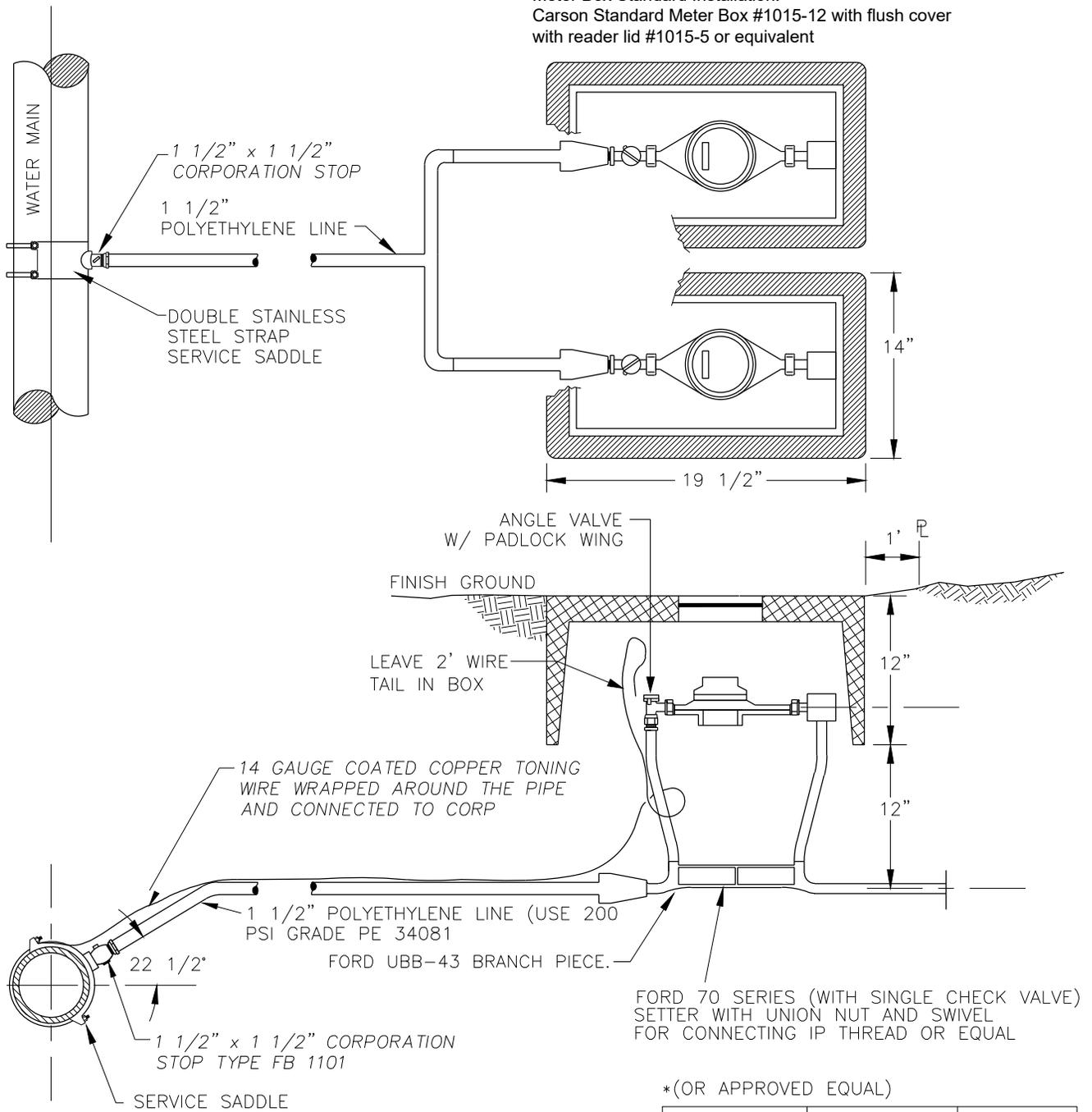
1. ALL SERVICE SADDLES SHALL HAVE RUBBER GASKET AND I.P. THREADS.
2. WATER METER SHALL BE SUPPLIED & INSTALLED BY THE WATER SYSTEM OWNER.

3/4" - 1" DUAL  
 METER SERVICE

THURSTON PUD STANDARD DETAIL

FIGURE 3 - SINGLE SERVICE CONNECTION

Meter Box Standard Installation:  
 Carson Standard Meter Box #1015-12 with flush cover  
 with reader lid #1015-5 or equivalent



NOTES:

1. STAINLESS STEEL INSERTS REQUIRED FOR ALL PACK JOINTS.
2. ALL SERVICE SADDLES SHALL HAVE RUBBER GASKET AND I.P. THREADS.
3. WATER METER SHALL BE SUPPLIED & INSTALLED BY THE WATER SYSTEM OWNER.

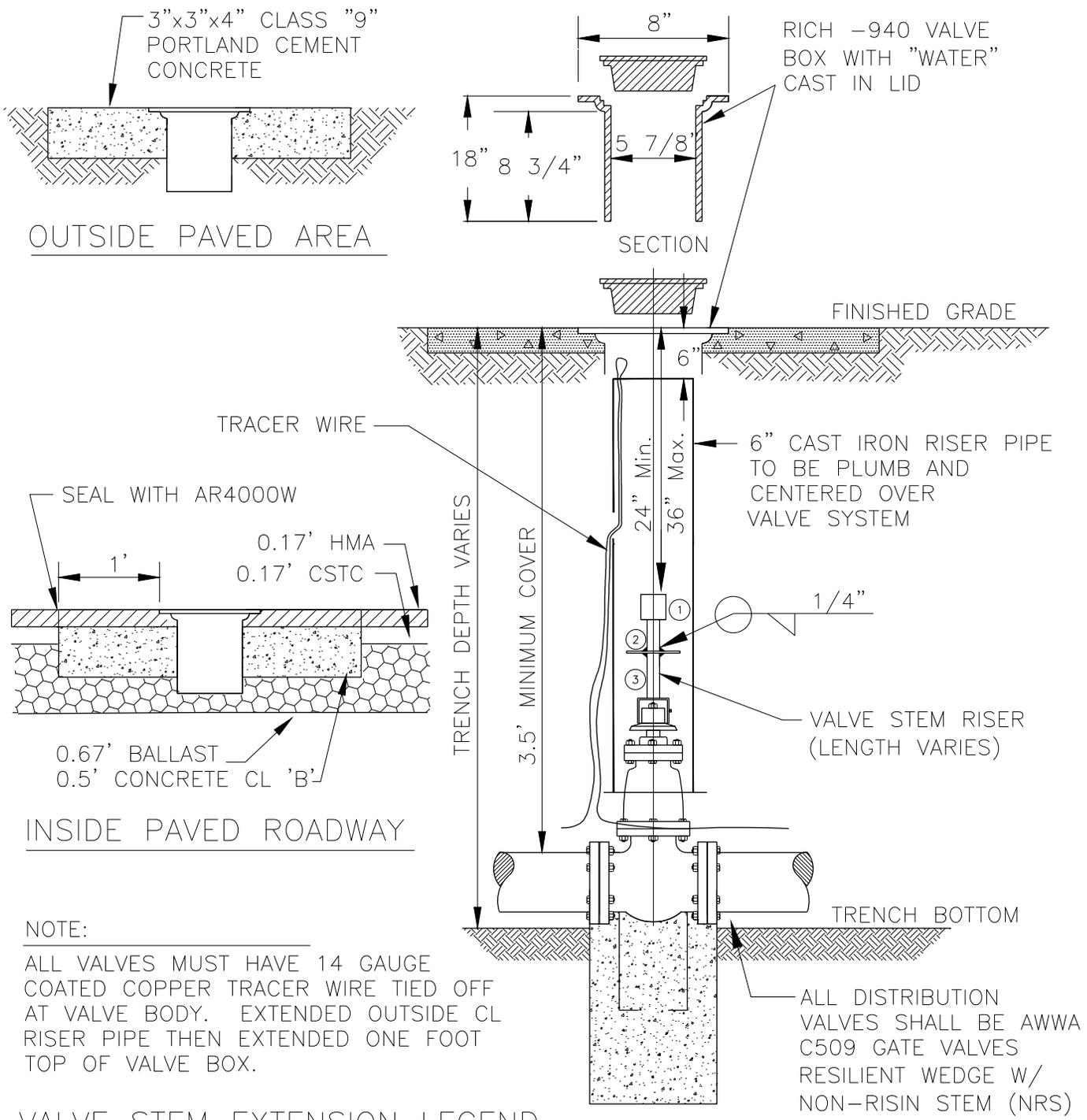
3/4" - 1" DUAL METER SERVICE

\*(OR APPROVED EQUAL)

ENVIRONMENT	METER BOX	LID TYPE
CONCRETE SIDEWALK	*BROOKS SERIES 375 CONCRETE OR CHRISTY 99X	CONCRETE
CONCRETE DRIVEWAY & OTHER TRAFFIC AREAS	*BROOKS SERIES 375 CONCRETE OR CHRISTY 99X	CAST IRON TRAFFIC COVER

THURSTON PUD STANDARD DETAIL

FIGURE 4- DOUBLE SERVICE CONNECTION



**NOTE:**

ALL VALVES MUST HAVE 14 GAUGE COATED COPPER TRACER WIRE TIED OFF AT VALVE BODY. EXTENDED OUTSIDE CL RISER PIPE THEN EXTENDED ONE FOOT TOP OF VALVE BOX.

**VALVE STEM EXTENSION LEGEND**

- ① VALVE OPERATING NUT OR 1 7/8" X 1 7/8" X 2" HIGH GRADE STEEL WELDED TO GUIDE PLATE.
- ② 3/16" THICK X 5 1/5" DIA STEEL GUIDE PLATE WELDED TO RISER SHAFT.
- ③ 2"X2"X 3/16" SQUARE STRUCTURAL STEEL TUBING TO FIT OPERATING NUT. LENGTH AS REQUIRED.

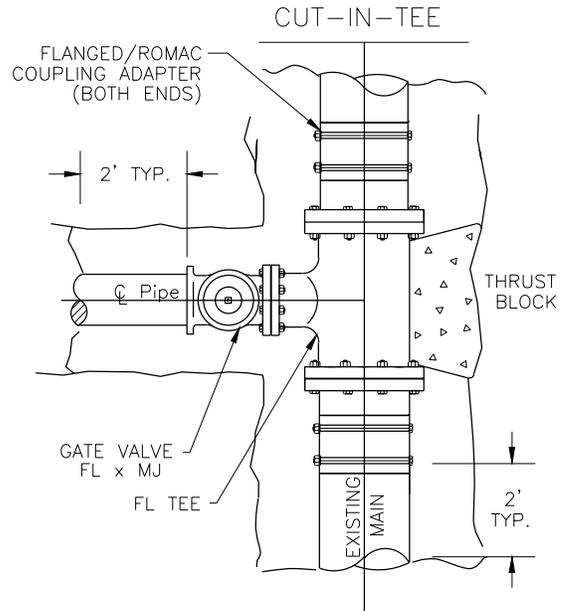
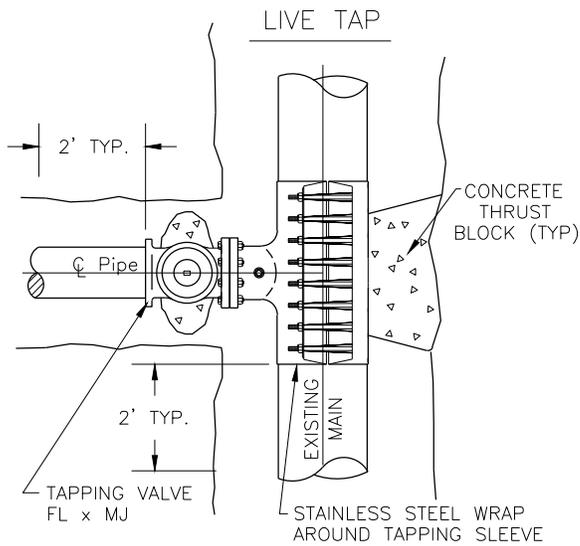
GATE VALVE SHOWN—SIMILAR INSTALLATION REQUIRED FOR BUTTERFLY VALVES.

**NOTE:**

WELD ALL AROUND, AS SPECIFIED ABOVE

THURSTON PUD STANDARD DETAIL

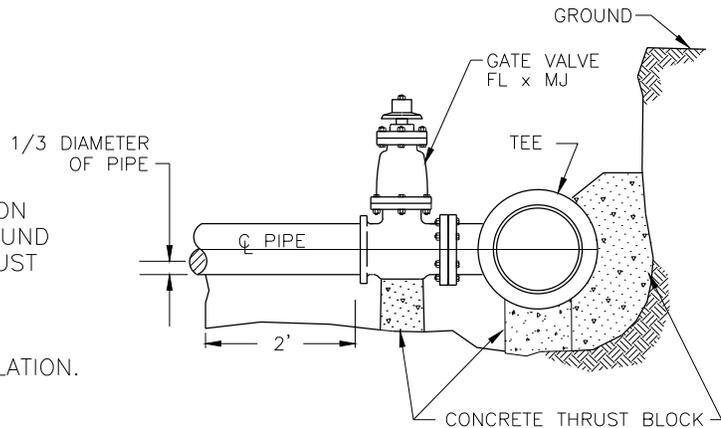
**FIGURE 5 - DISTRIBUTION SYSTEM VALVE ASSEMBLY**



VALVE AND SLEEVE SHALL BE SUPPORTED AND BACKFILLED AS SHOWN BELOW-RIGHT.

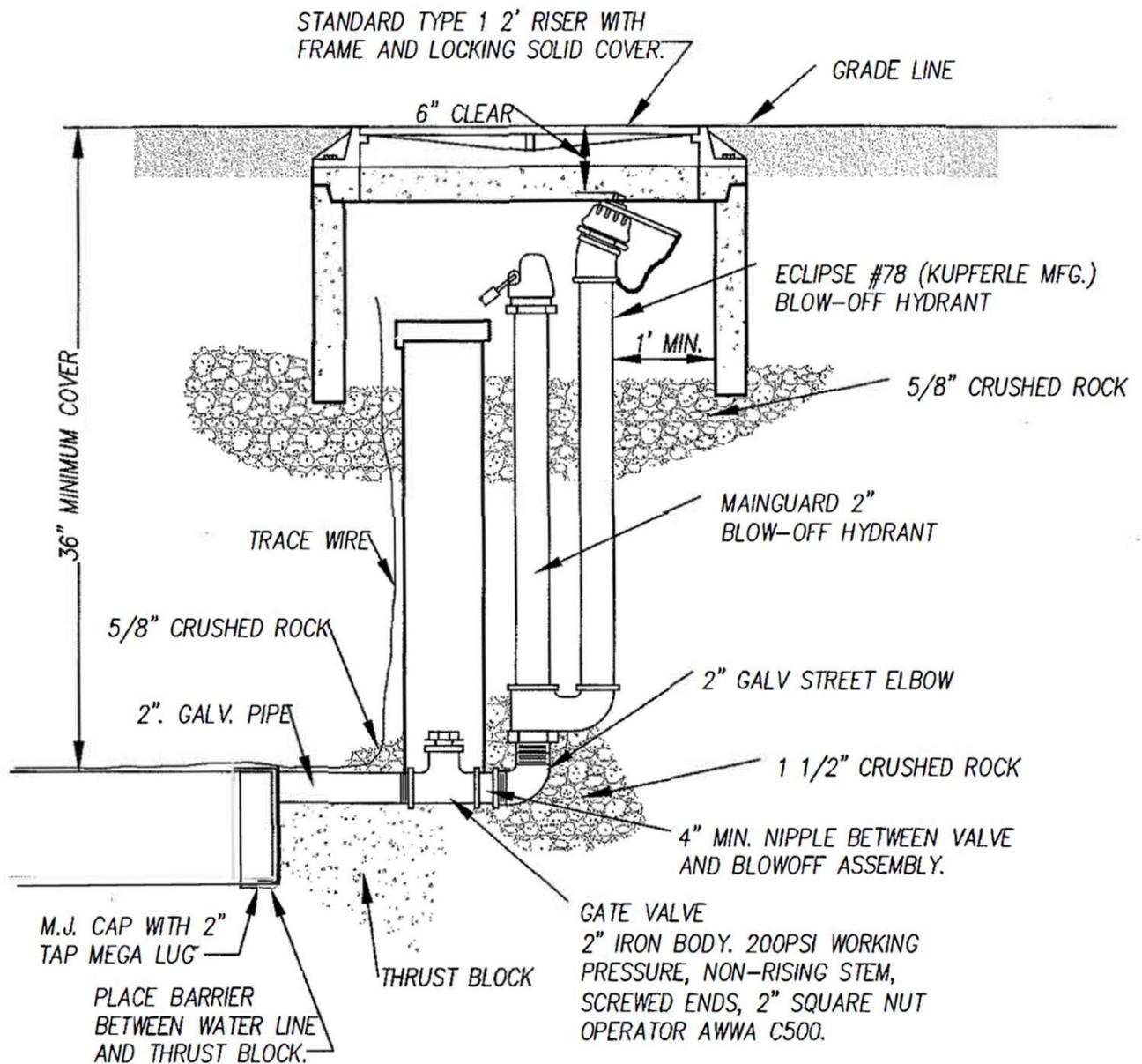
NOTES:

1. 11 MIL PLASTIC OR CONSTRUCTION FABRIC SHALL BE WRAPPED AROUND PIPE AND FITTINGS BEFORE THRUST BLOCKS ARE POURED.
2. SUPPORT VALVE AND SLEEVE CONTINUOUSLY THROUGH INSTALLATION.



THURSTON PUD STANDARD DETAIL

FIGURE 6 - CONNECTING TO EXISTING MAIN

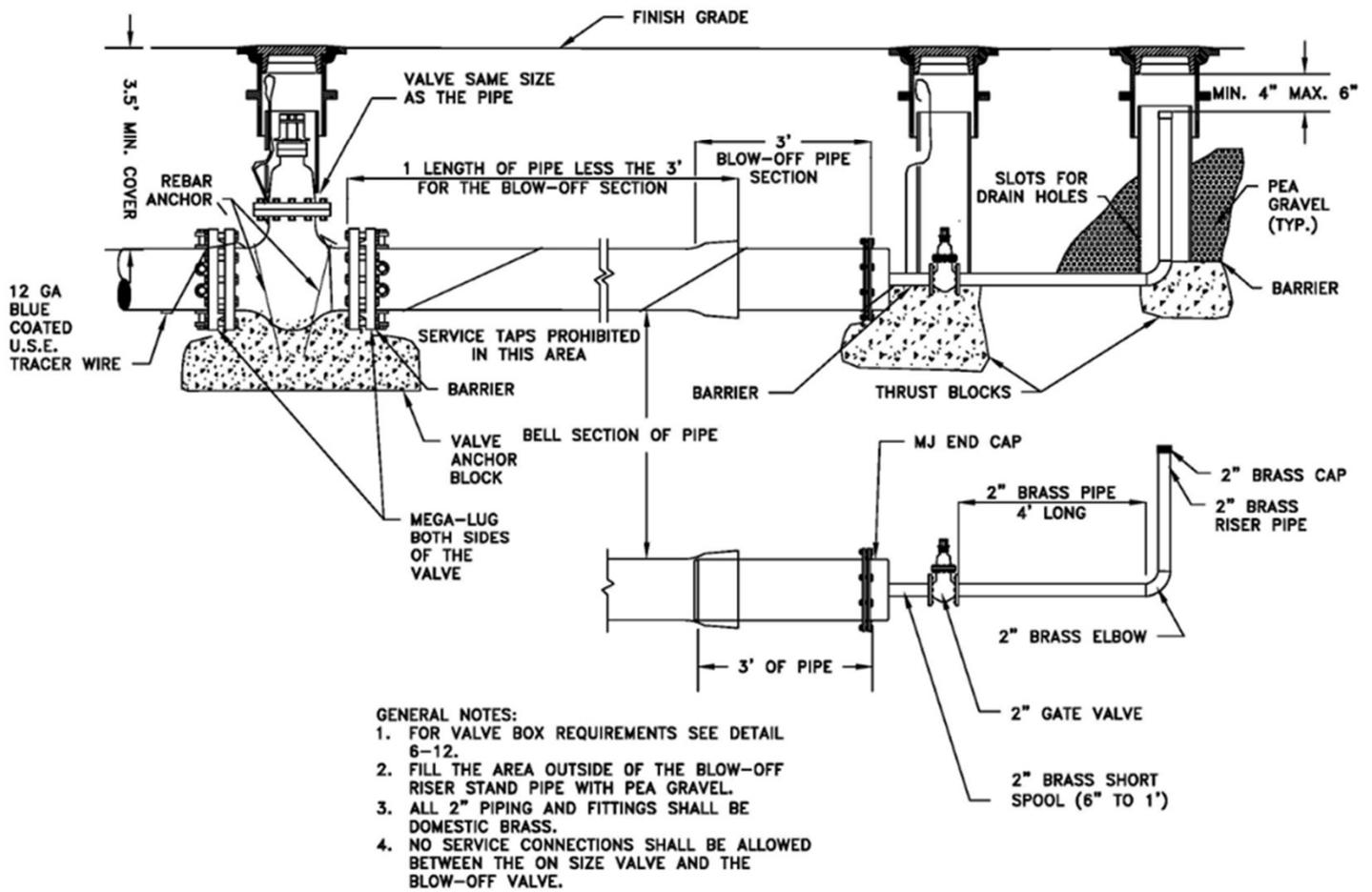


**INSTALLATION NOTE:** 1. BLOW-OFF WILL EXTEND FORM END OF MAINLINE.

2. THRUST BLOCK WILL BE POURED AS NOT IMPEDE THE DRAINING OF THE STAND PIPE.
3. A MINIMUM OF 18" OF 1 1/2" DRAIN ROCK WILL BE PLACED AT THE BOTTOM OF TRENCH WITH THE REMAINDER OF TRENCH BACKFILLED WITH 5/8" CRUSHED ROCK TO THE BASE OF THE BOX.
4. #14 TRACE WIRE WILL BE RUN UP AND INTO THE BLOW-OFF BOX.

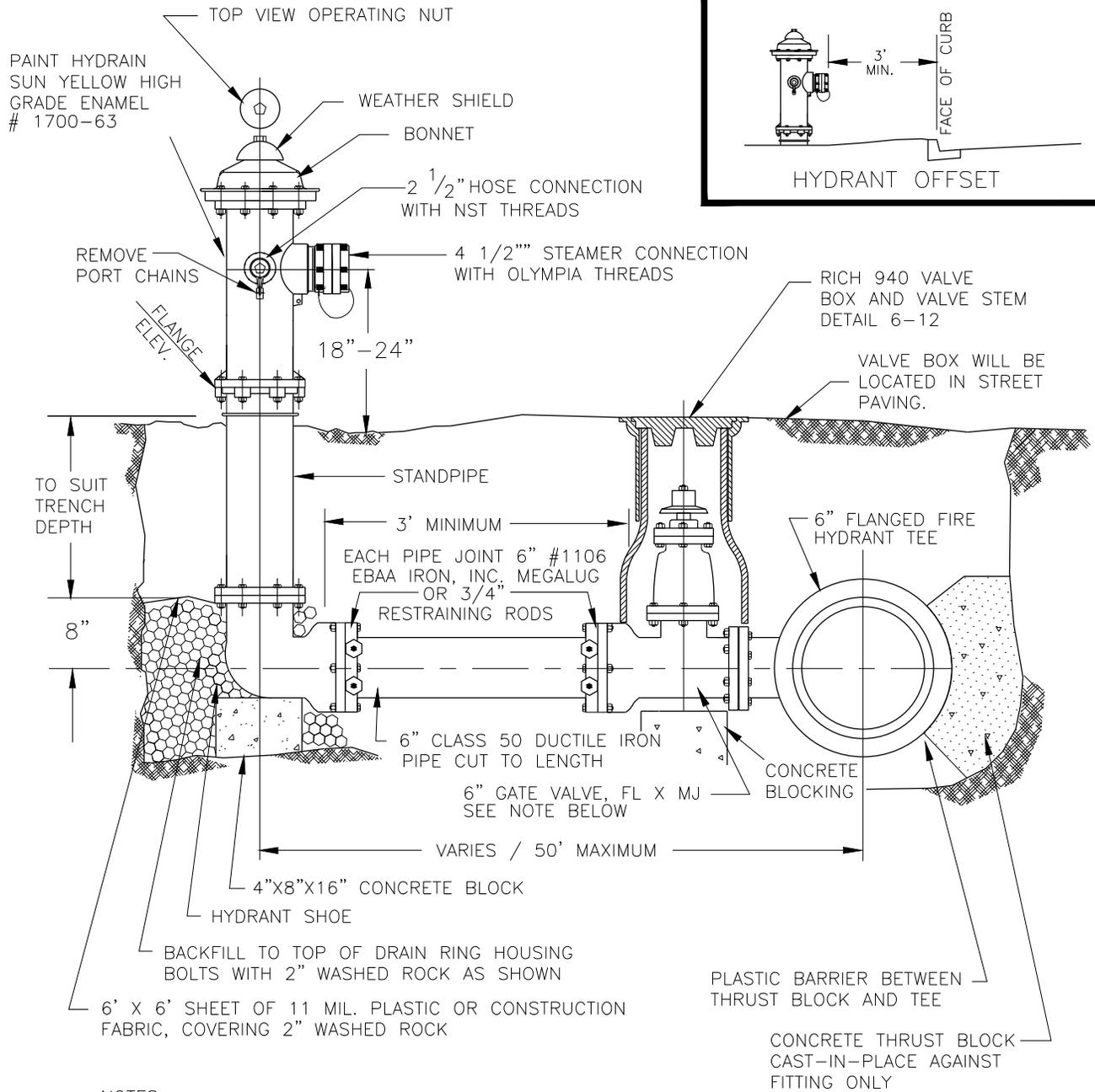
THURSTON PUD STANDARD DETAIL

FIGURE 7 - BLOW-OFF ASSEMBLY



THURSTON PUD STANDARD DETAIL

FIGURE 8 - BLOW-OFF ASSEMBLY #2

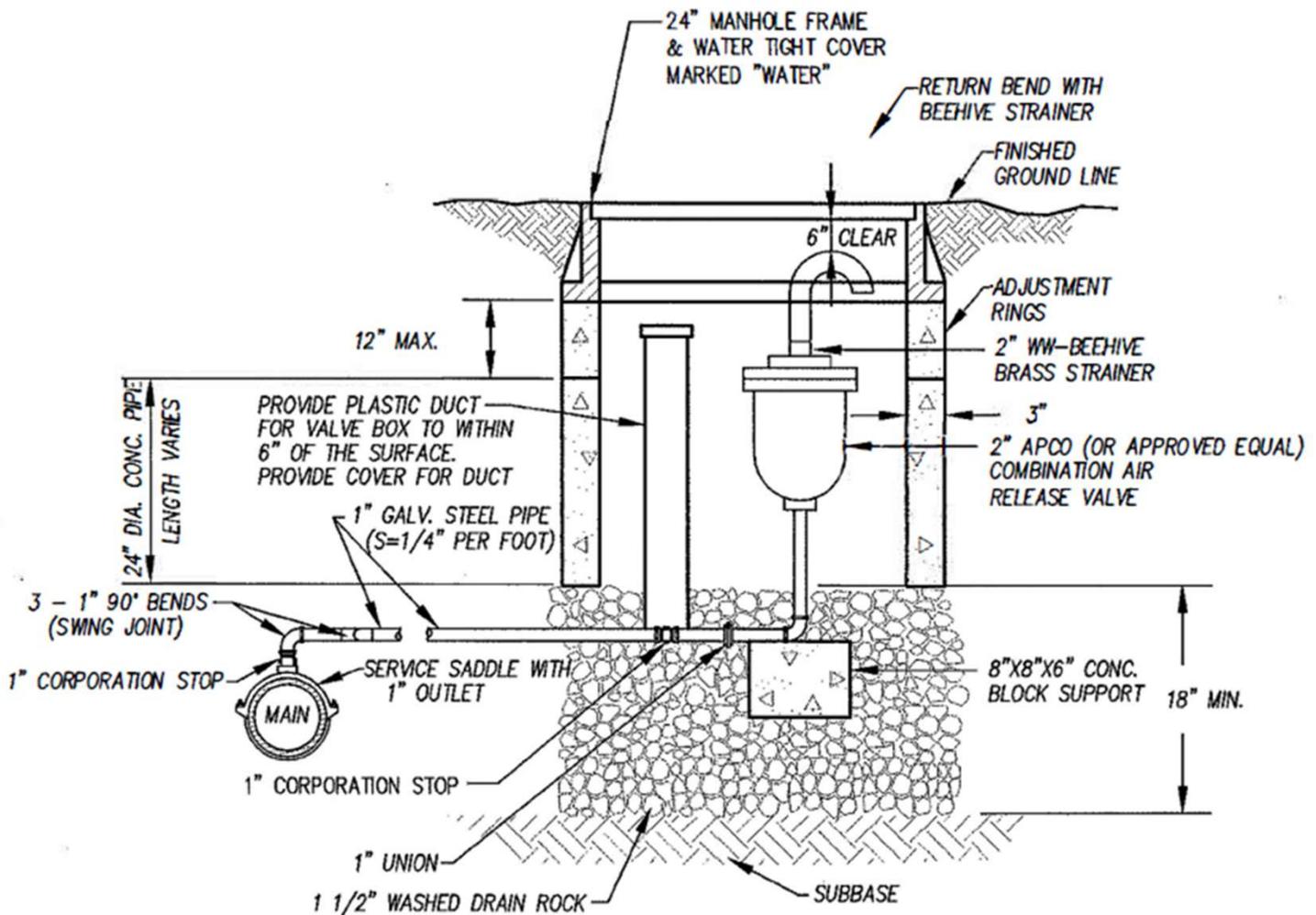


NOTES

- HYDRANTS SHALL BE LOCATED WITH A MINIMUM THREE FOOT RADIUS UNOBSTRUCTED WORKING AREA PROVIDED AROUND ALL HYDRANTS, AND IN NO CASE SHALL BE LOCATED IN SIDEWALK.
- HYDRANT SHALL BE DRESSER M & H RELIANT STYLE 929, MUELLER CENTURION, CLOW MEDALLION OR AVK.
- GATE VALVES SHALL BE RESILIENT WEDGE NRS WITH O-RING SEALS. VALVE ENDS SHALL BE MECHANICAL JOINT BY ANSI FLANGES. VALVES SHALL CONFORM TO AWWA 509-80. VALVES SHALL BE MUELLER M & H. KENNEDY. CLOW.

THURSTON PUD STANDARD DETAIL

FIGURE 9 - FIRE HYDRANT INSTALLATION

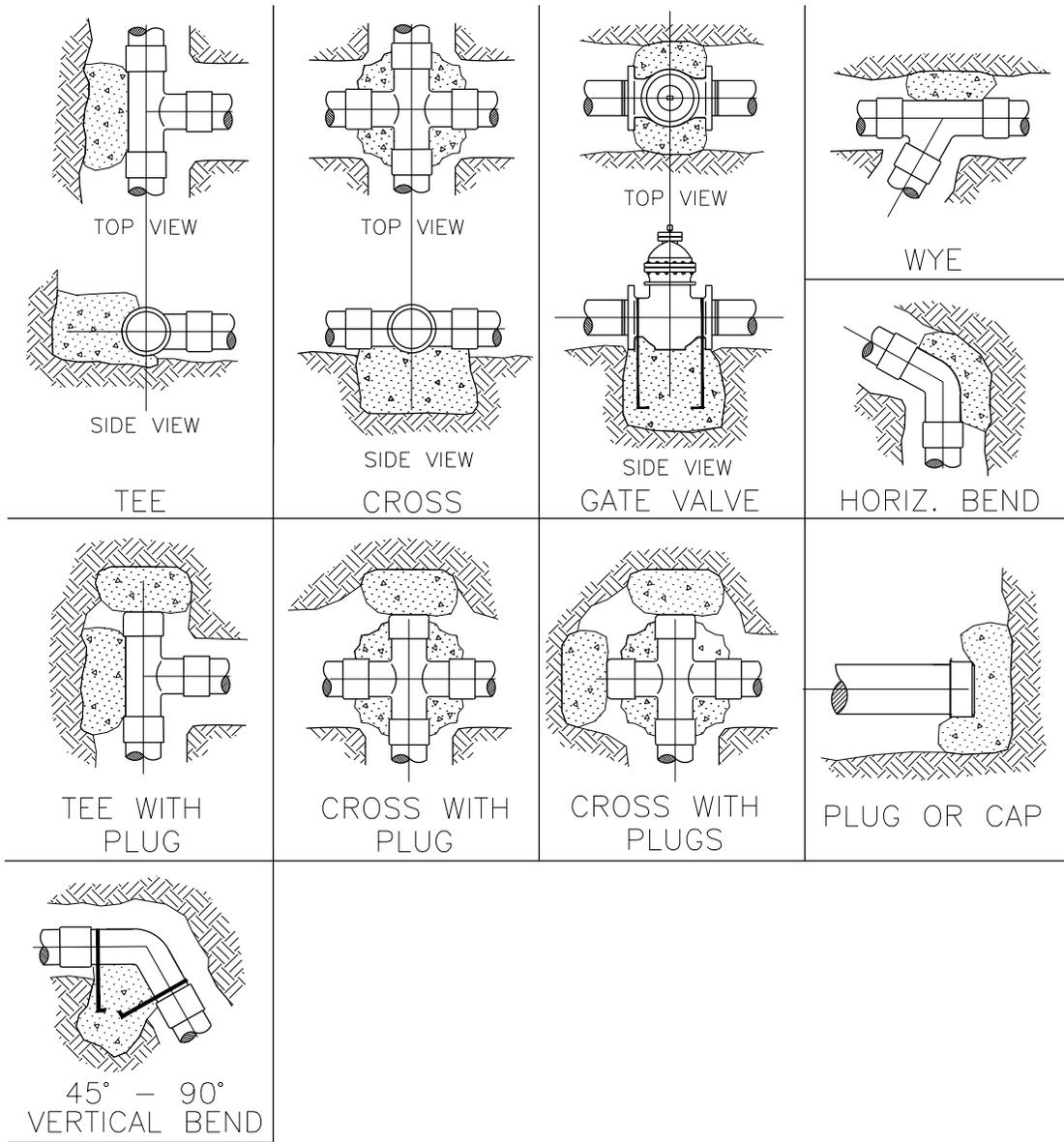


**NOTES:**

1. VALVE ASSEMBLY SHALL BE SET AT THE HIGH POINT OF THE LINE.
2. A MINIMUM OF ONE 4" ADJUSTMENT RING MUST BE PROVIDED IN TRAFFIC AREA SETTINGS.
3. ADJUSTMENT RINGS AND MANHOLE RING TO BE GROUTED, WATER TIGHT.
4. IF DETERMINED BY THE WATER COMPANY THAT EXISTING SOIL OR WATER TABLE CONDITIONS ARE INADEQUATE FOR PROPER DRAINAGE, A VENT PIPE WILL BE REQUIRED. VENT PIPE CONSTRUCTION WILL REQUIRE WATER COMPANY APPROVAL PRIOR TO INSTALLATION.

THURSTON PUD STANDARD DETAIL

FIGURE10- AIR VACUUM RELEASE ASSEMBLY



NOTES:

1. CONCRETE THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
2. PLASTIC BARRIER SHALL BE PLACED BETWEEN ALL THRUST BLOCKS & FITTINGS.
3. ANCHOR REBAR SHALL BE #5 ON 12" DIA. AND LESS WITH 30" IMBEDMENT, #5 ON 16"-24" DIAMETER WITH 36" IMBEDMENT.
4. PLUGS TO BE MINIMUM OF 5' FROM TEE, WYE CROSS ON VALVE.

THURSTON PUD STANDARD DETAIL

FIGURE 11 - THRUST BLOCKING

## THRUST LOADS

THRUST AT FITTINGS IN POUNDS AT 200 POUNDS PER SQUARE INCH OF WATER PRESSURE

PIPE DIAMETER	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND	DEAD END OR TEE
4"	3,600	2,000	1,000	500	2,600
6"	8,000	4,400	2,300	1,200	5,700
8"	14,300	7,700	4,000	2,000	10,100
10"	22,300	12,100	6,200	3,100	15,800
12"	32,000	17,400	8,900	4,500	22,700
14"	43,600	23,600	12,100	6,100	30,800
16"	57,000	30,800	15,700	7,900	40,300

### NOTES:

- BLOCKING SHALL BE CEMENT CONCRETE CLASS "B" POURED IN PLACE AGAINST UNDISTURBED EARTH. FITTING SHALL BE ISOLATED FROM CONCRETE THRUST BLOCK WITH PLASTIC OR SIMILAR MATERIAL.
- TO DETERMINE THE BEARING AREA OF THE THRUST BLOCK IN SQUARE FEET (S.F.):  
EXAMPLE : 12" - 90° BEND IN SAND AND GRAVEL  
 $32,000 \text{ LBS} \div 3000 \text{ LB/S.F.} = 10.7 \text{ S.F. OF AREA}$
- AREAS MUST BE ADJUSTED FOR OTHER PIPE SIZE, PRESSURES AND SOIL CONDITIONS.
- BLOCKING SHALL BE ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY WITHSTAND OPERATING PRESSURE UNDER ALL CONDITIONS OF SERVICE.

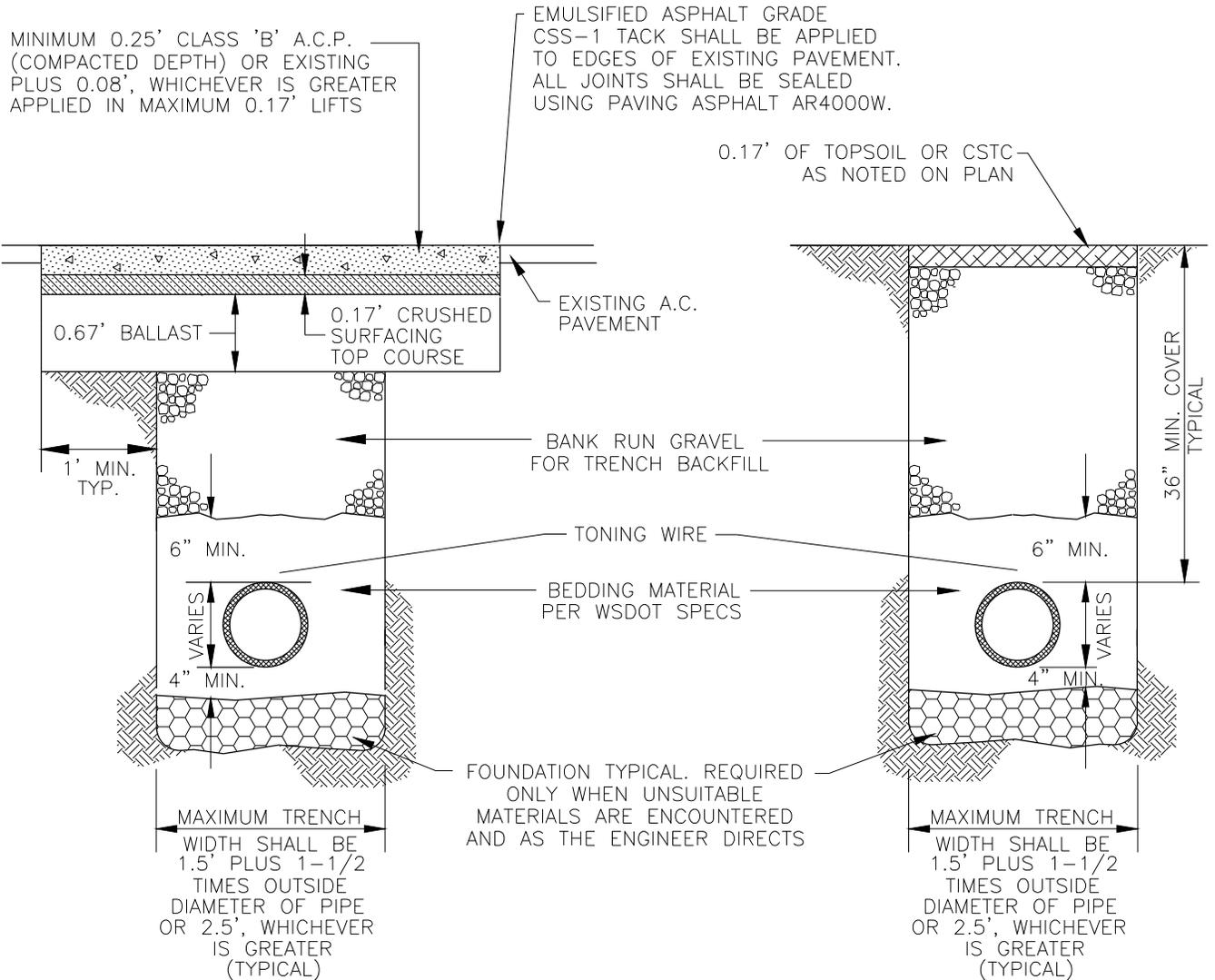
### SAFE SOIL BEARING LOADS

FOR HORIZONTAL THRUSTS WHEN THE DEPTH OF COVER OVER THE PIPE EXCEEDS 2 FEET

SOIL	POUNDS PER SQUARE FOOT
MUCK, PEAT	0
SOFT CLAY	1,000
SAND	2,000
SAND & GRAVEL	3,000
SAND & GRAVEL CEMENTED WITH CLAY	4,000
HARD SHALE	10,000

THURSTON PUD STANDARD DETAIL

**FIGURE 12 - THRUST BLOCKING ALLOWABLE LOADS**

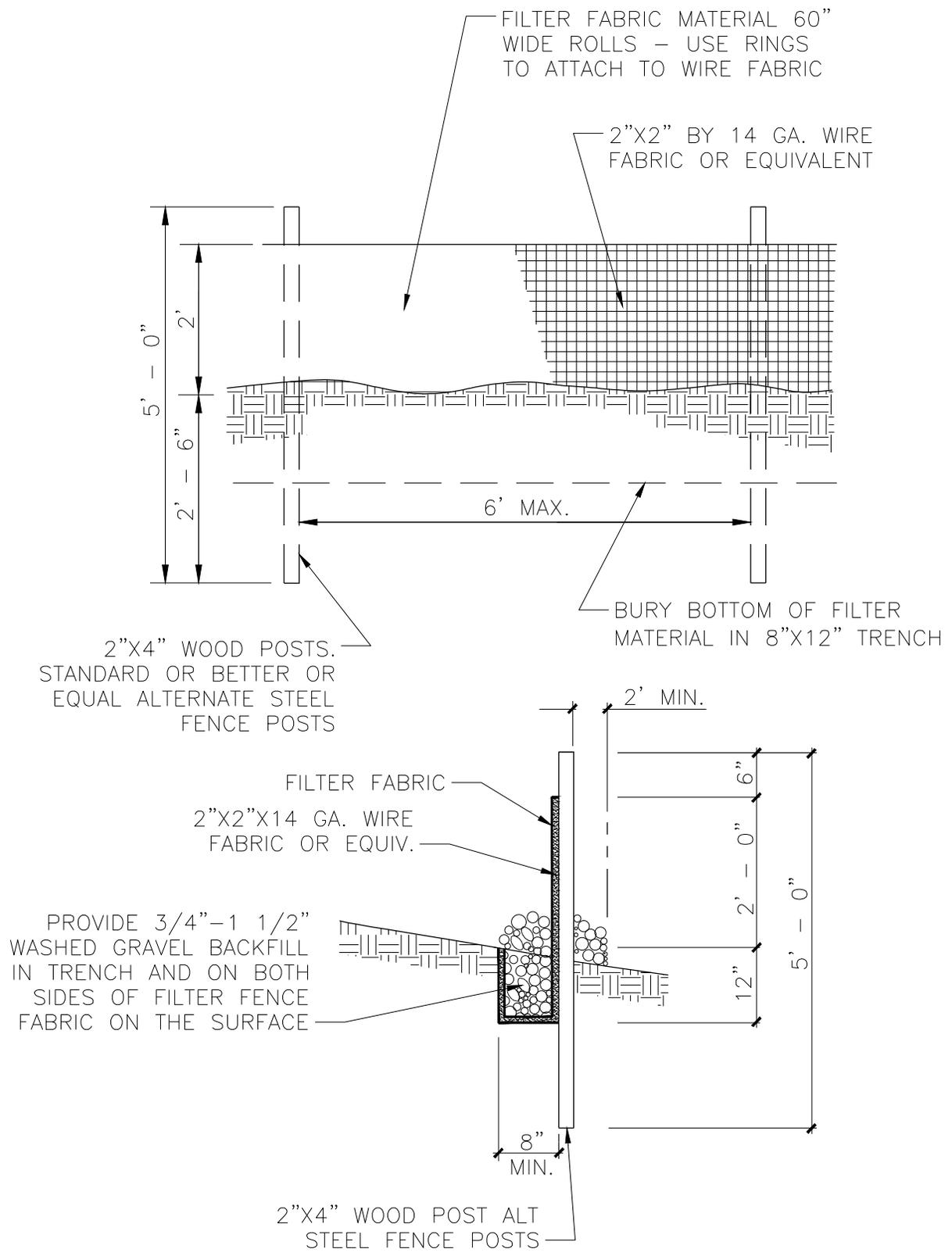


NOTES:

1. ALL MATERIALS EXCEPT A.C.P. AND BEDDING MATERIAL SHALL BE COMPACTED IN 6-INCH MAXIMUM LIFTS TO 95% DENSITY.
2. BEDDING SHALL CONFORM TO SECTION 9-03.15 OR 9-03.16 OF THE STD. SPECS.
3. COMPACTION: BEDDING SHALL BE COMPACTED TO 95% MAX. AS DETERMINED BY ASTM D1557. BACKFILL SHALL BE COMPACTED TO 85% IN UNPAVED AREA AND 95% IN PAVED OR SHOULDER AREAS AS DETERMINED BY ASTM D1557.
4. ALL MATERIALS WORKMANSHIP AND INSTALLATION SHALL BE IN CONFORMANCE WITH THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION LATEST EDITION THEREOF.
5. KEEP TRENCH BOTTOM COMPACTED WITH UNIFORM GRADE. A BELL JOINT SHALL BE REQUIRED AT EACH JOINT FOR PROPER SUPPORT. NO TEMPORARY SUPPORTS, I.E. BLOCKS WILL BE ALLOWED TO SUPPORT PIPE TRENCH BOTTOM SHALL BE TO GRADE PRIOR TO PIPE INSTALLATION.

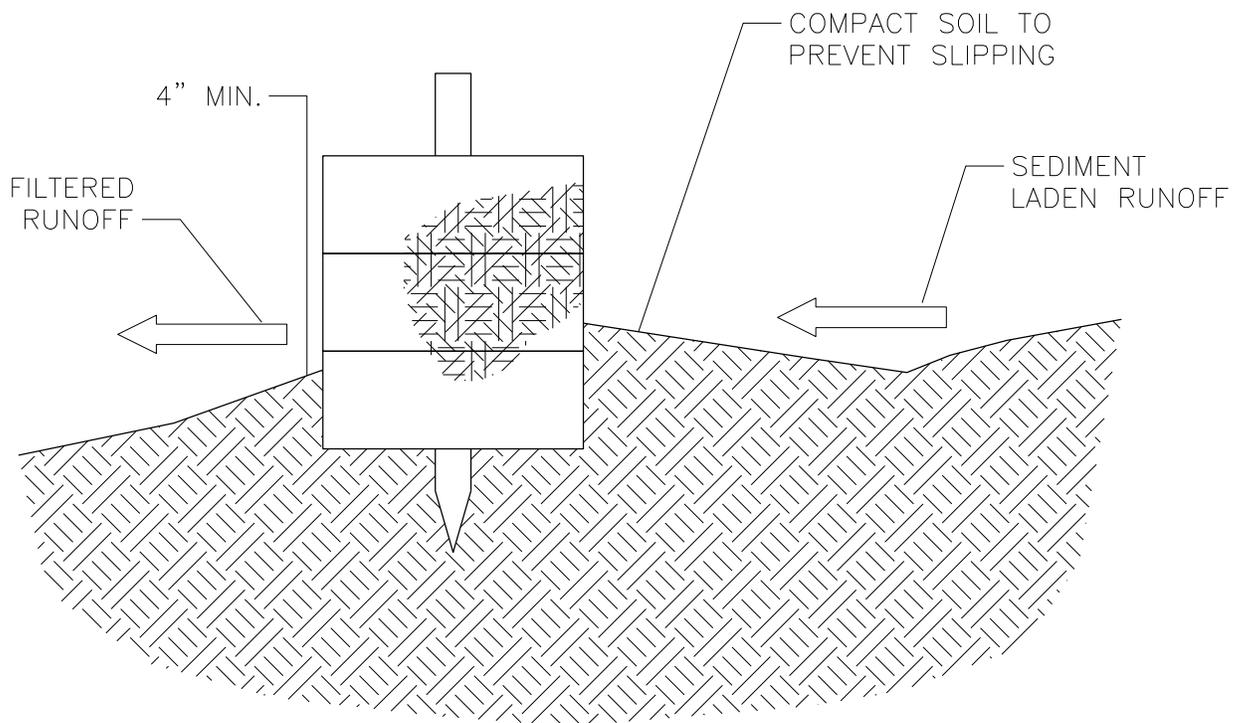
THURSTON PUD STANDARD DETAIL

FIGURE 13 - TRENCH AND PAVEMENT RESTORATION



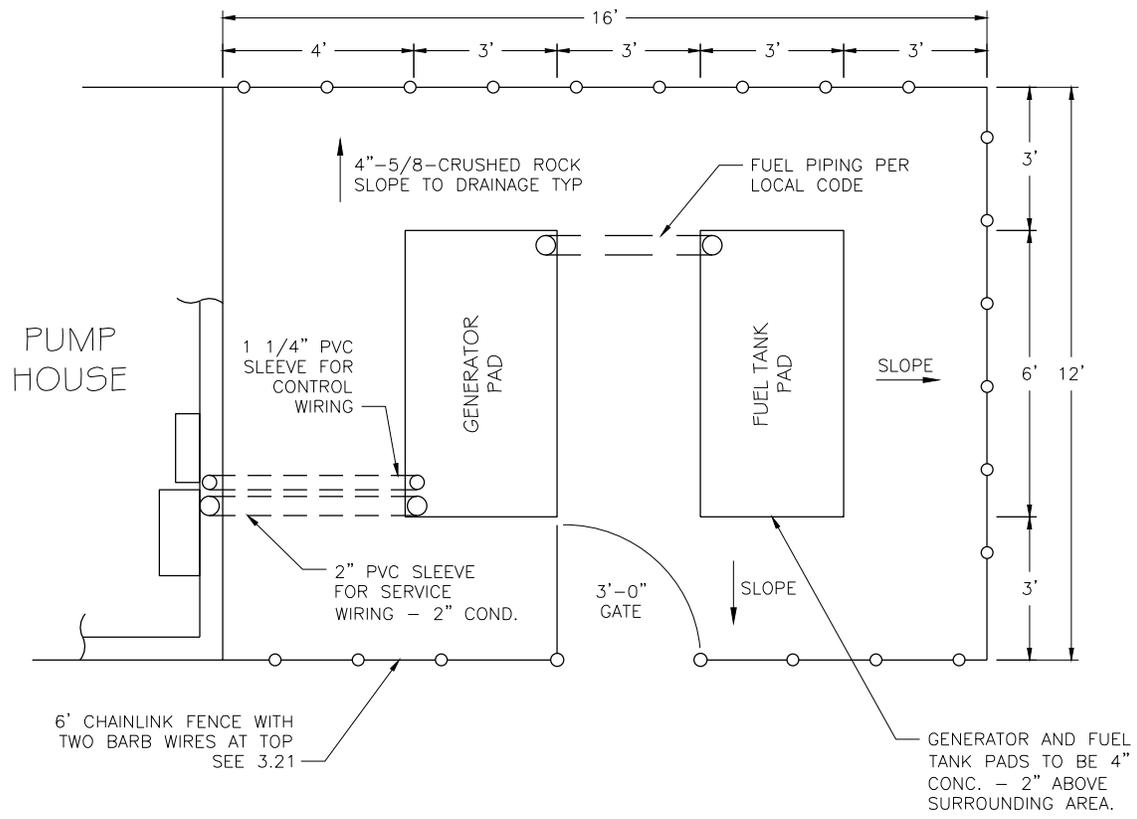
THURSTON PUD STANDARD DETAIL

FIGURE 14 - FILTER FABRIC FENCE



THURSTON PUD STANDARD DETAIL

FIGURE 15 - STRAW BALE BARRIER

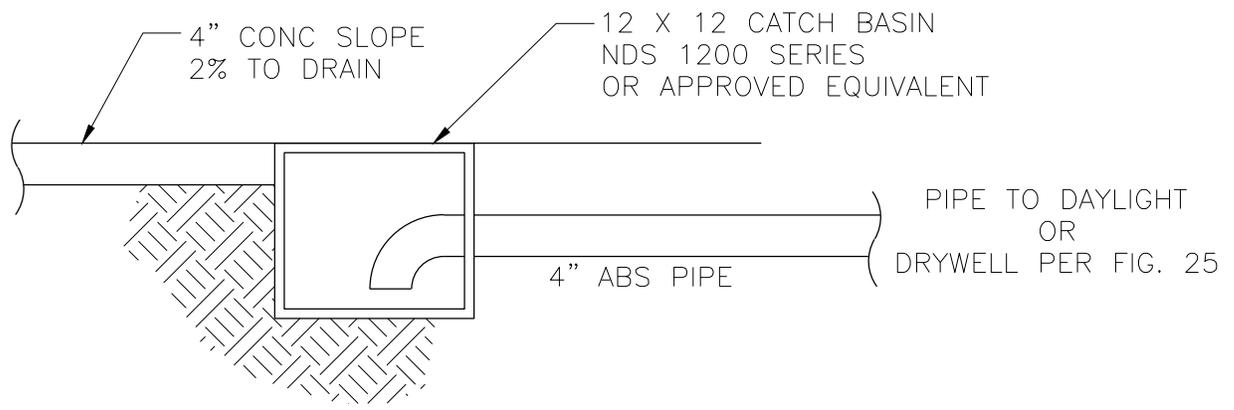


SCALE: 1/4" = 1'

PVC SLEEVES NOT TO SCALE

THURSTON PUD STANDARD DETAIL

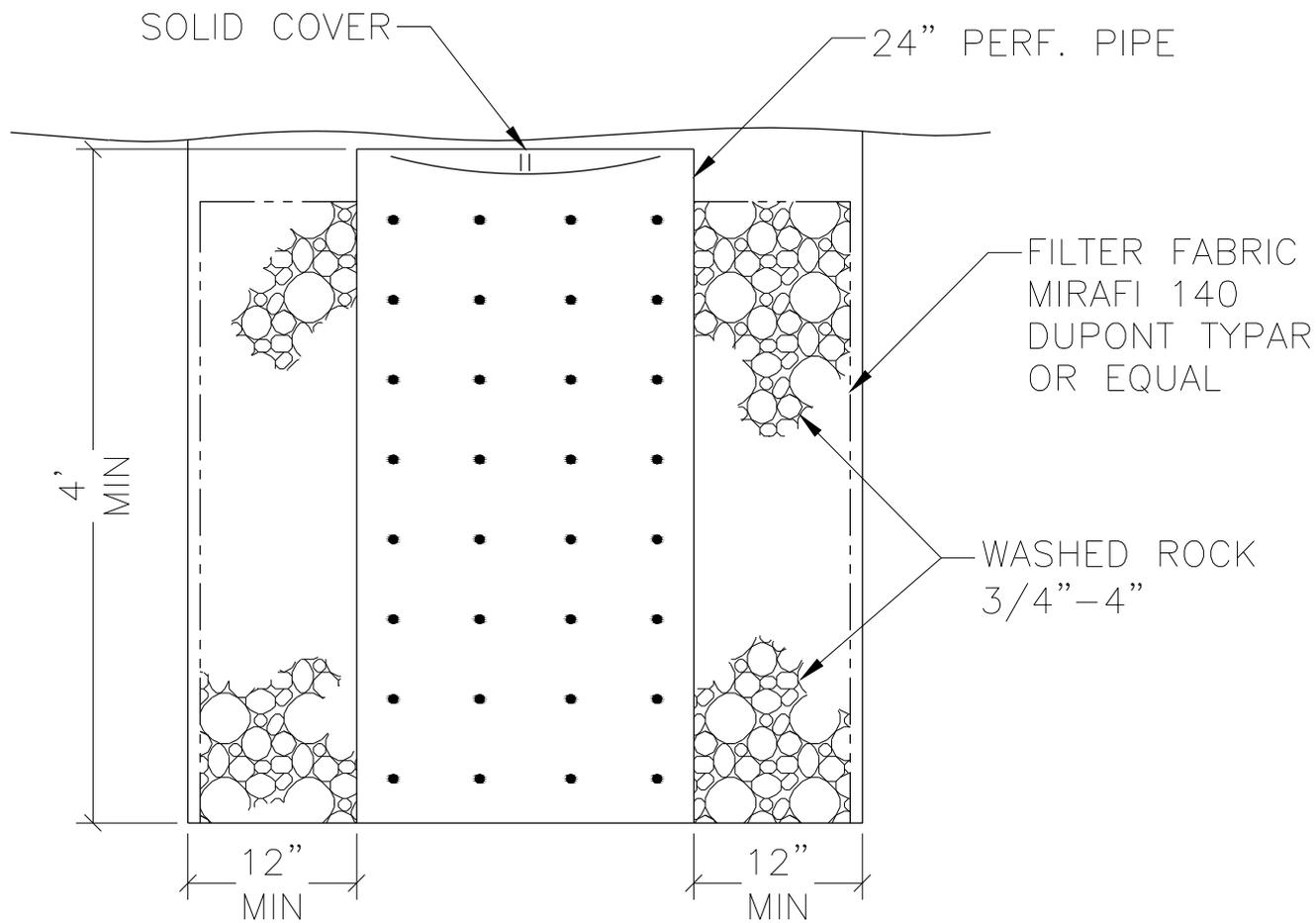
FIGURE 16 - TYPICAL GENERATOR / FUEL TANK INSTALLATION



NO SCALE

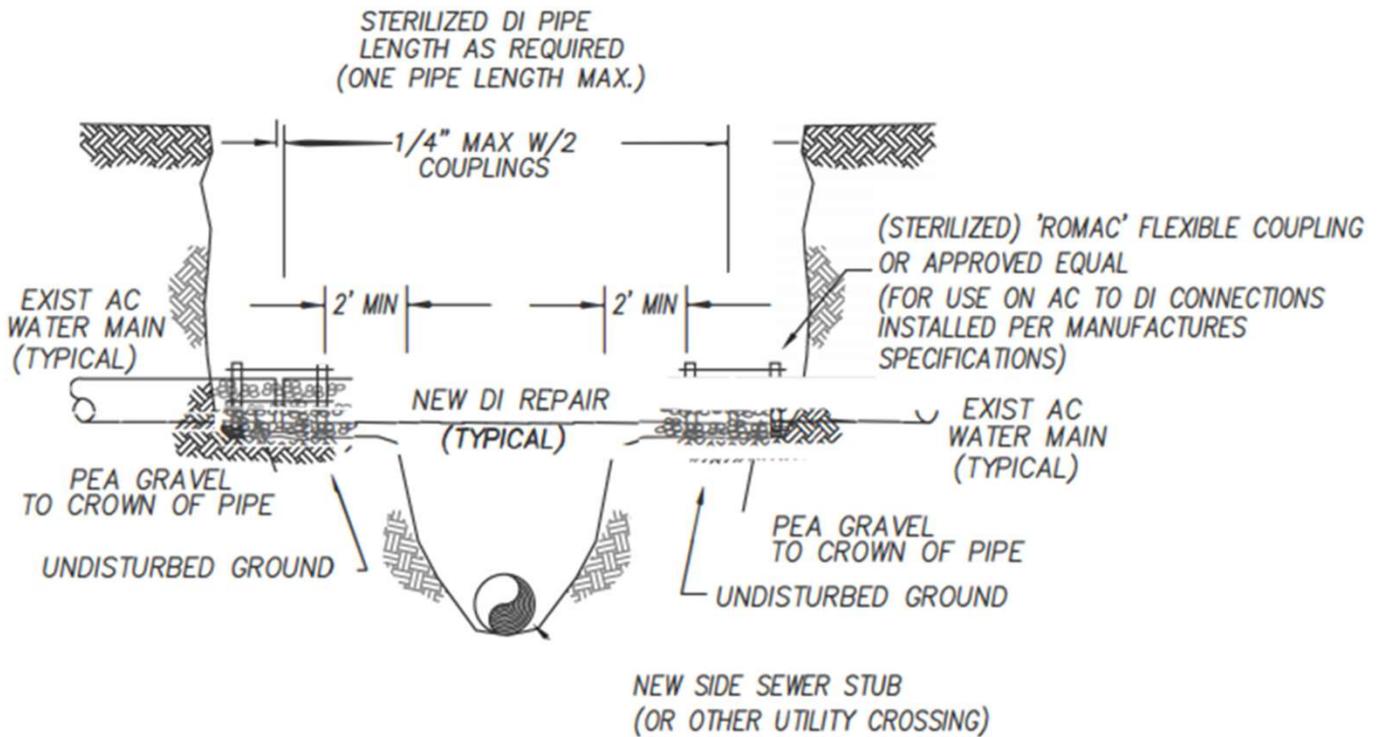
THURSTON PUD STANDARD DETAIL

FIGURE 17 - FLOOR DRAINS



THURSTON PUD STANDARD DETAIL

FIGURE 18 - DRY WELL

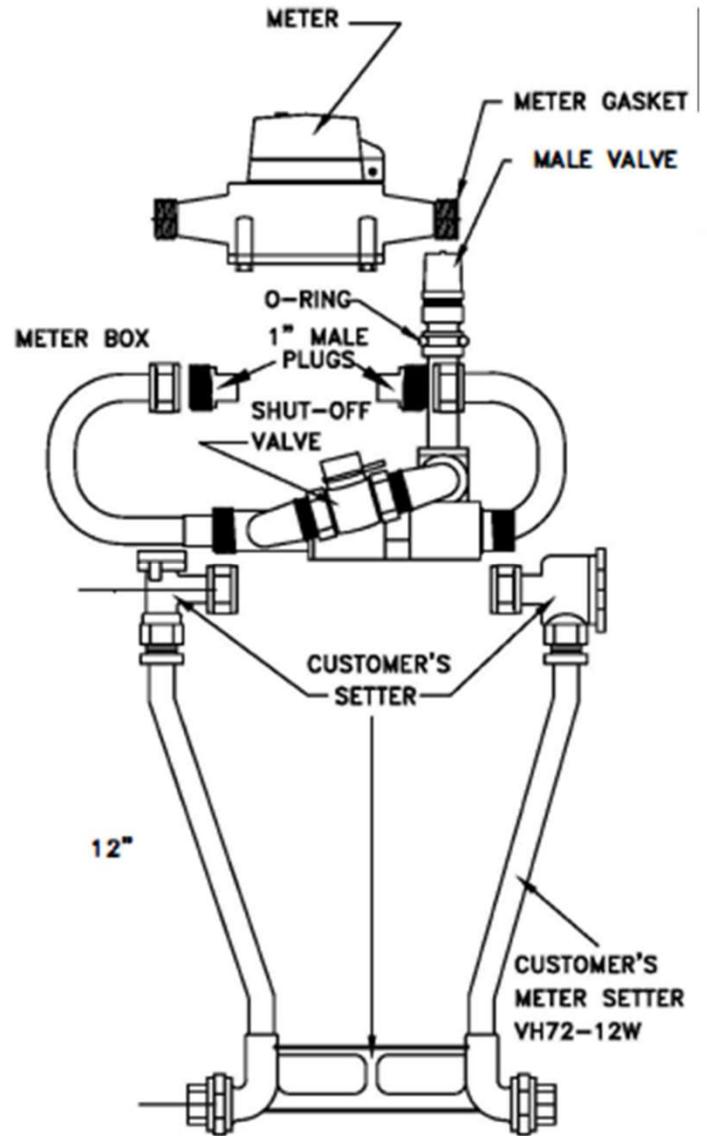
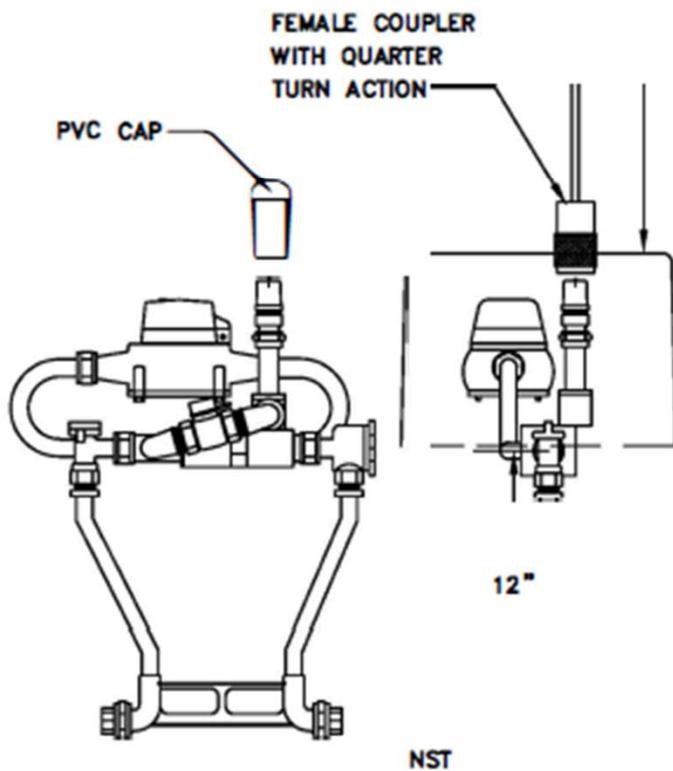
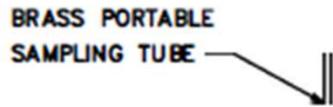
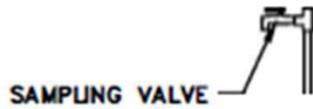


NOTES:

1. ALL EXCAVATED, EXPOSED, OR UNDERMINED AC OR PVC MAINS SHALL BE BED IN PEA GRAVEL OR CDF TO THE CROWN OF THE PIPE (MINIMUM)
2. (STERILIZED) 'ROMAC' FLEXIBLE COUPLING (OR OR APPROVED EQUAL FOR AC TO DI CONNECTIONS)
3. COUPLINGS SHALL BE LOCATED ON UNDISTURBED GROUND A MINIMUM OF 2- FEET PAST THE LIMITS OF THE UNDERMINING UTILITY TRENCH
4. STERILIZED DI PIPE – LENGTH AS NEEDED (ONE PIPE LENGTH MAX.) ALL D.I. PIPE SHALL REST ON FIRM BEARING EARTH
5. CONTRACTOR IS REQUIRED TO MAINTAIN WORKERS EXPOSURE TO ASBESTOS MATERIAL AT OR BELOW THE LIMIT PRESCRIBED IN WAC 296-62-07705  
ASBESTOS CEMENT PIPE SHALL BE CUT WITH A HAND OPERATED CARBIDE BLADE CUTTER WITH CONTROLLED FLOWING WATER  
CONTAMINATED CLOTHING SHALL BE LEFT AND BURIED IN THE TRENCH OR TRANSPORTED IN SEALED IMPERMEABLE BAGS LABELED IN ACCORDANCE WITH WAC 296-62-07721. AC PIPE SHALL BE LEFT AND BURIED IN THE TRENCH

THURSTON PUD STANDARD DETAIL

FIGURE 19 ASBESTOS CEMENT WATER LINE REPAIR



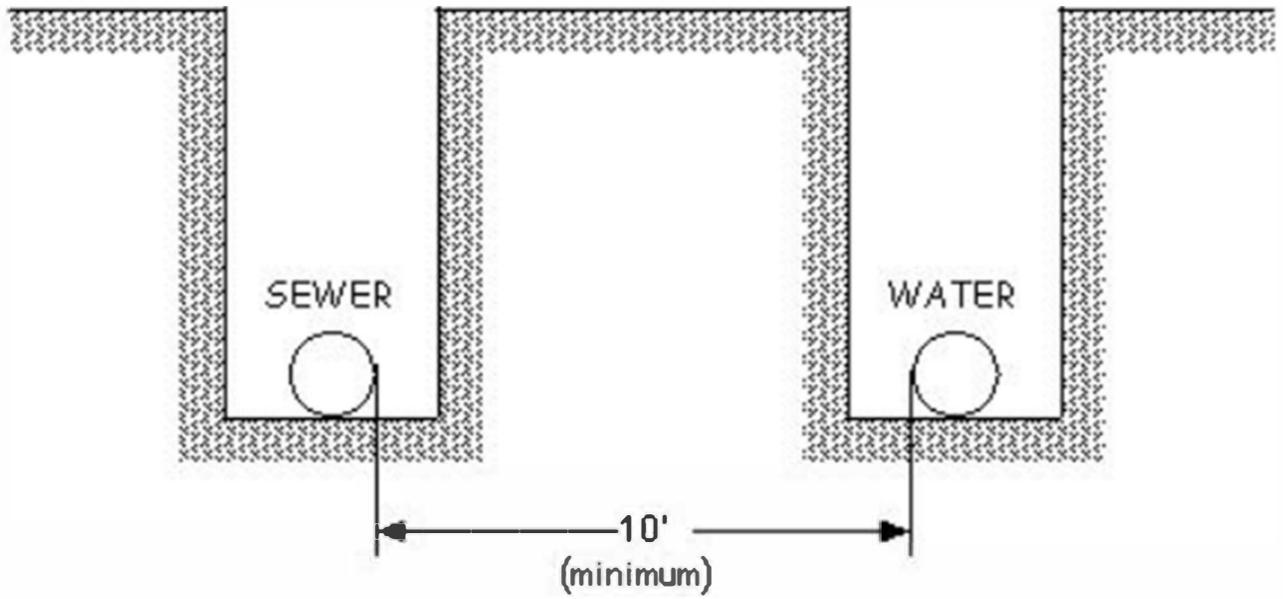
**GENERAL NOTES:**

1. PROVIDE THE CITY WITH A BRASS PORTABLE SAMPLING TUBE.
2. PROVIDE 2 EACH 1" MALE PLUGS TO CAP AND PROTECT THE SAMPLING UNIT.
3. THE SAMPLING STATION SHALL BE INSTALLED IN THE CUSTOMER'S METER SETTER. A SEPARATE METER SETTER IS NOT REQUIRED.

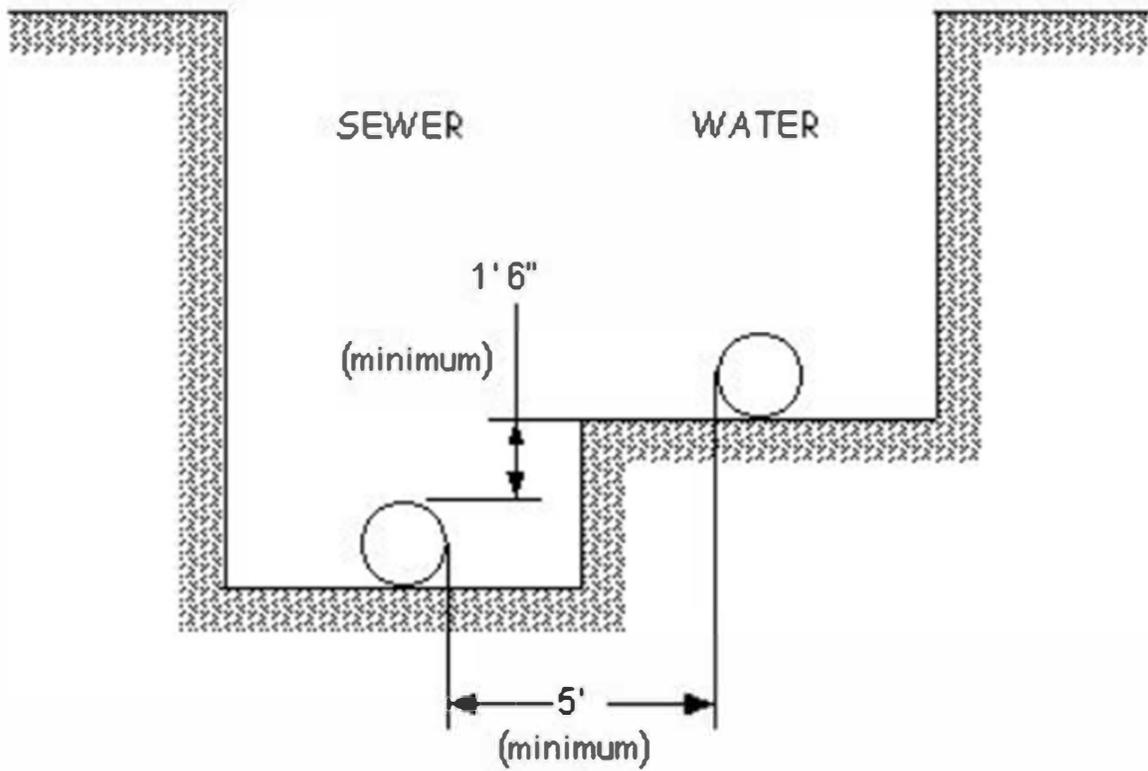
THURSTON PUD STANDARD DETAIL

FIGURE 20 - SAMPLE STATION

NORMAL CONDITIONS



UNUSUAL CONDITIONS



THURSTON PUD STANDARD DETAIL

FIGURE 21 – SEPARATION OF WATER AND SEWER LINES

# Appendix

## STANDARD SYMBOLS FOR AWRI SYSTEM PLANS



STANDARD METER BOX WITH STANDARD METER



SHUT-OFF VALVE



BLOW OFF ASSY



HYDRANT



STANDARD METER BOX WITH SHUT-OFF VALVE (NO METER)



SERVICE SHUT-OFF VALVE WITH NO METER OR METER BOX



PUMP HOUSE



AIR VACUUM RELEASE

WHERE POSSIBLE DIMENSIONS LOCATING METERS RELATIVE TO ROAD CENTER LINE OR PROPERTY LINES ARE SHOWN ON SYSTEM PLANS.

EXAMPLE:

#237642  
1" ROCKWELL  
32' TO ROAD CL  
12'-N OF PROP. LINE



18' FROM HSE  
12' S OF DR.  
STK



### EXAMPLE 1

SERVICE IS METERED  
METER IS 32' FROM THE  
CENTER LINE OF THE ROAD AND  
IS 12' FROM THE NORTH PROPERTY  
LINE OF PROPERTY BEING SERVED.  
METER NUMBER IS 237642

### EXAMPLE 2

SERVICE IS NOT METERED  
& HAS SHUT-OFF VALVE ONLY  
LOCATED 18' FROM THE  
HOUSE SERVED AND IS 12'  
SOUTH OF THE EDGE OF THE  
DRIVEWAY METER LOCATION  
IS STAKED

### EXAMPLE 3

SERVICE HAS A METER BOX  
BUT IS NOT METERED

NOTE  GIVES A

DETAILED LOCATION OF THE  
SHUT-OFF VALVE

NOTE: WHENEVER POSSIBLE METER NUMBERS SHOULD BE INDICATED ON WATER SERVICE PLAN INDICATING SIZE AND TYPE OF METER.  
WHERE APPROPRIATE METER LOCATIONS ARE MARKED BY A 2X2 STAKE PAINTED BLUE.

THURSTON PUD STANDARD DETAIL

**STANDARD SYMBOLS FOR AWRI SYSTEM PLANS**

**Appendix B**  
**Rates and Fees**

---

**A1 Introduction**

This Section contains the current Rate Schedules and Fees charged by the District. You can find the District's current Rates, Fees and Charges on our website at <http://www.thurstonpud.org/our-rates.htm>.

**INDEX OF RATES AND FEES SCHEDULES**

<b><i>Table</i></b>	<b><i>Schedule Name</i></b>
<b><i>B-1</i></b>	<b>Rates, Fees and Charges – Effective 1/1/2020</b>
<b><i>B-2</i></b>	<b>ERU Determination</b>
<b><i>B-3</i></b>	<b>Equipment and Employee Rates – Effective 1/1/2020</b>
<b><i>B-4</i></b>	<b>Miscellaneous Fees</b>
<b><i>B-5</i></b>	<b>Engineering Fees</b>
<b><i>B-6</i></b>	<b>Standard Penalties</b>

**CERTIFIED COPY OF RESOLUTION  
ADOPTED AT THE REGULAR MEETING OF THE COMMISSIONERS  
OF  
PUBLIC UTILITY DISTRICT NO. 1 OF THURSTON COUNTY**

The President and Secretary of Public Utility District No. 1 of Thurston County (District) certify that a majority of the Commissioners of Public Utility District No. 1 of Thurston County in attendance at the meeting held at the District's administrative office at 1230 Ruddell Road SE, Lacey, Washington, 98503 on Wednesday, October 2, 2019 adopted this resolution. This resolution has not been revoked.

**RESOLUTION NO. 19-35**

**RECITALS**

The proposed amendment to the schedules of miscellaneous fees and rates charged by the District for water supplied by the District to its customers in 2020 have been filed in the records of the District, and

The capital surcharges adopted by the District in Resolution 14-21 on September 23, 2014, are proposed to be increased to \$9.35 per equivalent residential unit as stated on the attached rate sheet.

The Commissioners held public hearings on the 2020 Capital Budget on Tuesday, September 10 and 23, 2019, at the Lacey Community Center at 6729 Pacific Avenue SE, Lacey, Washington 98503. Additional public meetings were held on Wednesday, September 11, 2019, at the Bethel Learning Center at 21818 38th Ave E, Spanaway, WA 98387, and on September 18, 2019, at the Veterans Memorial Museum at 100 SW Veterans Way, Chehalis, WA 98532, after publishing notices of the meetings as prescribed by law, and

The Commissioners have discussed the Schedule of Revised Rates in open public meetings, and the public was provided the opportunity to give their testimony at advertised Public Hearings.

NOW, THEREFORE, THE COMMISSIONERS OF THE DISTRICT DO HEREBY RESOLVE AS FOLLOWS:

Section 1. The schedules of the revised rates and charges attached to this Resolution are incorporated and adopted as the rates of the Public Utility District No. 1 of Thurston County for the supply of water and other services, effective January 1, 2020.

This Resolution was approved and adopted by a majority vote of the Commissioners present.

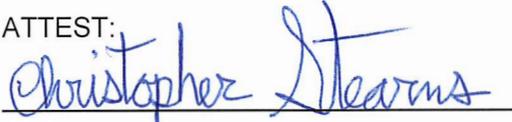
As the President and Secretary of the District, we additionally certify that this meeting of October 2, 2019 was attended by at least two of the three Commissioners of the District and that

this resolution was adopted by a majority vote of the Commissioners of the District in attendance at the meeting.

 \_\_\_\_\_

Russell E. Olsen  
Commissioner and President of  
Public Utility District No. 1 of Thurston County

ATTEST:

 \_\_\_\_\_

Christopher Stearns  
Commissioner and Secretary

Attachment: Schedules of Revised Rates



## RATES, FEES AND CHARGES

For All PUD Customers\*

Effective January 1, 2020

Thurston PUD has a policy to meter all connections and then move customers to the same metered rates by 2020.

Residential Base Rate	Base Rate (per month)				Consumption Charges (per hundred cubic feet)				
	Meter Size	¾"	1"	Flat Rate	0-500	501-2100	2101-3600	3601-7000	7000+
	Monthly Rate	\$31.15	\$61.90	\$75.70	\$2.80	\$4.30	\$5.15	\$6.00	\$6.75

Commercial Base Rate	Base Rate (per month)						Consumption Charges (per hundred cubic feet)	
	Meter Size	¾"	1"	1 ½"	2"	3"	Nov-Jun	Jul -Oct
	Commercial and Multifamily	\$35.85	\$71.15	\$142.30	\$227.70	\$426.95	\$4.30	\$6.00
	Irrigation	\$35.85	\$71.15	\$142.30	\$227.70	\$426.95	\$6.00	\$6.00
Tanglewilde Parks & Recreation	\$47.45						\$1.40	\$2.00

Capital Improvement Surcharges (Monthly Per ERU)	
¾" Meter	\$9.35
1" Meter	\$15.60
1 ½" Meter	\$31.15
2" Meter	\$49.85
3" Meter	\$93.50
Marvin Road DWSRF	\$15.35
Webster Hill DWSRF	\$14.94
Service Charges	
New Account Service Charge	\$35.00
New Account Non-Related Tenant	\$5.00 each tenant
Late Payment Fee	\$5.00
Return Check Charge	\$30.00
General Facility Charge	\$3,000.00
Non-compliant Customer First	\$50.00
Non-compliant Customer Second	\$110.00
Local Taxes & Fees	
Street Light Fee (Conifer, Cooperfield, Quail Run, Cedarwood)	\$3.15 per month
City of Gig Harbor B&O Tax – Quail Run Only	5%

Service Fees	
Water Availability Letter	\$55.00
Lender Letter	\$55.00
Hydrant Use Fee	Apply 1 1/2 Metered Rate
Meter Test	\$100.00
Cross Connection Survey	\$45.00
Back Flow Test	Time and materials-SMA rates
Refundable Deposits	
Green Report	\$0.00
Yellow Report	\$75.00, or highest bill in the last 12 months, whichever is highest
Red Report	\$150.00 or 2 times the highest bill in the last 12 months, whichever is highest
Temporary Service Deposit	\$1,500.00
Service Connection Charges	
¾" Meter Install	\$730.00
1" Meter Install	\$830.00
1 ½" Meter Install	\$730.00 plus time and materials to install
2" Meter Install	\$900.00 plus time and materials to install
Fire Meter Install	\$1,562.00
Reconnection Fees	
Business Hours	\$50.00
After Hours	\$135.00
Holiday/Weekend	\$210.00
Meter Tampering Charge	\$200.00

\* Frog Hollow, Mountain Lakeview Addition, and Red Tail Hawk Water Systems have a separate rate schedule.



## RATES, FEES AND CHARGES

### For Customers from Frog Hollow, Mountain Lakeview Addition & Red Tail Hawk Water Systems

Effective January 1, 2020

Thurston PUD has a policy to meter all connections and then move customers to the same metered rates by 2020.

Residential Base Rate	Base Rate (per month)		Consumption Charges (per hundred cubic feet)				
	Meter Size	¾"	0-500	501-2100	2101-3600	3601-7000	7001+
	Mountain Lakeview Red Tail Hawk Frog Hollow	31.15	\$2.40	\$4.00	\$5.15	\$6.00	\$6.75

Capital Improvement Surcharges (Monthly Per ERU)		Service Fees	
¾" Meter	\$9.35	Water Availability Letter	\$55.00
1" Meter	\$15.60	Lender Letter	\$55.00
1 ½" Meter	\$31.15	Hydrant Use Fee	Apply 1 1/2 Metered Rate
2" Meter	\$49.85	Meter Test	\$100.00
3" Meter	\$93.50	Cross Connection Survey	\$45.00
Marvin Road DWSRF	\$15.35	Back Flow Test	Time and materials-SMA rates
Webster Hill DWSRF	\$14.94	Refundable Deposits	
Service Charges		Green Report	\$0.00
New Account Service Charge	\$35.00	Yellow Report	\$75.00, or highest bill in the last 12 months, whichever is highest
New Account Non-Related Tenant	\$5.00 each tenant	Red Report	\$150.00 or 2 times the highest bill in the last 12 months, whichever is highest
Late Payment Fee	\$5.00	Temporary Service Deposit	\$1,500.00
Return Check Charge	\$30.00	Service Connection Charges	
General Facility Charge	\$3,000.00	¾" Meter Install	\$730.00
Non-compliant Customer First	\$50.00	1" Meter Install	\$830.00
Non-compliant Customer Second	\$110.00	1 ½" Meter Install	\$730.00 plus time and materials to install
Local Taxes & Fees		2" Meter Install	\$900.00 plus time and materials to install
Street Light Fee (Conifer, Cooperfield, Quail Run, Cedarwood)	\$3.15 per month	Fire Meter Install	\$1,562.00
City of Gig Harbor B&O Tax – Quail Run Only	5%	Reconnection Fees	
		Business Hours	\$50.00
		After Hours	\$135.00
		Holiday/Weekend	\$210.00
		Meter Tampering Charge	\$200.00

**Table B-2  
ERU Determination**

<b>Customer Class</b>	<b>ERU</b>
Single-Family Residential Dwelling Unit	1 ERU
Multi-Family Residential Dwelling Unit	0.778 ERU
Commercial/Industrial	
<sup>3</sup> / <sub>4</sub> - inch meter	1 ERU
1 - inch meter	2.5 ERU
1 <sup>1</sup> / <sub>2</sub> - inch meter	5 ERU
2 - inch meter	8 ERU
4 - inch meter	1 ERU per 0.55 gpm estimated peak day demand
6 - inch meter	1 ERU per 0.55 gpm estimated peak day demand
8 - inch meter	1 ERU per 0.55 gpm estimated peak day demand

Footnotes:

- (1) Estimated demand to be determined by the District, based on comparable facilities and information provided by the Applicant or Customer.

**PUBLIC UTILITY DISTRICT NO. 1 OF THURSTON COUNTY**  
**Employee and Equipment Rate Schedule**  
Effective January 1, 2020

2020

**Time and Material fees**

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Freightliner Vactor HXX - hourly with operator	\$175.00
Well Pump Truck - hourly with operator	\$150.00
Mini Excavator - hourly with operator	\$120.00

All materials will be charged at cost plus 20% up to \$150, plus 10% for amounts over \$150.

**Employee Rates**

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Customer Service/Office Support- hourly	\$60.00
Laborer - hourly	\$56.00
Meter Reader - hourly	\$57.00
Field Technician I - hourly	\$57.00
Field Technician II - hourly	\$64.00
Field Technician III - hourly	\$76.00
Accounting Assistant - hourly	\$60.00
Accountant - hourly	\$67.00
Operations Specialist - hourly	\$77.00
Director of *all positions - hourly	\$112.00
Department Manager - hourly	\$86.00
Assistant General Manager - hourly	\$108.00
General Manager - hourly	\$123.00

Overtime is charged at 1 1/2 times the hourly rate, holidays are charged at 2 times the hourly rate

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**Table B-4  
Miscellaneous Fees**

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<b>Description</b>	<b>Amount</b>
Chlorine Adjustment	Credit of Current Base Rate

**Table B-5  
Engineering Service Fees**

<b>Description</b>	<b>Amount</b>
Plan Review Fee – Two (2) Reviews Non-Residential	Equipment and Employee Rates \$225.00
Extension Agreement Fee	Equipment and Employee Rates
Pre-Construction Conference	Equipment and Employee Rates
Construction Inspection	Equipment and Employee Rates
LUD Feasibility Study	Equipment and Employee Rates
Non-standard Services	
PUD Staff	Equipment and Employee Rates
Outside Engineering Staff	Engineer’s Cost plus 20%
Satellite System Preliminary Feasibility Study	\$200.00
Satellite System Full Feasibility Study	Equipment and Employee Rates
Water Availability Letter	
Residential	\$55.00
Non-residential or Multi-Residential	\$200.00
Fire Flow Model	Engineer’s Cost plus 20%
Fire Flow Test	Engineer’s Cost plus 20%
Developer or Contractor letter of credit processing fee	\$50.00
Easement Preparation	Equipment and Employee Rates

**Table B-6  
Standard Penalties**

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<b>Description</b>	<b>Amount</b>
Unauthorized Taking of Water	\$200.00 (plus estimated use of water charges)
Failure to Appear at Dispute Hearing	\$200.00
Late Request for a Continuance of Dispute Hearing	\$50.00
Investigation and Service & Commodity Charge	\$200.00 (plus damages)
General Damages	Equipment and Employee Rates
Monthly Fee to non-compliant customer	
1 <sup>st</sup> instance of no response *	\$50.00
Repeated instance of refusal *	\$150.00
* fees will be in addition to regular fee for monthly service and will be non-refundable	

Appendix B  
Extension Agreement

Water System Plan – Part A



Thurston PUD

Developer's Extension Agreement  
And  
Design/Construction  
Specifications and Standards

2020

Thurston PUD  
1230 Ruddell Rd SE  
Lacey WA 98503  
360-357-8783 or 866-357-8783  
[www.ThurstonPUD.org](http://www.ThurstonPUD.org)

## INSTRUCTIONS FOR DEVELOPER: EXTENSIONS TO THE WATER SYSTEM

The Public Utility District No. 1 of Thurston County (District) General Manager has the right to require, add, modify, or delete any requirements he deems necessary.

It is the policy of the District that the cost of water line extensions be built to the District's standards and shall be paid for by the property to be benefited. Insofar as possible, the District will provide the water supply per the Washington State, Department of Health, Drinking Water approved system. Extensions are normally installed through direct construction by the Developer. To be eligible, it is necessary that the tax parcel to be served is within the boundaries of the water supply approved service area. If the tax parcel is not currently within the boundaries of the District's service area boundaries, extensions of service area boundaries would need to be made prior to any applications for such extension. Approvals of changes in service area need to be approved through the Washington State, Department of Health, Drinking Water per WAC 246-290-100.

### Extension by Developers:

If a Developer or property owner desires to extend the water system, he/she may do so at his own expense, provided he/she complies with the standards and other requirements of the District. It is the responsibility of the Developer to hire a certified engineer to prepare the drawings, to District standards, for the approval of the District. Developer shall submit two (2) hard copies and one digital for approval.

The following steps are necessary for any extension to the water system:

1. At the time that the preliminary plat or Master Application is filed with the County, a letter requesting the availability of water should be submitted to the District for approval. A preliminary plat or other application materials should accompany this request.
2. Prior to the installation of water mains, an Application for Permission to Construct Extensions to the Distribution System of the District must be signed by the Developer.
3. After the plans are approved and the Developer wishes to proceed with calling for bids. The District may provide a list of contractors who have done adequate work for the District and are on the District's Small Works Roster. If a contractor, not currently on the District's Small Works Roster, is selected by the Developer, the contractor must apply to be placed on the District's Small Works Roster so that the District will have time to interview the contractor regarding qualifications to perform the contract. A performance bond is required of the Developer. Only licensed contractors shall be employed by the Developer.
4. The Director of Operations and Compliance or the District Manager shall be notified, not less than five (5) working days in advance, and a preconstruction meeting with meeting minutes must take place before work commences. Any work that is performed without proper notification to the District's Manager will be summarily rejected.
5. Before any work can begin, payment must be made to the District for General Facilities Charges, Connection Charges, estimated inspection cost, testing costs, etc. outlined in the ***Contract Letter***. There can be no exceptions to payment of these charges before work begins.
6. During the progress of the work, full-time inspection is required by District. Inspection by the District will be at contractor's expense.
7. After completion of construction, a standard pressure test to 200 psi shall be performed. The District's Inspector needs to be present.

8. After the pressure test, water samples shall be taken by the District, upon approval of purity in writing is received, connections to the water system may occur.
9. At this point, the Developer and the Contractor should ask for an inspection and acceptance of the mains. This inspection should be performed by the District's Inspector or Director of Field Operations in the presence of the Contractor and Developer.
10. The Developer shall furnish the District with a cost breakdown showing the total cost of construction.
11. The Developer shall furnish the District any permanent easements necessary to cross other property, and As-Built drawings, two (2) hard copies and one digital.
12. When water service is needed, the Developer may request meters to be installed by the District, allowing 5 working days. In any areas where excessive pressure exists (in excess of 80 pounds per square inch static pressure), the Developer is responsible for the installation of individual pressure reducing valves on the service connections.
13. Before acceptance of the water mains by the District, the Developer must convey to the District notarized easements, maintenance bond and bill of sale deeding these mains to the District. The conditions and standards which correspond to the specifications on all of the Developer's jobs are on file at the District's office. It is the responsibility of the Developer and his contractor to familiarize themselves with the specifications prior to starting work.

**DEVELOPER’S EXTENSION AGREEMENT**

**THIS AGREEMENT** entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, between Public Utility District No. 1 of Thurston County, organized under the laws of the State of Washington (hereinafter referred to as the “District”) and \_\_\_\_\_ and \_\_\_\_\_ (hereinafter referred to as the “Contractor” and the (“Developer”).

**R E C I T A L S**

**WHEREAS**, the Contractor and Developer have proposed to install, at the Developer’s cost estimated to be \$ \_\_\_\_\_, a water distribution main and related operating equipment and appurtenances (hereinafter “improvements”) to District standards and specifications at the following described property:

Legal Description including Parcel Number:

Common Address:

the details of which are further referred to on Drawing No. 1 attached hereto as Exhibit A and by this reference incorporated herein, and to furnish a bond to the District, holding it harmless from negligence of the Contractor or subcontractor, liens, third-party liability and defective material or equipment, a copy of which is attached hereto as marked Exhibit B and by this reference incorporated herein; and

**WHEREAS**, at the completion of said work, the Developer proposes to convey all of the improvements to the District by fully executed bill of sale, a copy of which is attached hereto as Exhibit C and by this reference incorporated herein;

**NOW, THEREFORE**, in consideration of the mutual benefits to be derived by all parties hereto, it is agreed as follows:

1. The Contractor shall proceed to furnish said Performance and Payment Bond and, at the cost hereinabove provided for, to construct the improvements in accordance with the District’s Standards and Specifications, a copy of which is attached hereto as Exhibit D and by this reference incorporated herein.

2. Upon completion of the work by the Contractor and upon acceptance of the improvements by the District for the purpose of providing maintenance and operation, Developer shall furnish all necessary conveyances, such as the Bill of Sale and the Maintenance Bond, in a form to be approved by the District, including a duly executed easement providing access to the improvements for purposes of maintaining, repairing or replacing, if necessary, the proposed improvements, a copy of which is attached hereto as Exhibit E and incorporated herein by this reference.

3. From the date of acceptance, the District shall maintain and operate the improvements conveyed and provide water service to the property.

4. The District reserves the right to install, if necessary, any and all of the improvements on Exhibit A hereto, with all costs of construction to be paid by Developer.

5. Prior to the start of construction, all proposed deviations from the specifications shall be submitted in writing to the Manager of the District and approved by the District.

6. Prior to the start of construction, all "approved equal" materials shall be submitted in writing to the Manager of the District, and cannot be substituted for specified materials without his prior written approval.

PUD No. 1 of Thurston County

By: \_\_\_\_\_  
General Manager

CONTRACTOR:

By: \_\_\_\_\_  
Its \_\_\_\_\_

DEVELOPER:

By: \_\_\_\_\_  
Its \_\_\_\_\_

**PUD No. 1 of Thurston County  
1230 Ruddell Rd SE  
Lacey, WA 98503**

**BILL OF SALE**

**KNOW ALL MEN BY THESE PRESENTS** in consideration of the sum of one dollar (\$1.00) and other good and valuable consideration, receipt of which is hereby acknowledged, the undersigned grantor(s) does by these presents hereby grant, bargain and convey, set over, assign, transfer and sell to the Public Utility District No. 1 of Thurston County, Thurston County, Washington, a municipal corporation, the following described water mains and appurtenances hereto, situated in \_\_\_\_\_ County, Washington.

**ALONG FROM TO SIZE LENGTH**

---

The said grantor(s) hereby certifies that he/she/they/it is/are the sole owner(s) of all the property described above, that they have full power to convey the same and that they will defend the said titles of said Water District against any and all persons lawfully making claim thereto.

The total cost of installing the above described extension(s) to the present District system including labor and materials, is \_\_\_\_\_ dollars (\$\_\_\_\_\_).

**IN WITNESS WHEREOF**, this Bill of Sale is executed this \_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

GRANTOR:

\_\_\_\_\_  
\_\_\_\_\_

STATE OF WASHINGTON )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

On this day personally appeared before me \_\_\_\_\_ to me known to be the individual or individuals described herein and who executed the within and foregoing instrument, and acknowledge that he/she/they executed said instrument as his/her/their free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

(Print Name) \_\_\_\_\_  
NOTARY PUBLIC in and for the State of  
Washington, residing at \_\_\_\_\_  
My Commission expires: \_\_\_\_\_

After Recording, Return to:  
Public Utility District No. 1 of Thurston County  
1230 Ruddell Rd SE  
Lacey, WA 98503

**EASEMENT FOR WATER UTILITIES  
(WATER PIPELINE)**

*NOTE: "Document must meet the County Auditor requirements."*

The Grantor, \_\_\_\_\_, does hereby grant to Public Utility District No. 1 of Thurston County, Thurston County, Washington, a municipal corporation, Grantee, its successors and assigns, an easement over, though, under, across, upon and in the following described real property situated in Thurston County, Washington, to wit:

Parcel # \_\_\_\_\_ being described as follows:

An easement over, under and across the above parcel as described:

for construction, operation, maintenance, repair, and/or replacement of a water pipeline and appurtenances thereto, together with all rights of ingress and egress to and from said easement for all purposes necessary and related thereto. Grantor, its heirs and assigns, agree to refrain from constructing or maintaining any structures (such as buildings and appurtenances, sheds, carports, above or underground vaults or manholes, or large utility lines), allow substantial vegetation, or allow any items or debris in the easement that would prohibit Grantee the full use and enjoyment of said easement.

DATED this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

**GRANTORS:**

\_\_\_\_\_  
\_\_\_\_\_

(document continued)

STATE OF WASHINGTON    )  
  ) ss.  
COUNTY OF THURSON    )

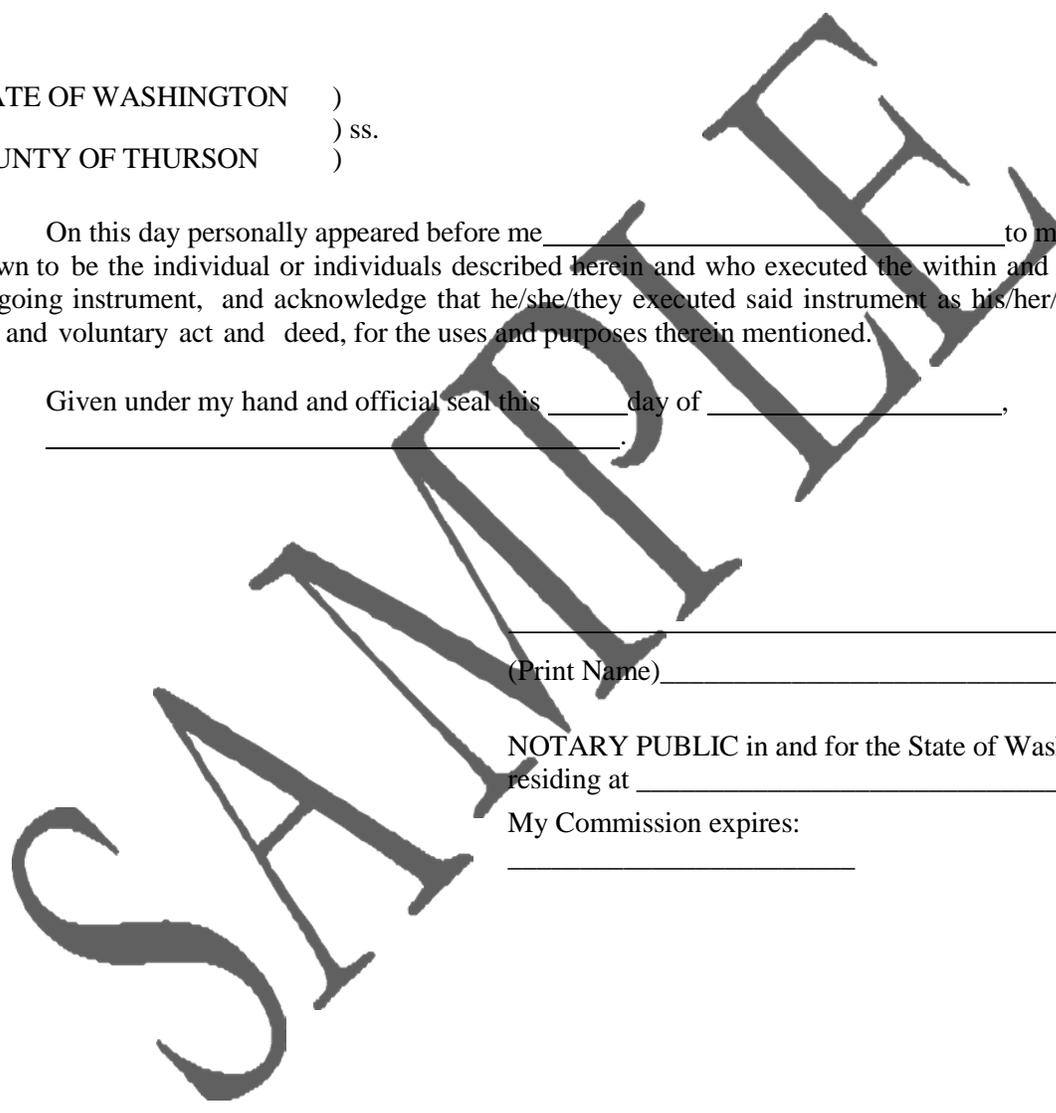
On this day personally appeared before me \_\_\_\_\_ to me  
known to be the individual or individuals described herein and who executed the within and  
foregoing instrument, and acknowledge that he/she/they executed said instrument as his/her/their  
free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this \_\_\_\_\_ day of \_\_\_\_\_,  
\_\_\_\_\_.

\_\_\_\_\_  
(Print Name) \_\_\_\_\_

NOTARY PUBLIC in and for the State of Washington,  
residing at \_\_\_\_\_

My Commission expires:  
\_\_\_\_\_



## **PERFORMANCE AND PAYMENT BOND**

### **KNOW ALL PERSONS BY THESE PRESENTS:**

That we, the undersigned, \_\_\_\_\_, as principal,  
and

\_\_\_\_\_, a corporation organized and existing under the laws of the State of Washington, as a surety corporation, and qualified under the laws of the State of Washington to become surety upon bonds of contractors with municipal corporations, as surety, are jointly and severally held and firmly bound to Public Utility District No. 1 of Thurston County in the penal sum of \$\_\_\_\_, (100% value of materials, equipment & time of water improvements installed by principal) for the payment of which sum on demand we bond ourselves and our successors, heirs, administrators and/or personal representatives, as the case may be.

This obligation is entered into pursuant to the statutes of the State of Washington.

DATED this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

### **THE CONDITIONS OF THE ABOVE OBLIGATIONS ARE SUCH THAT:**

**WHEREAS**, Public Utility District No. 1 of Thurston County has executed or is about to execute a certain contract with the above bonded principal and providing for installation of a water distribution main and related operating equipment at the location referred to on Exhibit A attached to the contract, which contract is incorporated herein by reference; and

**WHEREAS**, the said principal has executed or is about to execute the contract and undertake to perform the work therein provided for in the manner and within the time set forth;

**NOW, THEREFORE**, if the said \_\_\_\_\_ shall faithfully perform all of the provisions of said contract in the manner and within the time herein set forth or within such extension of time as may be granted under said contract, and shall pay all laborers, mechanics, subcontractors and material men and all persons who shall supply said principal or subcontractors with provisions and supplies for the carrying on of said work and shall hold said Public Utility District No. 1 of Thurston County harmless from any loss or damage occasioned to any person or property by reason of any carelessness or negligence on the part of said principal or any subcontractor in the performance of said work, and shall indemnify and hold Public Utility District No. 1 of Thurston County harmless from any damage or expense by reason of failure of performance as specified in said contract, or from defects appearing or developing in the material or workmanship provided or performed under said contract within a period of one year after its acceptance by Public Utility District No. 1 of Thurston County (and agrees to correct or replace any defective work or material discovered

within such year), then and in that event this obligation shall be void; but otherwise it shall be and remain in full force and effect.

**AND FURTHER**, we, the undersigned Developer, as principal, and \_\_\_\_\_, a corporation organized and existing under the laws of the State of Washington and duly authorized to do business as a surety in the State of Washington, are jointly and severally held and firmly bound to Public Utility District No. 1 of Thurston County in the sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) for the payment of which we do jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns by these presents.

**WITNESS** our hand this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

**PRINCIPAL:**

By: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Its \_\_\_\_\_

**SURETY, ATTORNEY-IN-FACT:**

By: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Its \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Approved:

Public Utility District No. 1 of Thurston County

By: \_\_\_\_\_ General Manager

Developer's Extension Program

# MAINTENANCE BOND

BOND NO. \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS

That \_\_\_\_\_ as Principal, hereinafter called Contractor, and \_\_\_\_\_, as Surety, hereinafter called Surety, are held and firmly bound unto **Public Utility District No. 1 of Thurston County** as Obligee, hereinafter called Owner, in the penal sum of fifteen percent (15%) being \_\_\_\_\_, for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated \_\_\_\_\_, 20\_\_\_\_ entered into a contract with Owner for **Water Service** in accordance with the General Conditions, the Drawings and Specifications, which contract is by reference incorporated herein, and made a part hereof, and is referred to as the Contract.

NOW, THEREFORE, the condition of this obligation is such that, if Contractor shall remedy any defects due to faulty materials or workmanship which shall appear within a period of **One (1)** year from the date of substantial completion of the work provided for in the Contract, then this obligation to be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that Owner shall give Contractor and Surety notice of observed defects with reasonable promptness.

SIGNED and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

IN THE PRESENCE OF:

\_\_\_\_\_  
(Contractor)

By \_\_\_\_\_  
Witness

By \_\_\_\_\_  
(Seal)

\_\_\_\_\_  
Title

\_\_\_\_\_  
(Surety)

By: \_\_\_\_\_  
Attorney-in-Fact

Appendix C  
Consistency Checklists from Counties

Water System Plan – Part A



# Local Government Consistency Determination Form

Water System Name: Thurston PUD PWS ID: SMA #147

Planning/Engineering Document Title: SMA Plan Updated Plan Date: 5/2020

Local Government with Jurisdiction Conducting Review: Thurston County

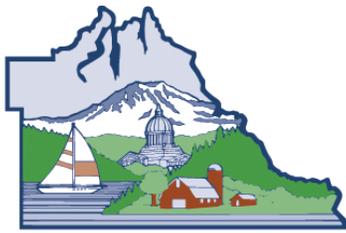
Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

By signing this form, the local government reviewer confirms the document under review is consistent with applicable local plans and regulations. If the local government reviewer identifies an inconsistency, he or she should include the citation from the applicable comprehensive plan or development regulation and explain how to resolve the inconsistency, or confirm that the inconsistency is not applicable by marking N/A. See more instructions on reverse.

Local Government Consistency Statement	For use by water system	For use by local government
	Identify the page(s) in submittal	Yes or Not Applicable
a) The water system service area is consistent with the adopted <u>land use and zoning</u> within the service area.	Page <del>3-8, 3-9</del>	Yes
b) The <u>growth projection</u> used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	Page <del>3-8, 3-9</del>	Yes
c) For <u>cities and towns that provide water service</u> : All water service area policies of the city or town described in the plan conform to all relevant <u>utility service extension ordinances</u> .	Page 3-8, 3-9	N/A
d) <u>Service area policies</u> for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	Page 3-8, 3-9	yes
e) <u>Other relevant elements</u> related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.	Page 2-3, 3-8, 3-9	yes

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with adopted local plans and development regulations.

  
 Signature \_\_\_\_\_ Date 3/3/21  
Stephanie Kenny, Thurston Co. Public Health  
 Printed Name, Title, & Jurisdiction



**MEMORANDUM**

Schelli Slaughter, MHA  
Director

Dimyana Abdelmalek, MD, MPH  
Health Officer

March 3, 2021

**TO:** Ron Buckholt, Thurston County Planner  
**FROM:** Stephanie Kenny, Thurston County Environmental Health  
**SUBJECT:** Project 2020106197, Thurston PUD SMA update, Part A

---

The above referenced application has been routed to this agency for review and comment. The applicant has updated a portion of SMA plan for Thurston PUD to fulfill a requirement by Washington State Department of Health Office of Drinking Water (DOH ODW) for periodic updates. As a condition to grant approval of the updated plan by DOH ODW, the applicant is required to route a copy to Thurston County for Local Government Consistency Review.

Environmental Health has completed our review of the plan. It does not appear to be in conflict with Thurston County Coordinated Water System and Groundwater Area Management plans.

If you or the applicant has any questions regarding Environmental Health's review of this application, I can be reached at (360) 867-2630.

Sincerely,

A handwritten signature in black ink that reads "Stephanie Kenny". The signature is written in a cursive, flowing style.

Stephanie Kenny  
Environmental Health Specialist  
Thurston County Environmental Health

Ms. Gubbe:

The review of project 2020106197 is complete.

Attached is a final letter from planning, the LGC statement, a memo from Thurston County Environmental Health, and the Consistency Review guidance.

For future submittals, please take some time to look at the review guidance sheet (two sides). I have marked the information that is required to be submitted for an LGC review. The planning department does not need the entire notebook you provided (it contains maps and other documents for several surrounding counties). A small, concise report that addresses the minimal requirements is adequate for our needs.

Please let me know if you have any questions.

Thank you.

**Leah Davis**

Associate Planner

Community Planning and Economic Development

Building 1, Thurston County Courthouse Complex

2000 Lakeridge Drive SW

Olympia, WA 98502

(360) 786-5582

# Local Government Consistency Determination Form

Water System Name: Thurston PUD PWS ID: SMA #147

Planning/Engineering Document Title: SMA Plan Updated Plan Date: 5/2020

Local Government with Jurisdiction Conducting Review: Lewis County

Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

By signing this form, the local government reviewer confirms the document under review is consistent with applicable local plans and regulations. If the local government reviewer identifies an inconsistency, he or she should include the citation from the applicable comprehensive plan or development regulation and explain how to resolve the inconsistency, or confirm that the inconsistency is not applicable by marking N/A. See more instructions on reverse.

Local Government Consistency Statement	For use by water system	For use by local government
	Identify the page(s) in submittal	Yes or Not Applicable
a) The water system service area is consistent with the adopted <u>land use and zoning</u> within the service area.	Page 3-8, 3-9	Yes
b) The <u>growth projection</u> used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	Page 3-8, 3-9	Yes
c) For <u>cities and towns that provide water service</u> : All water service area policies of the city or town described in the plan conform to all relevant <u>utility service extension ordinances</u> .	Page 3-8, 3-9	Yes
d) <u>Service area policies</u> for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	Page 3-8, 3-9	Yes
e) <u>Other relevant elements</u> related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.	Page 2-3, 3-8, 3-9	Yes

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with adopted local plans and development regulations.

Lee Napier  
Signature  
Lee Napier, Director Lewis County

3-9-2021  
Date

Printed Name, Title, & Jurisdiction

## Consistency Review Guidance

### ***For Use by Local Governments and Municipal Water Suppliers***

This checklist may be used to meet the requirements of WAC 246-290-108. When using an alternative format, it must describe all of the elements; 1a), b), c), d), and e), when they apply.

For **water system plans (WSP)**, a consistency review is required for the service area and any additional areas where a municipal water supplier wants to expand its water right's place of use.

For **small water system management programs**, a consistency review is only required for areas where a municipal water supplier wants to expand its water right's place-of-use. If no water right place-of-use expansion is requested, a consistency review is not required.

For **engineering documents**, a consistency review is required for areas where a municipal water supplier wants to expand its water right's place-of-use (water system plan amendment is required). For noncommunity water systems, a consistency review is required when requesting a place-of-use expansion. All engineering documents must be submitted with a service area map (WAC 246-290-110(4)(b)(ii)).

**A) Documenting Consistency:** The planning or engineering document must include the following when applicable.

- a) A copy of the adopted **land use/zoning** map corresponding to the service area. The uses provided in the WSP should be consistent with the adopted land use/zoning map. Include any other portions of comprehensive plans or development regulations that relate to water supply planning.
- b) A copy of the **growth projections** that correspond to the service area. If the local population growth projections are not used, explain in detail why the chosen projections more accurately describe the expected growth rate. Explain how it is consistent with the adopted land use.
- c) Include water service area policies and show that they are consistent with the **utility service extension ordinances** within the city or town boundaries. *This applies to cities and towns only.*
- d) All **service area policies** for how new water service will be provided to new customers.
- e) **Other relevant elements** the Department of Health determines are related to water supply planning. See Local Government Consistency – Other Relevant Elements, Policy B.07, September 2009.

**B) Documenting an Inconsistency:** Please document the inconsistency, include the citation from the comprehensive plan or development regulation, and explain how to resolve the inconsistency.

**C) Documenting a Lack of Local Review for Consistency:** Where the local government with jurisdiction did not provide a consistency review, document efforts made and the amount of time provided to the local government for review. Please include: name of contact, date, and efforts made (letters, phone calls, and emails). To self-certify, please contact the DOH Planner.

The Department of Health is an equal opportunity agency. For persons with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TTY 1-800-833-6388).

# Local Government Consistency Determination Form

Water System Name: Thurston PUD PWS ID: SMA #147

Planning/Engineering Document Title: SMA Plan Updated Plan Date: 5/2020

Local Government with Jurisdiction Conducting Review: King County

Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

By signing this form, the local government reviewer confirms the document under review is consistent with applicable local plans and regulations. If the local government reviewer identifies an inconsistency, he or she should include the citation from the applicable comprehensive plan or development regulation and explain how to resolve the inconsistency, or confirm that the inconsistency is not applicable by marking N/A. See more instructions on reverse.

Local Government Consistency Statement	For use by water system	For use by local government
	Identify the page(s) in submittal	Yes or Not Applicable
a) The water system service area is consistent with the adopted <u>land use and zoning</u> within the service area.	Page 9	YES
b) The <u>growth projection</u> used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	Not Applicable Non-expanding	N/A
c) For <u>cities and towns that provide water service</u> ; All water service area policies of the city or town described in the plan conform to all relevant <u>utility service extension ordinances</u> .	Not Applicable	N/A
d) <u>Service area policies</u> for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	Appendix A of WSP	YES
e) <u>Other relevant elements</u> related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.	Not Applicable	N/A

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with adopted local plans and development regulations.

Jae Hill  
Signature  
Jae Hill, Chair, King County Utilities Technical Review Committee

9/11/2020  
Date

Printed Name, Title, & Jurisdiction

## Consistency Review Guidance

### ***For Use by Local Governments and Municipal Water Suppliers***

This checklist may be used to meet the requirements of WAC 246-290-108. When using an alternative format, it must describe all of the elements; 1a), b), c), d), and e), when they apply.

For **water system plans (WSP)**, a consistency review is required for the service area and any additional areas where a municipal water supplier wants to expand its water right's place of use.

For **small water system management programs**, a consistency review is only required for areas where a municipal water supplier wants to expand its water right's place-of-use. If no water right place-of-use expansion is requested, a consistency review is not required.

For **engineering documents**, a consistency review is required for areas where a municipal water supplier wants to expand its water right's place-of-use (water system plan amendment is required). For noncommunity water systems, a consistency review is required when requesting a place-of-use expansion. All engineering documents must be submitted with a service area map (WAC 246-290-110(4)(b)(ii)).

**A) Documenting Consistency:** The planning or engineering document must include the following when applicable.

- a) A copy of the adopted **land use/zoning** map corresponding to the service area. The uses provided in the WSP should be consistent with the adopted land use/zoning map. Include any other portions of comprehensive plans or development regulations that relate to water supply planning.
- b) A copy of the **growth projections** that correspond to the service area. If the local population growth projections are not used, explain in detail why the chosen projections more accurately describe the expected growth rate. Explain how it is consistent with the adopted land use.
- c) Include water service area policies and show that they are consistent with the **utility service extension ordinances** within the city or town boundaries. *This applies to cities and towns only.*
- d) All **service area policies** for how new water service will be provided to new customers.
- e) **Other relevant elements** the Department of Health determines are related to water supply planning. See Local Government Consistency – Other Relevant Elements, Policy B.07, September 2009.

**B) Documenting an Inconsistency:** Please document the inconsistency, include the citation from the comprehensive plan or development regulation, and explain how to resolve the inconsistency.

**C) Documenting a Lack of Local Review for Consistency:** Where the local government with jurisdiction did not provide a consistency review, document efforts made and the amount of time provided to the local government for review. Please include: name of contact, date, and efforts made (letters, phone calls, and emails). To self-certify, please contact the DOH Planner.

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## Kitsap County Department of Community Development

August 28, 2020

Thurston Public Utility District  
Attn: Kim Gubbe  
1230 Ruddell Rd SE  
Lacey, WA 98503

**RE: Thurston PUD Water System Plan Part A – Umbrella (June 2020)**

Dear Ms. Gubbe,

The Kitsap County Department of Community Development (DCD) appreciates the opportunity to review and comment on the Thurston PUD Water System Plan, received on July 16, 2020. Overall the plan is consistent with the Kitsap County Comprehensive Plan and adopted development regulations.

We look forward to working with Thurston Public Utility District to review Water System Plan Part B submittals for individual water systems.

Please contact me with any questions at (360) 337-4844, or by email at [dgurnee@co.kitsap.wa.us](mailto:dgurnee@co.kitsap.wa.us).

---

Darren Gurnee, Planner  
Planning and Environmental Programs Division  
Kitsap County Department of Community Development  
619 Division St, MS-36  
Port Orchard, WA 98366

Cc: Teal Reopelle, Thurston Public Utility District Administrative Assistant  
Fern Schultz, Department of Health Regional Planner  
Liz Williams, Kitsap County Planning Supervisor  
Dave Ward, Kitsap County Department of Community Development Manager  
Lisa Nickel, Kitsap County Deputy Prosecuting Attorney

Water System Name: Thurston Public Utility District PWS ID: 147

Planning/Engineering Document Title: Thurston PUD Water System Plan Part A – Umbrella

Plan Date: June 2020

Local Government with Jurisdiction Conducting Review: Kitsap County

Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

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Local Government Consistency Statement	For use by water system	For use by local government
	Identify the page(s) in submittal	Yes or Not Applicable
a) The water system service area is consistent with the adopted <u>land use and zoning</u> within the service area.	Page 3-8, 3-9	NA - Part B submittals
b) The <u>growth projection</u> used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	Page 3-8, 3-9	NA - Part B submittals
c) For <u>cities and towns that provide water service</u> : All water service area policies of the city or town described in the plan conform to all relevant <u>utility service extension ordinances</u> .	Page 3-8, 3-9	NA - Part B submittals
d) <u>Service area policies</u> for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	Page 3-8, 3-9	NA - Part B submittals
e) <u>Other relevant elements</u> related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.	Page 2-3, 3-8, 3-9	Yes and NA - Part B submittals

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with adopted local plans and development regulations.

Signature



Date 8/28/2020

Darren Gurnee, Senior Planner, Kitsap County Department of Community Development  
Printed Name, Title, & Jurisdiction

### **Consistency Review Guidance**

#### ***For Use by Local Governments and Municipal Water Suppliers***

This checklist may be used to meet the requirements of WAC 246-290-108. When using an alternative format, it must describe all of the elements; 1a), b), c), d), and e), when they apply.

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**A) Documenting Consistency:** The planning or engineering document must include the following when applicable.

- a) A copy of the adopted **land use/zoning** map corresponding to the service area. The uses provided in the WSP should be consistent with the adopted land use/zoning map. Include any other portions of comprehensive plans or development regulations that relate to water supply planning.
- b) A copy of the **growth projections** that correspond to the service area. If the local population growth projections are not used, explain in detail why the chosen projections more accurately describe the expected growth rate. Explain how it is consistent with the adopted land use.
- c) Include water service area policies and show that they are consistent with the **utility service extension ordinances** within the city or town boundaries. *This applies to cities and towns only.*
- d) All **service area policies** for how new water service will be provided to new customers.
- e) **Other relevant elements** the Department of Health determines are related to water supply planning. See Local Government Consistency – Other Relevant Elements, Policy B.07, September 2009.

- B) Documenting an Inconsistency:** Please document the inconsistency, include the citation from the comprehensive plan or development regulation, and explain how to resolve the inconsistency.
- C) Documenting a Lack of Local Review for Consistency:** Where the local government with jurisdiction did not provide a consistency review, document efforts made and the amount of time provided to the local government for review. Please include: name of contact, date, and efforts made (letters, phone calls, and emails). To self-certify, please contact the DOH Planner.

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# Local Government Consistency Determination Form

Water System Name: Thurston PUD PWS ID: SMA #147

Planning/Engineering Document Title: SMA Plan Updated Plan Date: 5/2020

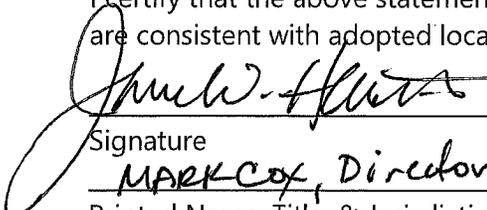
Local Government with Jurisdiction Conducting Review: Grays Harbor County

Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

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Local Government Consistency Statement	For use by water system	For use by local government
	Identify the page(s) in submittal	Yes or Not Applicable
a) The water system service area is consistent with the adopted <u>land use and zoning</u> within the service area.	Page 3-8, 3-9	yes
b) The <u>growth projection</u> used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	Page 3-8, 3-9	yes
c) For <u>cities and towns that provide water service</u> : All water service area policies of the city or town described in the plan conform to all relevant <u>utility service extension ordinances</u> .	Page 3-8, 3-9	N/A for unincorporated Grays Harbor Co.
d) <u>Service area policies</u> for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	Page 3-8, 3-9	yes.
e) <u>Other relevant elements</u> related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.	Page 2-3, 3-8, 3-9	yes.

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with adopted local plans and development regulations.


 FOR MARK COX, Director 12/14/20  
 Signature \_\_\_\_\_ Date \_\_\_\_\_  
 MARK COX, Director of Utilities - Community  
 Printed Name, Title, & Jurisdiction \_\_\_\_\_  
 Development, Grays Harbor County.



## Lewis County Department of Public Works

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Josh S. Metcalf, PE, Director  
Tim D. Fife, PE, County Engineer

TO: Kim Gubbe, Thurston PUD

RE: MSC20-0032, Thurston PUD/Water System Plan  
Initial Review 9/4/2020, Due Date: 10-5-2020

Access Review:

None

Reviewed by: Matt Hinderlie Date 9/4/20

Road/Utilities Review:

Whenever Thurston PUD operates within Lewis County's right of way, they are required to submit plans & apply for a Work in the Right of Way permit.

Reviewed by: Garry Scott Date 9/08/20

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**Road Maintenance &  
Fleet Services**  
476 West Main St.  
Chehalis, WA 98532  
O 360.740.3380  
F 360.740.2741

**Administration, Engineering, Utilities,  
Real Estate Services & Traffic**  
2025 NE Kresky Ave.  
Chehalis, WA 98532  
O 360.740.1123  
F 360.740.1479

**Solid Waste Services**  
Post Office Box 180  
Centralia, WA 98531  
O 360.740.1451  
F 360.330.7805

Traffic Review:

No comments at this time

Reviewed by: Jack Niehuser Date 9/11/20

Stormwater Review

None

Reviewed by: \_\_\_\_\_ Date \_\_\_\_\_

Survey Review:

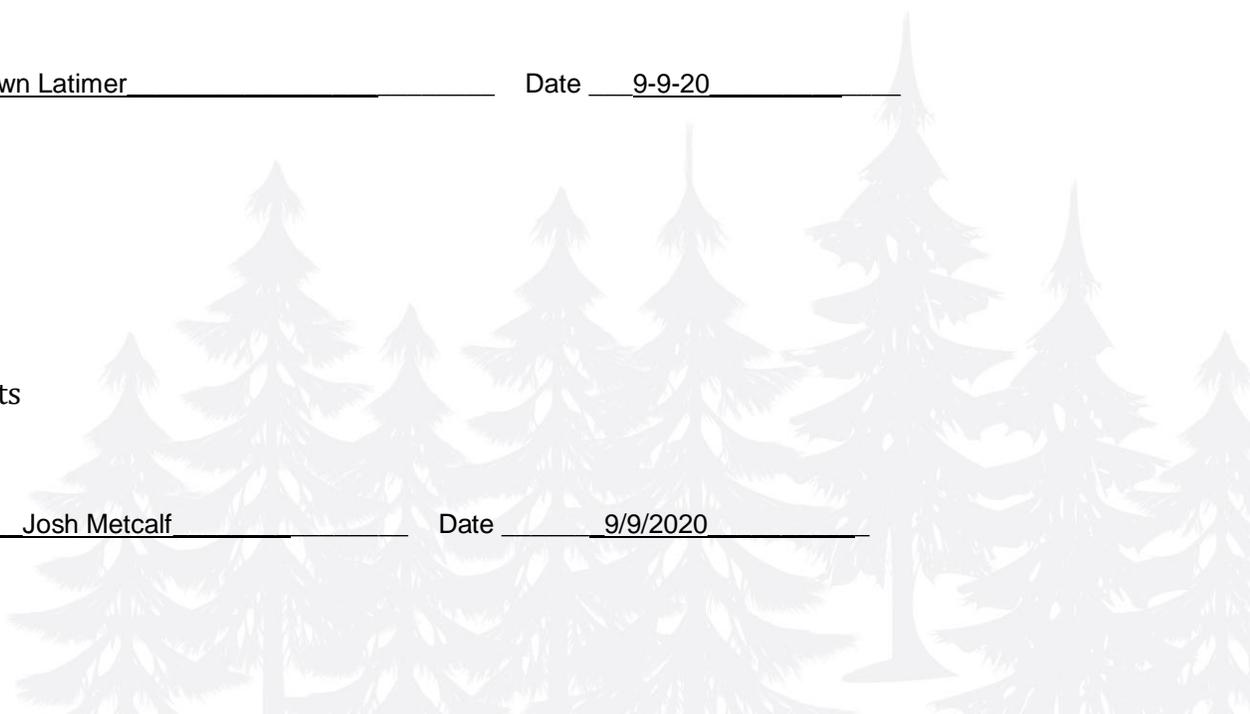
No comment

Reviewed by: Shawn Latimer Date 9-9-20

Director Review:

No comments

Reviewed by: Josh Metcalf Date 9/9/2020



Appendix D  
SEPA Review Checklist

Water System Plan – Part A



## APPENDIX D

# SEPA ENVIRONMENTAL CHECKLIST

### A. *Background* [\[HELP\]](#)

1. Name of proposed project, if applicable:  
**Water System Plan (WSP) Update.**
2. Name of applicant:  
**Public Utility District No. 1 of Thurston County (Thurston PUD)**
3. Address and phone number of applicant and contact person:  
**Kim Gubbe, Director of Planning and Compliance**  
**1230 Ruddell Rd SE**  
**Lacey, WA 98503**  
**360-357-8783**
4. Date checklist prepared:  
**5/21/2020**
5. Agency requesting checklist:  
**Thurston PUD**  
**Washington State Department of Health.**
6. Proposed timing or schedule (including phasing, if applicable):  
**Continual operation and maintenance of Thurston PUD's 275 water systems.**

**This WSP is a non-project action. A separate Washington State Environmental Policy Act (SEPA) review will be completed prior to actual implementation and construction of each individual project as identified on the CIP list. Certain categorical exemptions from the SEPA review process may apply to specific projects, in accordance with WAC 97-11-800.**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.  
**No, this is a non-project update to an existing plan. Future project-level actions requiring a permit or government approval, and which are not categorically exempt, will be subject to further SEPA review.**
8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

**Specific environmental information has not been prepared directly related to the update of the WSP.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

**No.**

10. List any government approvals or permits that will be needed for your proposal, if known.

**The WSP, and all its updates, must be approved by the Washington State Department of Health. No project specific approvals or permits are required as part of the WSP update.**

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

**The WSP is a Non-Project Action that identifies Thurston PUD's history; demonstrates how the system will address present and future needs in a manner consistent with other relevant plans and local, state, and federal laws, including applicable land use plans; and addresses the elements required in compliance with WAC 246-290-100, Section (4).**

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

**Thurston PUD has two offices. The main office is located at 1230 Ruddell Rd SE, Lacey, WA 98503 and houses the Customer Service and Finance departments. The satellite office is located at 8421 Old Highway 99 SE, Olympia, WA 98501 and houses the Field Operations and Planning & Compliance Departments. The service area includes 74 Group A and 201 Group B water systems spread throughout Thurston, Pierce, Lewis, Grays Harbor, and King county. Maps of all water systems are included in Section 1, Figures 1.3 – 1.8.**

## **B. Environmental Elements** [\[HELP\]](#)

### 1. **Earth** [\[help\]](#)

a. General description of the site:

(circle one): Flat, **rolling** hilly, steep slopes, mountainous, other \_\_\_\_\_  
**Varies throughout the water systems.**

b. What is the steepest slope on the site (approximate percent slope)?

**Approximately 30-50%.**

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

**Varies throughout the water systems. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project. Resources include the USDA Web Soil Survey and local GIS data.**

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

**None known, and may vary throughout the water systems. Will be determined on a case-by-case basis depending on the location of the project-specific work within the water system and the type of project.**

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

**No filling, grading, or excavation proposed by the WSP planning document. Filling, excavation, and grading associated with any future project-specific work will be determined on a case-by-case basis depending on the location within the water systems and the type of project.**

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

**As a non-project action, the WSP will not result in any clearing or construction-related erosion. Erosion potential associated with future project-specific work will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project, and such work will include protective measures for erosion control, where necessary. .**

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

**The WSP will not affect the amount of impervious surface. Each facility will comply with the impervious surface limitations of the zoning designation and aquifer recharge areas.**

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:  
**Preventative measures will be based on site specific conditions and will follow Best Management Practices and incorporated into the project's erosion control and development plans. Management of stormwater during construction will address such factors as compaction, slope treatment, and other considerations.**

## 2. *Air* [\[help\]](#)

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

**As a non-project action, the WSP does not propose any construction. De minimis dust due to movement of vehicles from equipment during general operations and maintenance is possible. No emissions should result from general system operations.**

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

**Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project. Consultation with the local air quality authority will help identify air quality issues including smoke and other particulate matter, ozone, carbon monoxide, and odors.**

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:

**Dust will be controlled by an approved Temporary Erosion and Sediment Control (TESC) plan. All construction equipment will be in proper working order and within compliance of the State regulations regarding vehicle emissions. The site will be watered and the streets will be cleaned as necessary to reduce dust emissions during construction.**

## 3. *Water* [\[help\]](#)

- a. Surface Water: [\[help\]](#)

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

**Yes, there are multiple lakes, streams, rivers, ponds, and wetlands in the immediate vicinity of many of Thurston PUD's water systems. Thurston PUD's water systems are located within the following Water Resource Inventory Areas (WRIAs):**

**WRIA 9 (Duwamish/Green)**  
**WRIA 10 (Puyallup/White)**  
**WRIA 11 (Nisqually)**  
**WRIA 12 (Chambers/Clover)**  
**WRIA 13 (Deschutes)**  
**WRIA 14 (Kennedy/Goldsborough)**  
**WRIA 15 (Kitsap)**  
**WRIA 22 (Lower Chehalis)**  
**WRIA 23 (Upper Chehalis)**  
**WRIA 26 (Cowlitz)**

**The specific name of each water body will be identified on a case-by-case basis depending on the location within the water systems and the type of project. Resources include Washington State Open GIS data, Department of Ecology's GIS data and Water Resources Explorer, local county GIS data, and the Washington Coastal Atlas.**

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.  
**No; the WSP Update is non-project action. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**
- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.  
**None anticipated. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**
- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.  
**None anticipated. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**
- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.  
**Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project. Resources include local GIS data, FEMA flood maps, and the Department of Ecology's Floodplain Management Program.**
- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.  
**No. Will be further determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

b. Ground Water: [\[help\]](#)

- 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the

well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

**Yes, groundwater will be withdrawn through approved wells for distribution to residential and commercial customers. Currently there are 74 Group A and 201 Group B water systems that serve approximately 7,884 active connections.**

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

**No waste material will be discharged as a result of the WSP Update. Currently there are 74 Group A and 201 Group B water systems that serve approximately 7,884 active connections.**

c. Water runoff (including stormwater):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

**None anticipated. The WSP Update is a non-project action. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

**None anticipated. The WSP Update is a non-project action. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

- 3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

**No.**

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

**None required. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

#### 4. *Plants* [\[help\]](#)

a. Check the types of vegetation found on the site:

deciduous tree: alder, maple, aspen, other

evergreen tree: fir, cedar, pine, other

shrubs

- grass
- pasture
- crop or grain
- Orchards, vineyards or other permanent crops.
- wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
- water plants: water lily, eelgrass, milfoil, other
- other types of vegetation

**City and county planning departments will be consulted for information about local vegetation on a case-by-case basis.**

- b. What kind and amount of vegetation will be removed or altered?  
**None. No vegetation will be removed as part of the WSP Update. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**
- c. List threatened and endangered species known to be on or near the site.  
**May vary by geographic location. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project. The Washington Department of Natural Resources and the Washington Native Plant Society will be consulted for information about rare, threatened, and endangered plant species.**
- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:  
**None planned. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**
- e. List all noxious weeds and invasive species known to be on or near the site.  
**Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project. The Washington Noxious Weed Control Board will be consulted.**

## 5. *Animals* [\[help\]](#)

- a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.  
**Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project. The Washington Department of Fish and Wildlife (WDFW) will be consulted to identify priority species and habitats including using their IPaC tool.**
- b. List any threatened and endangered species known to be on or near the site.  
**Information regarding Priority Habitats and Species, including threatened and endangered species has been review and can be located at <https://wdfw.wa.gov/species-habitats/at-risk/phs> and <https://wdfw.wa.gov/species-habitats/at-risk/phs/list>, incorporated herein by**

**this reference. These include the species and habitats identified for Thurston County, and other counties in which Thurston PUD operates water systems. Species distribution maps depict counties where each priority species is known to occur as well as other counties where habitat primarily associated with the species exists. Will be further determined on a case-by-case basis depending on the location of the work within the water system and the type of project. Consultation and research includes the WDWF, NOAA Fisheries Critical Habitat Information, US Fish & Wildlife Service Endangered Species List, StreamNet, and the Washington Department of Natural Resources Natural Heritage Program.**

c. Is the site part of a migration route? If so, explain.

**Yes. The water systems are located within the Pacific Flyway. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

d. Proposed measures to preserve or enhance wildlife, if any:

**None planned. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

e. List any invasive animal species known to be on or near the site.

**Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project. The Washington Invasive Species Council will be consulted on a project-specific basis.**

## **6. Energy and Natural Resources** [\[help\]](#)

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

**Electric energy will be used almost exclusively to power pumps, treatment, and all other electronic equipment and assets within each pumphouse.**

b. Would your project affect the potential use of solar energy by adjacent properties?

If so, generally describe.

**None anticipated. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

c. What kinds of energy conservation features are included in the plans of this proposal?

List other proposed measures to reduce or control energy impacts, if any:

**None.**

## **7. Environmental Health** [\[help\]](#)

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal?

If so, describe.

**No. The WSP Update is a non-project action.**

- 1) Describe any known or possible contamination at the site from present or past uses.  
**No known contamination.**
- 2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.  
**Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**
- 3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.  
**None.**
- 4) Describe special emergency services that might be required.  
**No emergency services required. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**
- 5) Proposed measures to reduce or control environmental health hazards, if any:  
**None; no health hazards identified. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

b. *Noise*

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?  
**None known. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**
- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.  
**As non-project action, no noise impacts associated with WSP Update. De minimis operational noise associated with occasional equipment and vehicles. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**
- 3) Proposed measures to reduce or control noise impacts, if any:  
**None. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

8. *Land and Shoreline Use* [\[help\]](#)

- a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

**Pumphouses are generally located within residential neighborhoods for efficient distribution to homes and businesses. No work should affect adjacent or nearby properties but will be evaluated on a case-by-case basis.**

- b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

**No, none of the water systems have boundaries that overlap or within the vicinity of working farmlands or forest lands.**

- 1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

**Does not apply.**

- c. Describe any structures on the site.

**Structures include those needed to serve the water system including pumphouses and reservoirs.**

- d. Will any structures be demolished? If so, what?

**No. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

- e. What is the current zoning classification of the site?

**Varies by location and jurisdiction. Will be determined on a case-by-case basis depending on the location of the work within the water system.**

- f. What is the current comprehensive plan designation of the site?

**Varies by location and jurisdiction. Will be determined on a case-by-case basis depending on the location of the work within the water system.**

- g. If applicable, what is the current shoreline master program designation of the site?

**Varies by location and jurisdiction. Will be determined on a case-by-case basis depending on the location of the work within the water system.**

- h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

**Yes, there are many critical areas within various water systems. The classification will be determined on a case-by-case basis depending on the location of the work within the water system.**

i. Approximately how many people would reside or work in the completed project?

**Does not apply.**

j. Approximately how many people would the completed project displace?

**None.**

k. Proposed measures to avoid or reduce displacement impacts, if any:

**Does not apply.**

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

**Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project. All structures will comply with the specific zoning regulations of the area it is located within.**

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

**Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

## **9. Housing** [\[help\]](#)

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

**None. Does not apply.**

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

**None. Does not apply.**

c. Proposed measures to reduce or control housing impacts, if any:

**None. Does not apply.**

## **10. Aesthetics** [\[help\]](#)

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

**Depends on the water system needs. All structures will comply with the specific zoning regulations of the area it is located within.**

b. What views in the immediate vicinity would be altered or obstructed?

**Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

- c. Proposed measures to reduce or control aesthetic impacts, if any:  
**Comply with zoning designations and design standards for each zone and community plan that the improvements are within.**

## **11. Light and Glare** [\[help\]](#)

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?  
**No impacts anticipated. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**
- b. Could light or glare from the finished project be a safety hazard or interfere with views?  
**None impacts anticipated. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**
- c. What existing off-site sources of light or glare may affect your proposal?  
**No. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**
- d. Proposed measures to reduce or control light and glare impacts, if any:  
**None. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

## **12. Recreation** [\[help\]](#)

- a. What designated and informal recreational opportunities are in the immediate vicinity?  
**Various recreational opportunities exists in or near the water systems depending on jurisdiction and geographic area. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**
- b. Would the proposed project displace any existing recreational uses? If so, describe.  
**No. Will be further determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**
- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:  
**No impacts anticipated. Will be further determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

### 13. *Historic and cultural preservation* [\[help\]](#)

- a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.

**Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project. The Department of Archaeology and Historic Preservation (DAHP) and local historic preservation organizations will be consulted to develop strategies, as appropriate.**

- b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

**None known. Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

**As a non-project action, no impacts on cultural or historic resources anticipated. Will be further determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

**Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

### 14. *Transportation* [\[help\]](#)

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

**Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

**Will be determined on a case-by-case basis depending on the location of the work.**

- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

**The WSP Update will not create or eliminate any parking.**

- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).  
**No.**
- e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.  
**Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**
- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?  
**Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**
- g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.  
**Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**
- h. Proposed measures to reduce or control transportation impacts, if any:  
**Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

### 15. *Public Services* [\[help\]](#)

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.  
**Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**
- b. Proposed measures to reduce or control direct impacts on public services, if any.  
**Will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

### 16. *Utilities* [\[help\]](#)

- a. Circle utilities currently available at the site:  
**Depends on the site. Electricity is used to power most pumps and other assets that require power. Internet service is setup at a couple sites to remotely read the chlorine residual.**

- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

**Thurston PUD is a water utility. Details will be determined on a case-by-case basis depending on the location of the work within the water system and the type of project.**

### ***C. Signature*** [\[HELP\]](#)

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Brian Wilson

Name of signee: **Brian Wilson**

Position and Agency/Organization: **Operations Specialist II – Thurston PUD**

Date Submitted: **9/3/2020**

### ***D. Supplemental sheet for nonproject actions*** [\[HELP\]](#)

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

**This Water System Plan update would not affect any of the above.**

Proposed measures to avoid or reduce such increases are:

**Does not apply.**

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

**It would not affect plant, animal, fish, or marine life.**

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

**Does not apply.**

2. How would the proposal be likely to deplete energy or natural resources?

**It would not deplete energy or natural resources.**

Proposed measures to protect or conserve energy and natural resources are:

**Does not apply.**

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

**It would not affect environmentally sensitive areas.**

Proposed measures to protect such resources or to avoid or reduce impacts are:

**Does not apply.**

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

**It would not affect land and shoreline use.**

Proposed measures to avoid or reduce shoreline and land use impacts are:

**Does not apply.**

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

**It would not affect demands on transportation, public services, or utilities.**

Proposed measures to reduce or respond to such demand(s) are:

**Does not apply.**

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

**It would not conflict with any laws protecting the environment.**

## Commissioners

Linda Oosterman – District 1

Russell E. Olsen – District 2

Chris Stearns – District 3



Providing safe, reliable, affordable, and sustainable service.

### DETERMINATION OF NON-SIGNIFICANCE

- **Description of proposal:** The WSP is a Non-Project Action that identifies Thurston PUD's history; demonstrates how the system will address present and future needs in a manner consistent with other relevant plans and local, state, and federal laws, including applicable land use plans; and addresses the elements required in compliance with WAC 246-290-100, Section (4).
- **Proponent:** Thurston PUD
- **Location of proposal, including street address, if any:** Thurston PUD has two offices. The main office is located at 1230 Ruddell Rd SE, Lacey, WA 98503 and houses the Customer Service and Finance departments. The satellite office is located at 8421 Old Highway 99 SE, Olympia, WA 98501 and houses the Field Operations and Planning & Compliance Departments. The service area includes 74 Group A and 201 Group B water systems spread throughout Thurston, Pierce, Lewis, Grays Harbor, and King county.
- **Lead agency:** Thurston PUD

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030 (2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

- There is no comment period for this DNS.
- This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS.
- ✓ **This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 30 days from the date below. Comments must be submitted by 10/5/2020.**

- Responsible official: **John Weidenfeller**
- Position/title: **General Manager**
- Phone: **360-357-8783**
- Address: **1230 Ruddell Rd SE, Lacey, WA 98503**

Signature:

A handwritten signature in blue ink that reads "John Weidenfeller".

Date: 9/3/2020

115653 Notice

**NOTICE OF  
DETERMINATION  
OF NON-SIGNIFICANCE**

Take notice that Public Utility District No. 1 of Thurston County issued a determination of non-significance (DNS) under the State Environmental Policy Act Rules (SEPA) (Chapter 197-11 WAC) for the following project:

Water System Plan Update 2020. The WSP is a Non-Project Action that identifies Thurston PUD's history; demonstrates how the system will address present and future needs in a manner consistent with other relevant plans and local, state, and federal laws, including applicable land use plans; and addresses the elements required in compliance with WAC 246-290-100, Section (4).

The project is proposed by Public Utility District No. 1 of Thurston County, who is also the lead agency on the project.

After review of a completed environmental checklist and other information on file with the agency, Public Utility District No. 1 of Thurston County has determined this proposal will not have a probable significant adverse impact on the environment. Copies of the DNS are available at no charge from the agency address below.

The DNS is issued under WAC 197-11-340(2); the lead agency will not act on these proposals for 30 days from the DNS issuance date: Thursday, September 3, 2020. The public is invited to comment on this DNS by submitting written comments no later than, Monday, October 5, 2020.

Submit comments to:  
Public Utility District No. 1  
of Thurston County  
1230 Ruddell Rd SE  
Lacey, WA 98503  
Phone: (360) 357-8783 or  
Toll free: (866) 357-8783

Pub: Nisqually Valley News  
September 3, 2020

Search / 202004601 - Thurston Public Utility District

## 202004601 - Thurston Public Utility District

### Lead Agency

Thurston Public Utility District

### Contact

John Weidenfeller

(360) 357-8783

[pudcustomerservice@thurstonpud.com](mailto:pudcustomerservice@thurstonpud.com)

### County

THURSTON

### Region

SW

**SEPA #** 202004601

**Document Type** DNS

**Date Issued** 09/03/2020

**Comments Due** 10/05/2020

### Proposal Description

Thurston PUD No. 1 Water System Plan Update; The WSP is a Non-Project Action that identifies Thurston PUD's history; demonstrates how the system will address present and future needs in a manner consistent with other relevant plans and local, state, and federal laws, including applicable land use plans; and addresses the elements required in compliance with WAC 246-290-100, Section (4).

### Related Record

#### Notes

**Location** Address: Thurston County

**Applicant** Thurston PUD

### Applicant Contact

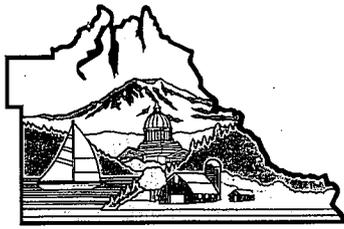
### Documents

[Appendix D - SEPA - 2020 Update - Final.pdf \(400 KB\)](#)

[Determination of Non-Significance - WSP Update 2020.pdf \(234 KB\)](#)

Appendix E  
Franchise Agreements

Water System Plan – Part A



**THURSTON COUNTY**  
WASHINGTON  
SINCE 1852

COUNTY COMMISSIONERS

Cathy Wolfe  
District One

Diane Oberquell  
District Two

Robert N. Macleod  
District Three

## ROADS & TRANSPORTATION SERVICES

Lester Olson  
Director

~~Dec.~~  
~~August 4, 2005~~

Thurston PUD  
Attn: Harry Paul  
P.O. Box 7709  
Olympia, WA 98507

Dear Mr. Paul:

Enclosed please find a copy of the recorded Nonexclusive Franchise for Public Utility District #1 of Thurston County.

If you have any questions or concerns do not hesitate to contact me at 360-786-5132. Thank you for your time and cooperation.

Sincerely,

Pamela J. Dittloff, SR/WA  
SR Right of Way Agent

J:R\W\FRANCHIS\Letter PUD.doc



RETURN ADDRESS

Thurston County  
2000 Lakeridge Drive SW  
Olympia, WA 98502

**Document Title**

RESOLUTION #13463

**Reference Numbers of related documents**

N/A

**Grantor**

Public Utility District #1 of Thurston County

**Grantee**

The Public

**Legal Description**

Countywide

Additional legal is on Page 15

**Assessor's Property Tax Parcel/Account Number**

N/A

The Auditor/Recorder will rely on the information provided on this form. The staff will not read the document to verify the accuracy or completeness of the indexing information provided herein.



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RESOLUTION NO. 13463

IN THE MATTER OF THE APPLICATION OF )  
PUBLIC UTILITY DISTRICT NO. 1 OF )  
THURSTON COUNTY FOR A NONEXCLUSIVE )  
FRANCHISE TO CONSTRUCT, ) NONEXCLUSIVE  
OPERATE AND/OR MAINTAIN A WATER ) FRANCHISE  
SYSTEM WITHIN THURSTON COUNTY, )  
WASHINGTON, UPON, OVER, UNDER, ALONG, )  
AND/OR ACROSS CERTAIN COUNTY RIGHTS-OF- )  
WAY, NOT WITHIN THE LIMITS OF ANY )  
INCORPORATED CITY OR TOWN. )

A RESOLUTION granting a nonexclusive Franchise to Public Utility District No. 1 of Thurston County (Thurston PUD #1) to engage in the business of constructing, operating, and/or maintaining a water system in Thurston County; setting forth terms and conditions accompanying the grant of the nonexclusive Franchise; and providing for County administration and regulation of the nonexclusive Franchise.

WHEREAS, Thurston PUD #1 has applied to the Board of County Commissioners of Thurston County, pursuant to Chapter 36.55 RCW, for a nonexclusive Franchise to construct, operate, and/or maintain a water system upon, over, under, along and/or across certain County Rights-of-Way in Thurston County; and

WHEREAS, pursuant to RCW 36.55.040, notice was posted in three public places in the County seat at least fifteen (15) days before the hearing date, and notice was published twice in the official County newspaper, the last publication being not less than five (5) days before the date fixed for the hearing; and

WHEREAS, pursuant to RCW 36.55.040, a hearing on the application for Franchise was held on the 3 day of October, 2005 ; and

WHEREAS, the Board of County Commissioners finds that it is in the public interest to grant the nonexclusive Franchise;

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF THURSTON COUNTY that a nonexclusive Franchise is hereby granted to Thurston PUD #1, hereinafter referred to as the Grantee, to construct, operate, and/or maintain a water system upon, under, along, and/or across certain County Rights-of-Way in Thurston County, as described in the accompanying attachment to this Franchise hereby designated as Exhibit A, under the following express terms and conditions:

SECTION 1 DEFINITIONS Terms as used throughout this Franchise shall have the same meanings given in Section 13.56.030 TCC. The terms listed below, as used in this Franchise, shall have the meanings given herein. When not inconsistent with the text, words used in the present tense include the future tense, words in the plural



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number include the singular number, words in the singular number include the plural number, and the use of any gender shall be applicable to all genders. The words "shall" and "will" are mandatory, and the word "may" is permissive. Words not otherwise defined shall be given their common and ordinary meaning.

1.1 "Board" means Board of County Commissioners of Thurston County, Washington.

1.2 "County" means Thurston County of the State of Washington and all the unincorporated territory within its present and future boundaries.

1.3 "Emergency" means any condition constituting a clear and present danger to life or property, or a customer service outage, ("customer" meaning any person who lawfully receives services provided by the Grantee).

1.4 "Franchise" means the grant of rights, privileges and authority embodied in this Resolution.

1.5 "Hazardous Substance" means any substance that has been determined by Federal or State law to present a threat to human health or the environment.

1.6 "Person" means an individual, entity, corporation, partnership, firm, association, joint venture, or organization of any kind.

1.7 "TCC" means the Thurston County Code, as now exists or as later amended or superseded.

1.8 "WAC" means the Washington Administrative Code, as now exists or as later amended or superseded.

1.9 "Wetland" means an area that is inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions or any area that has been so designated under Federal or State law.

## SECTION 2 FRANCHISE.

2.1 Grant of Franchise. Pursuant to Chapter 36.55 RCW, the County hereby grants to Grantee a nonexclusive Franchise to construct, operate, and/or maintain a water system upon, over, under, along, and/or across certain County Rights-of-Way in Grantee's Franchise Area, and for that purpose to erect, install, construct, operate, repair, replace, maintain, or retain in, upon, over, under, along or across any road or extensions thereof and additions thereto, such appurtenances as poles, wires, pipes, cables, conductors, ducts, conduits, vaults, manholes, pedestals, appliances, attachments, and other related property or equipment as may be necessary or appurtenant to the system. The following conditions shall apply to the Franchise granted herein:



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- a. The Franchise granted shall not convey any rights, title or interest in the Rights-of-Way but shall be deemed a Franchise only to use and occupy the Rights-of-Way for the limited purposes and term stated herein.
- b. The Franchise granted shall not authorize or excuse Grantee from securing such further easements, leases, permits or other approvals as may be required to lawfully occupy and use the Rights-of-Way.
- c. The Franchise granted shall not be construed as any warranty of title.
- d. No act, event, occurrence or thing shall give Grantee any rights to occupy or use the Rights-of-Way permanently nor shall operate as an estoppel against the County.
- e. Grantee specifically agrees to comply with all applicable federal and the State of Washington laws and applicable rules and regulations, as now exist or as later amended or superseded, and all applicable County codes, resolutions, and ordinances, as now exist or as later amended or superseded, including regulatory requirements of the Washington Utilities and Transportation Commission. Except as otherwise provided in subsections 2.6 and 19.2, in the event of a conflict or inconsistency between any such provisions and this Franchise, the express terms and conditions of this Franchise shall govern. The express terms and conditions of this Franchise constitute a valid and enforceable contract between the Parties.

2.2 Term of Franchise. The term of the Franchise shall be fifteen (15) years from the date of adoption of the Franchise by the Board, unless terminated sooner as set forth herein. As an express condition of this Franchise, within thirty (30) days after the adoption of this Franchise by the Board, Grantee shall file with the Clerk of the Board its written acceptance of the Franchise accompanied by the required evidence of insurance set out in Section 12, and pay all publication costs required in Section 18. In the event Grantee fails to accept this Franchise or fails to comply with all conditions of acceptance within the said thirty (30) days, this Franchise shall be null and void.

2.3 Franchise Area. The Franchise Area shall be that area designated in Exhibit A, attached hereto and incorporated herein by reference. The Franchise granted herein does not give or grant to Grantee the right, privilege or authority to install a water system at any other location in the County. Grantee agrees not to install a water system at any other County location without written County approval.

2.4 Amendment of Franchise for Area Changes. Should Grantee not be able to install Utility Facilities along the Franchise Area, Grantee shall request from the County, in writing, a deviation from the area set out in Exhibit A. If Grantee desires to extend or locate its Utility Facilities in Rights-of-Way that are not included in this Franchise, Grantee shall apply in writing for an amendment to the Franchise. If the County orders Grantee to locate or relocate its Utility Facilities in Rights-of-Way not



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included in this Franchise, the County shall grant a Franchise amendment for the area change without further application.

2.5 Franchise Nonexclusive. The Franchise granted herein shall be nonexclusive. The County specifically reserves the right to grant, at any time, such rights, permits, licenses and/or franchises to other Persons to use the Rights-of-Way for similar or different purposes allowed hereunder as the County deems appropriate. Subject to this Franchise, Grantee shall not prevent or prohibit the County from constructing, altering, maintaining or using any of said Rights-of-Way, or affect its jurisdiction over them or any part of them, the County having full power and authority to make all necessary changes, relocations, repairs, or maintenance of said Rights-of-Way as the County deems appropriate.

2.6 Scope. The Franchise is granted subject to the applicable provisions of the Thurston County Code, including but not limited to Chapter 13.56, Accommodation of Utilities on Thurston County Rights-of-Way, as now exist or as later amended or superseded, which shall apply in addition to the terms and conditions of this Franchise and Chapter 36.55 RCW. Provisions of Chapter 13.56 TCC shall control over inconsistent terms contained in this Franchise; provided, however, that the Indemnification and Hold Harmless provision of this Franchise, Section 11, shall control for this Franchise over inconsistent provisions of Chapter 13.56 TCC as that Chapter is currently adopted.

### SECTION 3 PERFORMANCE OF WORK.

3.1 Permit Required. Prior to commencing any work within any County Rights-of-Way, Grantee shall apply for and receive a utility permit from the County pursuant to Chapter 13.56 TCC to do such work. All such work shall be subject to the approval of and shall pass the inspection of the Engineer. Grantee shall remain solely responsible for compliance with all applicable laws, regulations, codes, and standard plans and specifications in the design and construction of Utility Facilities. Grantee shall pay all fees, costs, and expenses incurred by the County in the administration, examination, inspection, and approval of such work on account of granting the permit.

3.2 Breaking Surface or Soil. The applicable provisions of Chapter 13.56 TCC shall control any work, which disturbs any soil, surface, facility or structure of any County Rights-of-Way. Grantee, at its expense, shall restore such soil, surface, facility or structure to substantially the same condition as existed before the work involving such disturbance took place. All such restoration work shall be subject to the approval and inspection of the Engineer. The Engineer may cause such restoration work to be done, at the expense of Grantee, that the Engineer deems necessary to render the County Rights-of-Way safe where a condition, which is dangerous to life, health, or property, is created by Grantee, or where Grantee fails, upon demand by the Engineer, to restore such County Rights-of-Way.

3.3 Emergency Excavation. No work which disturbs any soil, surface, facility or structure of any County Rights-of-Way shall be done prior to the obtaining of a utility permit; provided, however, that in cases of emergency when an immediate excavation may be necessary for protection of private or public property the necessary



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excavation may be made upon the express condition that an application for a utility permit be made on or before noon of the next following business day.

3.4 Conformity With Plans and Specifications Required. All lines, structures, equipment and facilities shall be laid in conformance with Grantee's plans and specifications, as approved by the Engineer, except where deviation is allowed by the Engineer upon application of Grantee. Grantee shall at all times employ ordinary care and shall install and maintain such lines, structures, equipment and facilities using commonly accepted methods and devices for preventing failures and accidents, which are likely to cause damage, injuries or nuisances to the public.

3.5 Workmanlike Manner. All work shall be done in accordance with current County codes, ordinances, regulations, standards, and procedures together with the laws of the State of Washington, all as now exist or as later amended or superseded, in a thorough, professional and workmanlike manner with minimum interference in public use of the County Rights-of-Way. Where any work includes opening of trenches and/or ditches and/or tunneling under County Rights-of-Way, Grantee shall take all precautions necessary to protect and guard the public from any condition caused by the work. All signs and barricades shall conform to the MUTCD. If any line, pole, or other facility of Grantee is so located that, in the opinion of the Engineer, any hazard to travel or the public is created, Grantee at its own expense shall remove or relocate the line, pole, or other facility upon request of the Engineer. Grantee shall be liable for any damages, including costs incurred by the County in remedying any failure to perform by Grantee, resulting from its failure to safely perform the work or failure to provide adequate traffic controls and protection to members of the public and their property.

3.6 Monuments. All survey monuments which are disturbed, displaced, or destroyed by Grantee in its performance of any work under this Franchise shall be referenced and restored by Grantee pursuant to chapter 332-120 WAC, as now exists or as later amended, and all pertinent federal, state and local standards and specifications.

3.7 Wetlands. All work shall be performed by Grantee in a manner to avoid or minimize impacts on wetlands contained within the County Rights-of-Way. Wetland impacts may occur where work related to installation, maintenance and/or repair of Grantee's facilities occurs in the wetland, or near enough to decrease the wetland's functional values. If Grantee is unable to perform its work without wetland impacts, it shall be responsible to take measures to mitigate those wetland impacts. Those mitigation measures within the County Rights-of-Way shall be in compliance with all applicable federal, state, and County laws, rules and regulations and/or County policies.

#### SECTION 4 RELOCATION OR REMOVAL OF UTILITY FACILITIES

4.1 Relocation or Removal. In the relocation or removal of Grantee's Utility Facilities, Grantee shall comply with Section 13.56.150 TCC as now exists or as later amended. The Grantee shall indemnify the County for any damages, claims, additional costs or expenses assessed against, or payable by, the County related to,

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arising out of or resulting from the Grantee's failure to remove or relocate any of its facilities in the County Rights-of-Way in a timely manner in accordance with any relocation or removal required by the County.

4.2 Interference. Should the County determine that Grantee's Utility Facilities interfere with the use of the County Rights-of-Way by the County, the general public or other authorized Persons pursuant to Section 5 below, and such interference necessitates the removal, relocation, and/or alteration of Grantee's Utility Facilities existing within the County Rights-of-Way, the Grantee at its own expense shall remove, relocate and/or alter its Utility Facilities when the County provides Grantee written notice requesting such removal, relocation and/or alteration.

## SECTION 5 NONINTERFERENCE

5.1 Interference Prohibited. Grantee's Utility Facilities shall be located and maintained within the Franchise Area so as not to interfere with the use of the Franchise Area by the County, the general public or other authorized Persons. All construction or installation of Grantee's Utility Facilities, service, repair, or relocation of the same, performed along or under any County Rights-of-Way shall be done in such a manner as not to interfere with the construction and maintenance of other utilities, public or private, drains, drainage ditches and structures, irrigation ditches and structures, located therein, nor with the grading or improvement of such County Rights-of-Way or other County property.

## SECTION 6 HAZARDOUS SUBSTANCES AND CONDITIONS

6.1 Hazardous Substances. Grantee agrees that it will not cause nor permit in any manner, including accidental or non-negligent acts or omissions, release of any hazardous substance, waste, or pollutant or contaminant into or upon any County Rights-of-Way contrary to any County, state or federal law, rules, regulations, ordinances and standards with respect thereto. Within twenty-four (24) hours, Grantee shall notify the Director or the Engineer and the State Department of Ecology in writing of such release. Grantee shall be completely liable for any and all consequences of such release, including liability under any federal or state law or at common law. Grantee shall indemnify and hold the County harmless from any and all liability resulting from such a release and shall have full responsibility for complete clean up, as required by any government agency, of any and all contamination from such a release. The County shall be entitled to full contribution for all costs incurred by the County as the result of any release of such materials by Grantee. Upon any release of a hazardous substance by Grantee, the County may give immediate notice of termination of this Franchise, or enter the Franchised premises and take whatever steps it deems appropriate to cure the consequences of such release, all at the expense of Grantee.

6.2 Hazardous Conditions. Whenever the Engineer determines that any conditions or operations caused by any activity covered by this Franchise have become a hazard, endanger property or public resources, or adversely affect the safety, use, or stability of County Rights-of-Way, the Engineer shall notify Grantee in writing of the property upon which the condition or operation is located, or other person or agent in control of said property, and direct them to repair or eliminate such condition or



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operation within the period specified therein so as to eliminate the hazard and be in conformance with the requirements of this Franchise. Should the Engineer have reasonable cause to believe that the situation is so adverse as to preclude written notice, the Engineer may take the measures necessary to eliminate the hazardous situation, provided that the Engineer shall first make a reasonable effort to notify Grantee before acting. If costs are incurred and the hazardous situation has been created in conjunction with or as a result of an operation for which financial security has been posted, the Engineer shall have the authority to forfeit the bond or other security to recover costs incurred.

## SECTION 7 AESTHETIC AND SCENIC CONSIDERATIONS

7.1 Design and Construction. In addition to the requirements of Sections 13.56.270 and 13.56.280 TCC, Grantee shall design and construct its Utility Facilities installations in a manner that minimizes the adverse effect on existing roadside manmade or natural amenities.

7.2 Refuse and Debris. Grantee shall promptly remove and properly dispose of refuse and debris resulting from the installation or maintenance of its Utility Facilities once the work is completed.

## SECTION 8 GRADING OR EXCAVATING BY COUNTY

8.1 Grading and Excavating. This Franchise shall not preclude the County, its agents, employees or contractors from grading, excavating, or doing other necessary roadwork contiguous to Grantee's Utility Facilities.

## SECTION 9 VACATION

9.1 If the County vacates any portion of the Franchise Area, the Board may, at its option and by giving forty-five (45) days written notice to Grantee, terminate this Franchise with reference to such portion of the Franchise Area so vacated, and the County shall not be liable for any damages or loss to the Grantee by reason of such termination. Pursuant to RCW 36.87.140, the County may retain an easement in respect to the vacated land for the construction, repair and maintenance of Grantee's Utility Facilities that at the time of the vacation are specifically authorized under this Franchise or physically located on a portion of the land being vacated. The County shall not be liable for any damages or loss to the Grantee by reason of any such vacation.

## SECTION 10 RIGHTS AND POWERS RESERVED TO THE COUNTY

10.1 Eminent Domain. The existence of this Franchise shall not preclude the County from acquiring by condemnation, in accordance with applicable law, all or a portion of Grantee's Utility Facilities within the Franchise Area for the fair market value thereof. In determining the value of such Utility Facilities, no value shall be attributed to the right to occupy the Franchise Area conferred by this Franchise.

10.2 Police Power. In granting this Franchise, the County does not



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waive any of its police powers to regulate the use of County Rights-of-Way in the interest of public health, safety, and general welfare through the adoption and enforcement of appropriate resolutions or ordinances.

10.3 Compensation. The Franchise granted hereunder is subject to the County's right, which is expressly reserved, to annually fix a fair and reasonable compensation for the authorization granted hereunder, and to reimburse the County's costs in connection with administration and oversight of this Franchise, and in connection with reviewing, inspecting, monitoring and supervising the use and occupancy of the Rights-of-Way. Nothing herein shall prohibit the County and Grantee from agreeing upon the compensation to be paid.

10.4 Nonwaiver of Rights. The County and Grantee agree that the excuse or forgiveness of performance, or waiver of any provision(s) of this Franchise does not constitute a waiver of such provision(s) or future performance, or prejudice the right of the waiving party to enforce any of the provisions of this Franchise at a subsequent time.

#### SECTION 11 INDEMNIFICATION AND HOLD HARMLESS

11.1 In addition to and distinct from the insurance requirements of this Franchise, Grantee shall defend, indemnify and hold harmless County, its elected and appointed officers, officials, employees, agents, and representatives (collectively referred to as the "Indemnities") from any and all claims, demands, actions, suits, losses, expenses, liabilities, damages, and judgments of any nature whatsoever including but not limited to all costs and attorneys fees made against Indemnities on account of injury, sickness, disease, disability, or death to persons, including officers, agents, and employees of any Person, or damage to property or business:

a. caused by or arising out of the acts or omissions of Grantee, its agents, employees, representatives, or lessees, or the acts or omissions of Grantee's suppliers or contractors of any tier, or anyone acting on Grantee's behalf, in the exercise of the rights granted to Grantee in this Franchise, or their failure to perform such rights, including but not limited to, the construction, installation, maintenance, presence, operation, use, or removal of Grantee's Utility Facilities or Grantee's system; and

b. arising out of or alleged to arise out of any claim for damages for Grantee's violation of infringement of any copyright, trademark, trade name, service mark or patent, or of any other right of any Person.

c. Grantee's duty to indemnify Indemnities shall not apply to liability for damages arising out of bodily injury to persons or damage to property caused by or resulting from the sole negligence of the Indemnities.

11.2 In the event any claim, demand or suit is presented to or filed with the County that the County intends to assert its rights under this Section 11, the County shall promptly notify Grantee thereof. Grantee will defend the same at its sole cost and expense, and in case judgment shall be rendered against the Indemnities, Grantee will



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fully satisfy said judgment within ninety (90) days after any claim, demand or suit shall have finally been determined, if determined adversely to the Indemnities.

11.3 In any and all claims against the Indemnities by any officer, employee, representative, or agent of the Grantee, its contractors, subcontractors, or lessees, or anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation under this Section 11 shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Grantee, its contractors, subcontractors, or lessees under worker's compensation acts, disability benefit acts, or other employee benefit acts. It is further specifically agreed and understood by the parties hereto that solely for the purposes of the indemnification provided herein, the Grantee expressly waives its immunity the Grantee may be granted under Title 51 RCW.

11.4 Indemnities shall not be liable to Grantee or to Grantee's customers, and Grantee hereby indemnifies, protects and saves harmless the Indemnities against any and all such claims, demands, suit or judgment for losses, liabilities, damages and expenses by Grantee's customers, or for any interruption to the service of Grantee, or for interference with the operation of the Utility Facilities.

11.5 Inspection or acceptance by the County of any work performed by Grantee shall not be grounds for avoidance by Grantee of any of its obligations under this Section 11. Said indemnification and hold harmless obligations shall extend to claims which are not reduced to a suit and any claims which may be compromised prior to the culmination of any litigation or the institution of any litigation.

11.6 In the event of liability for damages arising out of bodily injury to persons or damages to property or business caused by or resulting from the concurrent negligence of Grantee and County, Grantee's liability hereunder shall apply only to the percentage of fault attributable to the Grantee, its agents, employees, representatives, lessees, contractors, and subcontractors.

11.7 The provisions of Section 11 shall survive the expiration or termination of this Franchise. Further, all provisions of this Section 11 shall apply to the successors, assigns and lessees of Grantee.

## SECTION 12 INSURANCE

12.1 Grantee Insurance. As a condition of this Franchise, Grantee shall procure and maintain the following liability insurance policies for the duration of this Franchise:

- a. Commercial General Liability insurance, and if necessary, Umbrella Liability insurance, which will cover bodily injury, property damage, and any other exposure which can be reasonably identified as potentially arising from the Grantees activities within the Rights-of-Way. The limit of liability shall not be less than one million dollars (\$1,000,000) each occurrence. The County, its elected and appointed officers, officials,



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employees, agents, and representatives shall be named as additional insureds with respect to activities occurring within its Rights-of-Way. Coverage shall be comprehensive with respect to the Grantee's activities within the Rights-of Way and shall include completed operations, collapse, explosions and underground hazards, and shall include employer's liability coverage with a limit of not less than one million dollars (\$1,000,000) per occurrence.

- b. Business Automobile Liability insurance for owned, non-owned and hired vehicles with limits of not less than one million dollars (\$1,000,000) per person, two million dollars (\$2,000,000) per accident.
- c. Workers' Compensation insurance or self insurance as required by Title 51RCW.
- d. The insurance policies required by this section shall be maintained at all times by the Grantee. Each liability policy shall be endorsed to require the insurer to notify the County at least 30 days before the policy can be canceled by either party, and to require notice of cancellation due to non-payment of premium to be mailed to the Director as well as the named insured. The Grantee will be obligated to replace or renew the canceled or expiring policy and show proof in the form of a certificate of insurance, at least 20 days before the expiration or cancellation of the existing policy(s).
- e. The Grantee shall furnish the County with properly executed certificates of insurance and/or a signed policy endorsement, which shall clearly evidence all insurance required in this Section 12. The certificate will, at a minimum, list limits of liability, coverage, and all exclusions.
- f. The Grantee or its agent will provide a copy of any and all insurance policies specified in this Franchise upon request of the Director.
- g. The insurance limits mandated for any insurance coverage required by this Franchise are not intended to be an indication of limits of exposure nor are they limitations on liability or indemnification.

### SECTION 13 LIMITATION OF LIABILITY

13.1 Limitation of Liability. The County's administration of this Franchise shall not be construed to create the basis for any liability on the part of the County, its elected and appointed officers, officials, agents, employees, and representatives for any injury or damage from the failure of Grantee to comply with the provisions of this Franchise; by reason of any plan, schedule or specification review, inspection, notice and order, permission, or other approval or consent by the County; for any action or inaction thereof authorized or done in connection with the implementation or enforcement of this Franchise by the County; or for the accuracy of plans submitted to the County.



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## SECTION 14 TERMINATION OF FRANCHISE

14.1 Default by Grantee. If Grantee defaults on any term or condition of this Franchise, the County may terminate this Franchise in accordance with subsection 14.2. Upon termination of the Franchise, all rights of Grantee hereunder shall cease.

14.2 Procedure. If the Grantee does not comply with any term or condition of this Franchise for a period of thirty (30) days following written demand by the Engineer to so comply, the Engineer may request the Board to terminate this Franchise. The Board shall give the Grantee at least ten (10) days written notice of the Board's intention to terminate the Franchise on a designated Board meeting day. At such meeting, the Board shall consider the request of the Engineer and hear any Person desiring to be heard on the Franchise termination. If the Board determines that Grantee's default justifies revocation or termination of the Franchise, the Board may pass a resolution declaring that the Franchise is revoked or terminated.

14.3 Termination of Franchise. At the expiration of the term of this Franchise or upon its revocation or termination, the County shall have the right to require Grantee to remove its Utility Facilities within ninety (90) days from the County Rights-of-Way. The Grantee shall be liable for any costs incurred in removing any Utility Facilities of the Grantee and restoring any County Rights-of-Way. If Grantee fails to remove its Utility Facilities in the time frame required by the County, the County may perform the work and collect the cost thereof from the Grantee. The actual cost thereof, including direct and indirect administrative costs, shall be a lien upon all plant and property of the Grantee effective upon filing of the lien with the County Auditor.

14.4 Force Majeure. Neither the County nor the Grantee shall be deemed in breach or default of any provisions of this Franchise or subjected to any penalty hereunder, where performance or compliance is prevented by earthquake, floods, or other natural disasters, civil emergencies, or other such circumstances beyond the County's or Grantee's control. Upon removal or termination of the Force Majeure, the party claiming Force Majeure shall promptly perform the affected obligations in an expedited manner under this Franchise. The County and the Grantee shall use all reasonable efforts to eliminate or minimize delay caused by the Force Majeure.

## SECTION 15 TRANSFERS OR ASSIGNMENT

15.1 Board Consent. Neither this Franchise nor any interest therein shall be sold, transferred or assigned without the prior written approval of the Board, which shall not unreasonably withhold approval. No sale, transfer, or assignment of this Franchise shall be effective until the vendee, transferee, or assignee has filed in the Office of the County Auditor an instrument duly executed reciting the facts of such sale, transfer, or assignment, and agreeing to perform all terms and conditions of this Franchise. Neither this Section nor other Sections of this Franchise shall preclude the mortgaging, hypothecating, or the assignment of certain rights in the system, or the pledge of stock by Grantee for the purpose of financing. In no event shall a transfer, assignment, or disposal of ownership or control be approved without the assignee or transferee becoming a signatory to this Franchise, assuming all rights and obligations



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hereunder, and agreeing to perform the terms and conditions under this Franchise.

15.2 Binding on Successors. All provisions, conditions, regulations, and requirements herein contained shall be binding upon the successors and assigns of Grantee, and all privileges, as well as all obligations and liabilities of Grantee, shall inure to its successors and assigns equally as if they were specifically mentioned wherever Grantee is mentioned.

#### SECTION 16 INCORPORATION/ANNEXATION

16.1 City or Town. If any portion of the Franchise Area covered by this Franchise is incorporated into the limits of any city or town, this Franchise shall terminate as to any such portion within the corporate limits of such city or town and the County shall be released of its obligations under this Franchise as to the portion incorporated. This Franchise shall continue as to the Franchise Area not incorporated into a city or town.

16.2 New County. If, pursuant to Article XI §3 of the State of Washington Constitution, territory is stricken or taken from the County and a new county is established from the territory taken from the County, this Franchise shall terminate as to any portion of the Franchise Area within the territory so taken to establish the new county and the County shall be released of its obligations under this Franchise as to the territory taken. This Franchise shall continue as to all of the Franchise Area not taken from the County.

#### SECTION 17 GOVERNING LAW AND VENUE

17.1 Governing Law. This Franchise has been and shall be construed as having been made and executed within the State of Washington, and the parties stipulate that this Franchise shall be governed by the laws of the State of Washington, both as to its interpretation and performance.

17.2 Venue. Any action at law, suit in equity, or judicial proceeding arising out of this Franchise shall be instituted and maintained only in any of the courts of competent jurisdiction in Thurston County, Washington.

#### SECTION 18 PUBLICATION AND NOTICES

18.1 Cost. Grantee shall assume the costs of publication associated with this Franchise as such publication is required by law.

18.2 Notices. Except as provided herein, any notices required or permitted to be given under this Franchise shall be deemed properly served when deposited with the United States Postal Service, postage paid, addressed to the party to receive same.

Notice to the County shall be sent to:  
Thurston County Roads & Transportation Services Department  
2404-A Heritage Court SW



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Olympia, WA 98502-6031

Notice to Grantee shall be sent to:

Thurston PUD #1  
210 Union Avenue SE  
P.O. Box 7709  
Olympia, WA 98507  
(360)357-8783

Grantee shall promptly notify the County of any change in notice address.

### SECTION 19 SEVERABILITY AND SURVIVABILITY

19.1 If a court of competent jurisdiction holds any part, term or provision of this Franchise to be illegal, or invalid in whole or in part, the validity of the remaining provisions shall not be affected, and the parties' rights and obligations shall be construed and enforced as if the Franchise did not contain the particular provision held to be invalid. The invalidity of any portion of this Franchise shall not abate, reduce or otherwise affect any consideration or other obligation required of Grantee or any grant of right by the County. The headings of the sections and paragraphs of this Franchise are for convenience of reference only and are not intended to restrict, affect or be of any weight in the interpretation or construction of the provisions of such sections or paragraphs.

19.2 If any provision of this Franchise is in conflict with any statutory provision of the State of Washington, that provision which may conflict shall be deemed inoperative and null and void insofar as it may be in conflict, and shall be deemed modified to conform to such statutory provision.

19.3 Should the County determine that any provision of this Franchise severed or made ineffective under this Section 19 substantially alters this Franchise so that the original intent and purpose of this Franchise no longer exists, the County may, in its sole discretion, terminate this Franchise without cost or penalty.

19.4 The terms and conditions contained in this Franchise that by their sense and context are intended to survive the expiration or termination of this Franchise shall so survive.

### SECTION 20 ENTIRE AGREEMENT

20.1 Entire Agreement. The parties agree that this Franchise is the complete expression of the terms and conditions hereunder, and supersedes all prior agreements or proposals except as specifically set forth herein, and cannot be changed orally but only by an instrument in writing executed by the parties. Any oral or written representations or understandings not incorporated herein are specifically excluded. This Franchise is executed in duplicate originals and executed by the persons signing below who warrant that they have the authority to execute this Franchise.

**The parties hereto acknowledge that the waiver of immunity set out in subsection**



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11.3 was mutually negotiated and specifically agreed to by the parties herein.

ADOPTED: November 7, 2005

BOARD OF COUNTY COMMISSIONERS  
Thurston County, Washington

ATTEST:

Excused Absence  
Chairman Obergwell

Katherine J. Bryman  
Clerk of the Board

B. L. MacLeod  
Vice-Chairman

Approved as to Form Only:  
Edward G. Holm  
Prosecuting Attorney

Cathy Delfo  
Commissioner

By Catherine A. Salvin  
Deputy Prosecuting Attorney

**ACCEPTANCE:**

Thurston PUD #1, for itself, its successors and assigns, hereby accepts this Franchise and agrees to comply with all the terms and conditions thereof.

By: Harry M. Paul  
(Authorized Representative signature)

Harry M. Paul  
(Authorized Representative **printed**)

Title: General Manager

Date: 11-23-2005

Rev. 1-05-05

**EXHIBIT A to Resolution No.**

**Franchise Area Legal Description  
for construction, operation, and/or maintenance of a  
water system within Thurston County Rights-of-Way**

Commencing at the northwest corner of section four in township eighteen north, range four west; thence east on the township line to the northwest corner of section four in township eighteen north, range three west; thence north to the middle of the channel of Totten Inlet; thence along said channel to the waters of Puget Sound, intersecting the line in the channel of Puget Sound west of the southern portion of Squaxen Reservation; thence following said channel to the mouth of the Nisqually river; thence up midchannel of said river to a point where it strikes the north boundary of Lewis county; thence west along the section lines to the southwest corner of section twenty-three, township fifteen north, range four west; thence north along the section lines to the southeast corner of section thirty-four in township eighteen north, range four west; thence west on the township line to the southwest corner of section thirty-three; thence north on the section lines to the place of beginning, EXCLUDING THEREFROM those areas located within the incorporated areas of the cities and towns, including but not limited to Olympia, Lacey, Tumwater, Yelm, Tenino, Rainier, and Bucoda.



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# PIERCE COUNTY



## Office of the County Council

930 Tacoma Avenue South, Room 1046  
Tacoma, Washington 98402-2176

June 12, 2020

Julie Parker  
Assistant General Manager  
Public Utility District No. 1 of Thurston County  
1230 Ruddell Road SE  
Lacey, WA 98503

Dear Ms. Parker:

Enclosed is a copy of the recorded version of Ordinance No. 2019-40s for your records. The 12-digit number below the bar code is the recording number that was assigned by the Office of the Pierce County Auditor at the time of recording.

If you have any questions, please contact me at (253) 798-2687.

Sincerely,

A handwritten signature in blue ink that reads "Patricia L. Face".

Patricia L. Face, CMC  
Council Deputy Clerk

Enclosure

c: Brian Stacy, Pierce County Planning and Public Works  
Rondi Downs, Pierce County Planning and Public Works  
Jerry West, Pierce County Planning and Public Works

202005280782 CPENNYP 15 PGS  
05/28/2020 02:04:23 PM \$117.50  
AUDITOR, Pierce County, WASHINGTON

Return Address:  
Denise Johnson  
Pierce County Council  
930 Tacoma Ave S, Room 1046  
Tacoma, WA 98402

Please print legibly or type information.

Document Title(s) (or transactions contained therein): 1. Ordinance Number 2019-40s 2. 3. 4.
Grantor(s) (Last name first, first name, and initials): 1. Pierce County 2. 3. 4. 5. <input type="checkbox"/> Additional Names on Page _____ of the Document.
Grantee(s) (Last name first, first name, and initials): 1. Public Utility District No. 1 of Thurston County 2. 3. 4. 5. <input type="checkbox"/> Additional Names on Page _____ of the Document.
Legal Description (abbreviated; i.e., lot, block, plat or section, township, range):  See page 1-2 of Exhibit A.  Legal Description is on Page 1-2 of the Document.
Reference Number(s) of Documents Assigned or Released:  <input type="checkbox"/> Additional Reference Numbers on Page _____ of the Document
Assessor's Property Tax Parcel/Account Number:  Not assigned.
The Auditor/Recorder will rely on the information provided on this cover sheet. The staff will not read the document to verify the accuracy or completeness of the indexing information provided herein.

**RECEIVED**  
JUN 10 2020  
Pierce County Council

1 Sponsored by: Councilmember Douglas G. Richardson  
2 Requested by: County Executive/Planning and Public Works

3  
4  
5 **ORDINANCE NO. 2019-40s**  
6

7  
8 **An Ordinance of the Pierce County Council Granting a Nonexclusive**  
9 **Franchise to Public Utility District No. 1 of Thurston**  
10 **County for Location of Water Lines on Certain**  
11 **County-Owned Rights-of-Way; and Authorizing the County**  
12 **Executive to Execute Said Franchise.**  
13

14 **Whereas**, Public Utility District No. 1 of Thurston County, Washington, has  
15 applied for a nonexclusive Franchise to construct, operate, and maintain a  
16 waterline system under and along Pierce County roads, highways, and other  
17 County property(ies) in Pierce County, Washington, as hereinafter set forth; and  
18

19 **Whereas**, the proposed franchise is nonexclusive and does not establish a  
20 right, either expressly or implied, to the water purveyor to provide water service to  
21 properties located outside of their approved water service area. Furthermore, the  
22 request for this franchise is consistent with the Pierce County Coordinated Water  
23 System Plan (CWSP) provided that no extension of water service occurs without  
24 following the service area adjustment provisions outlined in the CWSP; and  
25

26 **Whereas**, said application for Franchise came on regularly for hearing  
27 before the Pierce County Council on the date set forth below under the provisions  
28 of Chapter 36.55, Revised Code of Washington; and  
29

30 **Whereas**, it appears to the Council that notice of said hearing has been  
31 duly given to the public and those interested in providing the same service applied  
32 for by the applicant as required by law and that it is in the public interest to grant  
33 the Franchise; **Now Therefore**,

34  
35 **BE IT ORDAINED by the Council of Pierce County:**  
36

37 Section 1. A nonexclusive Franchise, a copy of which is attached hereto  
38 and identified as Exhibit A, is hereby given and granted to Public Utility District  
39 No. 1 of Thurston County, Washington, hereinafter referred to as the Grantee, for  
40 a period of 15 years, from and after the date of filing of the Franchise to be granted  
41 with the Clerk of the Pierce County Council.



1 Section 2. Public Utility District No. 1 of Thurston County must indicate  
2 their full acceptance of this Franchise and all its terms and conditions within 60  
3 days from the effective date of the Ordinance. Said acceptance is to be in writing  
4 and filed with the Clerk of the Pierce County Council and shall be a condition  
5 precedent to the validity of said Franchise, and unless the Franchise is accepted  
6 within such time, this grant of permission shall be null and void.

7  
8 Section 3. The Executive of Pierce County is hereby authorized to execute  
9 said Franchise.

10  
11 PASSED this 11<sup>th</sup> day of February, 2020.

12  
13 ATTEST:

PIERCE COUNTY COUNCIL  
Pierce County, Washington

14  
15  
16  
17 Denise D. Johnson  
18 Denise D. Johnson  
19 Clerk of the Council

Douglas G. Richardson  
Douglas G. Richardson  
Council Chair

Bruce F. Dammeier  
Bruce F. Dammeier  
Pierce County Executive

Approved X Vetped     , this  
14<sup>th</sup> day of February, 2020.

20  
21  
22  
23  
24  
25  
26  
27  
28 Dates of Publication of  
29 Notice of Public Hearing: December 30, 2019 and January 8, 2020

30  
31 Effective Date of Ordinance: February 24, 2020

32  
33 Recording Number: \_\_\_\_\_

34  
35 Date Recorded: \_\_\_\_\_



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In the Matter of the Application of )  
Public Utility District No. 1 of Thurston )  
County, State of Washington, )  
for a Franchise to construct, operate, )  
and maintain pipelines for a Water System )  
under and along certain Public Roads and )  
Highways in Pierce County, Washington )

FRANCHISE

Application of Public Utility District No. 1 of Thurston County, Washington, for a nonexclusive Franchise to construct and maintain water pipelines with appurtenances for a water system under and along certain public roads, highways, and other County property in Pierce County, Washington, as hereinafter set forth, having come on regularly for hearing before the County Council of Pierce County, Washington, under the provisions of Chapter 36.55, Revised Code of Washington (RCW), and it appearing to the Council that notice of said hearing has been duly given as required by law, and that it is in the public interest to grant the Franchise herein requested;

NOW, THEREFORE, IT IS ORDERED, that a Franchise be, and the same is, hereby given and granted Public Utility District No. 1 of Thurston County, Washington, hereinafter called "Grantee" for a term of 15 years from and after the date of filing this Franchise with the Clerk of the Pierce County Council. This Franchise is a license for the privilege, and authority to construct, maintain, and operate for the said period of time, a water pipeline with appurtenances for a water system under and along public roads, highways, and other County property in Pierce County, Washington, as follows:

Section 16, Township 16 North, Range 04 East, W.M.  
All Pierce County roads lying within a portion of the Northwest quarter of said section.

Section 02, Township 18 North, Range 03 East, W.M.  
All Pierce County roads lying within a portion of the North half of said section.





1 specifications for the restoration of the roads to the same condition as they were  
2 prior to such work; and

3

4 PROVIDED FURTHER, the Engineer, in his or her discretion, may require a  
5 bond in a sum sufficient to guarantee to Pierce County that such roads shall be  
6 restored to the same condition as existed prior to such work. If Grantee does not  
7 repair County roads to the satisfaction of the Engineer, Pierce County Planning  
8 and Public Works may, at its sole discretion, repair such County roads, or cause  
9 them to be repaired, and Grantee hereby agrees to reimburse the County of  
10 Pierce for the cost of such work, including overhead costs.

11

12 Before any work is performed under this Franchise, which may affect any  
13 existing monuments or markers of any nature relating to section subdivisions,  
14 plats, roads, and all other surveys, Grantee shall reference all such monuments  
15 and markers in accordance with RCW 58.09.130. The reference points shall be so  
16 located that they will not be disturbed during Grantee's operations under this  
17 Franchise. The method of referencing these monuments or other points to be  
18 referenced shall be approved by the County Engineer. The replacement of all  
19 such monuments or markers disturbed during construction shall be made as  
20 expeditiously as conditions permit, and as directed by the County Engineer. The  
21 cost of monuments or other markers lost, destroyed, or disturbed, and the  
22 expense of replacement with approved monuments shall be borne by Grantee.

23

24 A complete set of reference notes for monuments and other ties shall be  
25 filed with Pierce County Planning and Public Works.

26

27

II

28

29 The water mains and pipes shall be laid down as directed by the Engineer  
30 at a depth of not less than 36 inches below the surface of the ground under and  
31 along the County roads, and in such a manner as not to interfere unnecessarily  
32 with the construction of sewers and drains, or with the grading of County roads.  
33 All surface appurtenances to the water system shall be installed or constructed as  
34 approved by the Engineer.

34

35

III

36

37 All work done under this Franchise shall be done in a thorough and  
38 professional manner. In the laying of water pipes and conduits and the digging of  
39 ditches therefore, Grantee shall leave ditches in such a way as to interfere as little  
40 as possible with public travel and shall take all due and necessary precautions to  
41 ensure that damage or injury shall not occur or arise by reason of such work; and  
42 that where any ditches or trenches are left open at night, Grantee shall place at all  
43 crossings suitable lights in such a position to guard against danger, and Grantee  
44 shall be liable for all property damage or personal injury that may be caused by  
reason of any injury sustained through Grantee's negligence by reason of any



1 person, animal or property being injured through any negligence of Grantee, or by  
2 reason of any damage caused through the neglect to properly guard any ditches  
3 or trenches dug or maintained by Grantee. The Engineer may specify actions to  
4 be taken to ensure the safety of the public and Grantee shall comply with such  
5 specifications.

6  
7 All abandoned underground utilities shall be removed from the right-of-way  
8 within 90 days from abandonment. The underground utility shall be considered  
9 abandoned upon completion of the permitted work. In the abandonment of  
10 hazardous materials such as asbestos concrete pipe, the materials being removed  
11 will be in accordance with Chapter 296-65 of the Washington Administrative Code  
12 (WAC).

13 IV

14 The County of Pierce, in granting this Franchise does not waive any rights  
15 that it now holds or may hereafter acquire and shall not be construed to deprive  
16 the County of Pierce of any powers, rights, or privileges that it now has or may  
17 hereafter acquire, including the right of eminent domain to regulate use and control  
18 of County roads covered by this Franchise, or to go upon any and all County roads  
19 and highways for the purpose of constructing and improving the same in such a  
20 manner as the County of Pierce, or its representatives may elect.

21 V

22  
23 Grantee shall provide a certificate of insurance showing evidence of  
24 commercial general liability and property damage liability insurance that includes  
25 but is not limited to the operations of Grantee, Grantee's protective liability,  
26 products completed operation's coverage, broad form blanket contractual liability:

<u>COVERAGES</u>	<u>LIMITS OF LIABILITY</u>
Commercial General Liability Insurance	\$2,000,000 Each
Bodily Injury Liability	Occurrence
Property Damage Liability	\$250,000 Each
	Occurrence

33 or  
34 COMBINED SINGLE  
35 LIMIT COVERAGE OF  
36 \$2,000,000

37  
38 The general requirements of the policy shall contain:

39  
40 Pierce County is named as an additional insured in this Franchise, to  
41 applicable coverage.  
42  
43



1 In the event of nonrenewal, cancellation, or material change in the coverage  
2 provided, 30 days' written notice will be furnished to the County prior to the  
3 date of nonrenewal, cancellation, or change. Such notice shall be sent to  
4 the County Engineer, Pierce County Planning and Public Works, 4301  
5 South Pine Street, Suite 628, Tacoma, Washington 98409.  
6

7 Pierce County has no obligation to report occurrences to the insurance  
8 companies unless a claim is filed with the County; and Pierce County has  
9 no obligations to pay premiums.  
10

11 Grantee's insurance policies shall contain a "cross-liability" endorsement  
12 substantially as follows:  
13

14 The inclusion of more than one Insured under this policy shall not  
15 affect the rights of any Insured with respect to any claim, suit, or  
16 judgment made or brought by or for any other insured or by or for  
17 any employee of any other Insured. This policy shall protect each  
18 Insured in the same manner as though a separate policy has been  
19 issued to each, except that nothing herein shall operate to increase  
20 Grantee's liability beyond the amount or amounts for which Grantee  
21 would have been liable had only one Insured been named.  
22

23 Grantee's insurance is primary over any insurance that may be  
24 carried by Pierce County. Grantee agrees to provide proof of  
25 insurance each year to Pierce County.  
26

27 Grantee agrees to defend, indemnify, and hold harmless Pierce  
28 County, its appointed and elected officials, its agents, and its  
29 employees, from and against all loss or expense arising out of any  
30 act, error or omission, or the exercise of any of the rights and  
31 privileges granted under this Franchise, including but not limited to,  
32 judgments, settlements, attorney's fees and costs, and any and all  
33 claims and demands upon the County, its elected or appointed  
34 officials, its agents, or its employees. Additionally, for damages  
35 because of personal or bodily injury including death at any time  
36 resulting therefrom, sustained by any person or persons, and for  
37 damages on account of damage to property, including loss of use  
38 thereof, where such injury to persons or damage to property is due to  
39 the negligence of Grantee, its contractors, its or their employees or  
40 agents, Grantee agrees to defend, indemnify, and hold harmless  
41 Pierce County, its appointed or elected officers, or its employees, or  
42 its agents, except only such injury or damage as shall have been  
43 occasioned by the sole negligence of Pierce County, its appointed or  
44 elected officials, or its agents, or its employees; and the Grantee



1 expressly waives its immunity under Title 51 of the Revised Code of  
2 Washington, the Industrial Insurance Act, and this waiver has been  
3 mutually negotiated by the parties to this Franchise.  
4

5 If the claim, suit, or action for injuries, death, or damages as provided  
6 for in this Franchise agreement is caused by or results from the  
7 concurrent negligence of (a) Pierce County or Pierce County's  
8 agents or employees; or (b) Grantee, or Grantee's agents or  
9 employees, the indemnity provisions provided for in this Franchise  
10 shall be valid and enforceable only to the extent of Grantee's  
11 negligence.  
12

13 Grantee specifically and expressly waives any immunity under  
14 Industrial Insurance Title 51 RCW and acknowledges that this waiver  
15 was mutually agreed upon by the parties herein.  
16

#### 17 VI

18 If, at any time, the County of Pierce shall vacate any County street, road or  
19 alley that is subject to rights granted by this Franchise, the Pierce County Council  
20 may, at its option, and by giving 30 days written notice to Grantee, its successors  
21 and assigns, terminate this Franchise with reference to such County road, street,  
22 or alley so vacated and the County of Pierce shall not be liable for any damages or  
23 loss to Grantee by reason of such termination.  
24

#### 25 VII

26 If, at any time, a new County road is created or established, and  
27 constructed, or an existing County road is reconstructed, realigned, or its grade is  
28 changed, or if sewer or drainage facilities, or any other facilities within future or  
29 existing County road rights-of-way are constructed, reconstructed, maintained, or  
30 relocated (all such work to be called "County Projects" hereinafter) and if the  
31 installation of the facilities as allowed in this Franchise, and all supplements and  
32 changes thereto, should interfere in any manner with any such County Projects  
33 then Grantee at no expense to Pierce County shall, upon notice, change the  
34 location or adjust the elevation of its facilities so that such facilities shall not  
35 interfere with such County Projects.  
36

37 When relocation of Grantee's facilities is required by such County Projects,  
38 the following procedures shall be followed:  
39

- 40 1. Pierce County shall make available to Grantee a list of anticipated  
41 projects for each new budget period as soon as is reasonably  
42 possible.  
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- 8. If Grantee does not relocate its facilities in a timely manner as required above, Pierce County may relocate, or cause to be relocated, such facilities of Grantee as Pierce County deems necessary, and in the manner Pierce County deems necessary, in its sole discretion. Grantee hereby indemnifies and holds Pierce County, its employees, officers, officials, and agents totally free and harmless from all and any liability which may arise from damages caused by the relocation by Pierce County of the facilities of Grantee, even if such damages and liability arise from the negligence of Pierce County, its employees, officers, officials, and agents.
- 9. Grantee hereby indemnifies and holds harmless Pierce County, its officers, officials, and employees, from damages that may arise from Grantee's failure to relocate its facilities in accordance with the dates for completion of relocation of facilities set forth above, or any other act or omission by Grantee, its contractor(s), agents, officers, or employees related to the provisions of this Franchise.
- 10. It shall be conclusively presumed that Pierce County will have suffered damages as a result of exercising its rights as set forth in Item 8 above, and compensation for such damages will be difficult to ascertain, and therefore, Grantee shall compensate Pierce County for such damages in the amount of twice the amount of the cost of such relocation of Grantee's facilities by Pierce County.
- 11. The exercise of its rights, as set forth in Item 8 above, by Pierce County in no way relieves Grantee of completing and/or finalizing the relocation of its facilities at no expense to Pierce County, if the relocation work done by Pierce County is incomplete.
- 12. In the event a lawsuit is brought by Pierce County against Grantee to collect damages presumed under Item 10 above for the exercise by Pierce County of its rights under Item 8 above, Grantee hereby agrees the only issue will be the actual cost to Pierce County for relocating Grantee's facilities. The party prevailing in such an action shall be allowed its legal fees and costs.

VIII

Grantee shall not sell, transfer, or assign this Franchise without first notifying the Pierce County Council. The terms and conditions set forth herein shall be binding on Grantee's successors and assigns unless amended by the Council of Pierce County.

IX

1  
2 This Franchise is granted upon the further express condition that it shall not  
3 be an exclusive Franchise and shall not, in any manner, prohibit the County of  
4 Pierce from granting any other Franchise under and along any of the said County  
5 roads of any kind and character or territories that may be deemed proper by the  
6 Pierce County Council, and this Franchise shall not in any way prevent the County  
7 of Pierce from using the County rights-of-way, or affect the jurisdiction over them,  
8 and every part of them by the County of Pierce with full power to make the  
9 necessary repairs, changes and alterations in the same and like manner as though  
10 this Franchise had never been granted.

11  
12 Pierce County reserves for itself the right to so change, amend, modify, or  
13 amplify this Franchise to conform to any State statute, order of the Washington  
14 Utilities and Transportation Commission, or County regulation, ordinance, or right-  
15 of-way regulation, as may hereafter be enacted, adopted, or promulgated. This  
16 Franchise may be terminated at any time upon 90 days written notice to Grantee  
17 to terminate this Franchise if Grantee fails to comply with its terms and conditions,  
18 or if Grantee fails to comply with such changes, amendments, modifications, or  
19 amplifications and upon termination Pierce County shall have a lien upon all  
20 equipment and materials erected or placed under this Franchise, which lien may  
21 be enforced to reimburse Pierce County for any reasonable expenses and  
22 payments incurred in terminating this Franchise, and to cure defaults by Grantee.

23  
24 Grantee agrees to and shall provide available financial information to the  
25 County upon reasonable request. Grantee agrees to and shall during regular  
26 business allow agents of Pierce County access for inspection and reproduction of  
27 all of Grantee's business records, gross revenue reports, or rules and regulations  
28 relevant to a determination of the gross revenues received by Grantee from the  
29 area served by the facilities permitted by this Franchise.

30  
31 Furthermore, all Grantees shall, within 30 days after written demand thereof  
32 on the anniversary of said grant, modification, amendment, renewal, or transfer of  
33 any franchise, reimburse Pierce County for all direct and indirect costs and  
34 expenses incurred by the County in the preceding 12 months in connection with  
35 any said franchise.

X

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38 In the event that the territory covered by this Franchise shall at any time  
39 during the Franchise period be included within the limits of any incorporated city or  
40 town, the authorities of said city or town shall have the right, to be exercised at  
41 their discretion, to acquire by purchase or condemnation, any part of such pipes,  
42 conduits, and water system other than transmission lines at a price to be based  
43 upon the reasonable value of the same at the time, without any additional value for  
44 the Franchise or any unexpired period thereof, and upon such acquirement, this



1 grant and Franchise shall immediately terminate, only that portion to be  
2 incorporated.

3  
4 XI

5 Grantee acknowledges that Pierce County Charter Section 9.20 Franchises  
6 provides in part: All Franchises shall be subject to the right of the Council, or the  
7 people acting for them through referendum, to repeal for cause, amend, or modify  
8 the Franchise in the interest of the public, and agrees to said condition.

9  
10 XII

11 Any failure to render adequate service to the patrons of said water system,  
12 or the discontinuance of such water services without fault on the part of the patron  
13 or patrons involved, for a period of 30 days, shall work a forfeiture of this  
14 Franchise, at the discretion of the Pierce County Council, unless the failure should  
15 result from causes beyond human control.

16  
17 XIII

18 Venue and jurisdiction for any controversy arising from the Franchise shall  
19 be in Pierce County, Washington.

20  
21 XIV

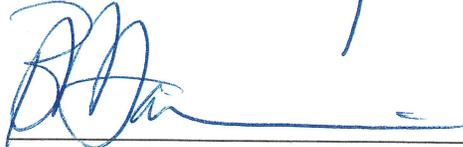
22 Grantee shall provide full acceptance of this Franchise and all its terms and  
23 conditions by filing a signed copy of the Franchise with the Clerk of the Pierce  
24 County Council within 60 days from FEBRUARY 24, 2020. This  
25 requirement shall be a condition precedent to the Franchise taking effect. If  
26 Grantee does not provide a signed copy of the Franchise as set forth in this  
27 Section, this Franchise shall be null and void.

28  
29 Pursuant to RCW 36.55.080, a copy of this Franchise shall be recorded in  
30 the Office of the Pierce County Auditor.  
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DATED at Tacoma, Washington, this 14<sup>th</sup> day of February, 2020.



Bruce F. Dammeier  
Pierce County Executive

Public Utility District No. 1 of Thurston County accepts and agrees to  
comply with all terms and conditions of this Franchise.

John Weidenfeller

Name

General Manager

Title



Public Utility District No. 1 of Thurston County

03/16/2020

Date



# Pierce County

Office of the County Council

930 Tacoma Avenue South, Room 1046  
Tacoma, Washington 98402-2176  
(253) 798-7777  
FAX (253) 798-7509  
1-800-992-2456

STATE OF WASHINGTON                    )  
  )  
COUNTY OF PIERCE                    )

I, Patricia L. Face, Deputy Clerk of the Pierce County Council, do hereby certify that the attached is a full, true, and correct copy of the following document:

ORDINANCE NO. 2019-40s

The original of this document is currently located in the Office of the Pierce County Council, 930 Tacoma Avenue South, Room 1046, Tacoma, Washington 98402.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of Pierce County, Washington, this 18<sup>th</sup> day of February, 2020.



PIERCE COUNTY COUNCIL  
PIERCE COUNTY, WASHINGTON

Patricia L. Face, CMC  
Council Deputy Clerk  
Pierce County Council



AFTER RECORDING RETURN TO:

Lewis County Public Services  
2025 NE Kresky Avenue.  
Chehalis, WA 98532

**PLEASE PRINT OR TYPE ALL INFORMATION**

**DOCUMENT TITLE(S) (OR TRANSACTIONS CONTAINED THEREIN):**

Resolution

**REFERENCE NUMBER(S) OF DOCUMENTS ASSIGNED/RELEASED:**

**GRANTOR/BORROWER (LAST NAME FIRST, FIRST NAME AND INITIALS):**

Lewis County Public Services  
2025 NE Kresky Avenue.  
Chehalis, WA 98532

ADDITIONAL NAMES LISTED ON PAGE \_\_\_\_\_ OF DOCUMENT.

**GRANTEE/ASSIGNEE/BENEFICIARY (LAST NAME FIRST, FIRST NAME AND INITIALS):**

PUD No. 1 of Thurston County  
1230 Ruddell Rd  
Lacey, WA 98503

ADDITIONAL NAMES LISTED ON PAGE \_\_\_\_\_ OF DOCUMENT.

**LEGAL DESCRIPTION (ABBREVIATED: I.E. LOT, BLOCK, PLAT OR SECTION, TOWNSHIP, RANGE)**

Countywide Franchise.

COMPLETE LEGAL DESCRIPTION IS LISTED ON PAGE \_\_\_\_ OF DOCUMENT.

**ASSESSOR'S TAX PARCEL NUMBER(S)**

N/A

**THE AUDITOR/RECORDER WILL RELY ON THE INFORMATION PROVIDED ON THIS FORM. THE STAFF WILL NOT READ THE DOCUMENT TO VERIFY THE ACCURACY OR COMPLETENESS OF THE INDEXING INFORMATION PROVIDED HEREIN.**

AFTER RECORDING RETURN TO:  
Lewis County Public Works Dept.  
2025 NE Kresky Ave  
Chehalis, WA. 98532

Tax Parcel Number: N/A Road Right of Way

## ***NONEXCLUSIVE FRANCHISE AGREEMENT PUD NO. 1 OF THURSTON COUNTY***

### **Section 1. Franchise**

**1.1 Definitions.** Terms as used throughout this Franchise shall have the same meanings given in Section 12.25.020 LCC (“Lewis County Code”) and Section 12.20.020 LCC. In addition to the meaning set forth in 12.25.020 LCC, “Ordinance”, as used herein, shall be inclusive of Chapters 12.20 through 12.50 of the LCC. Words not otherwise defined shall be given their common and ordinary meaning.

**1.2 Grant of Franchise.** Lewis County, a Washington municipal corporation and subdivision of the State (hereinafter “County”) hereby grants PUD No. 1 of Thurston County (hereinafter “Grantee”), a nonexclusive Franchise for the installation, construction, operation, and maintenance of water facilities within the rights of way of unincorporated Lewis County. The following conditions shall apply to the Franchise granted herein:

- A. The Franchise granted shall not convey any right, title or interest in the rights of way but shall be deemed a Franchise only to use and occupy the rights of way for the limited purposes and term stated herein. The Franchise shall not convey any right, title, or interest in rights of way in which the County has an interest.
- B. The Franchise granted shall not authorize or excuse Grantee from securing such further easements, leases, permits, or other approvals as may be required to lawfully occupy and use the rights of way.
- C. The Franchise granted shall not be construed as any warranty of title or interest in any right of way; it does not provide the Grantee with any interest in any particular location within the right of way; and it does not confer rights other than as expressly provided in the grant hereof.
- D. No act, event, occurrence, or thing shall give Grantee any rights to occupy or use the rights of way permanently nor shall operate as an estoppel against the County.
- E. **This Franchise is granted subject to the terms and conditions contained in Chapter 12.20 LCC, Installation of Utilities on Lewis County rights of way, as**

they are now written or as later amended, which shall apply in addition to the provisions of this Franchise. Provisions of Chapter 12.20 LCC shall control over inconsistent terms contained in this Franchise; provided, however, that Section 3.2 of this Franchise, Release, Indemnity and Hold Harmless, shall control for this Franchise over inconsistent provisions of Chapter 12.20 LCC as is currently adopted.

- F. The matters contained in Grantee's Franchise application and all subsequent applications or proposals for extensions or renewals of this Franchise, except as inconsistent with law, regulations, or local ordinance, are hereby incorporated by reference.
- G. This Franchise is being granted for Grantee's water system facilities.
- H. Grantee shall comply with all applicable state and federal laws, including regulatory requirements of the WUTC, if applicable to Grantee.
- I. This grant of authority to provide the services described herein shall be limited solely to those services expressly described and no others. In the event of any ambiguity, this Franchise agreement shall be strictly construed as to the rights granted herein.

**1.3 Term of Franchise.** The term of this Nonexclusive Franchise shall be five (5) years from the date of this Franchise. This Franchise may be renewed, at the sole discretion of the County by resolution of the Board of County Commissioners, for one additional five (5) year period upon the written request of, such request to be submitted not more than two (2) years nor less than one hundred eighty (180) days prior to the expiration of the initial five (5) year term.

**1.4 Nonexclusive Franchise.** The Franchise granted herein shall be nonexclusive. The County specifically reserves the right to grant, at any time, such rights, permits, licenses, and/or franchises to other Persons to use the rights of way for similar or different purposes allowed hereunder as the County deems appropriate. Subject to this Franchise, Grantee shall not prevent or prohibit the County from constructing, altering, maintaining, or using any of said rights of way, or affect its jurisdiction over them or any part of them, the County having full power and authority to make all necessary changes, relocation, repairs, or maintenance of said rights of way as the County deems appropriate.

**1.5 Renewal Applications.** If Grantee desires to renew this Franchise, Grantee shall comply with Section 12.37.120 LCC.

**1.6 Renewal Determinations.** Within 120 business days after receiving a complete application for renewal, the Board shall make a determination on behalf of the County granting or denying the renewal application in whole or in part. If the renewal application is denied, the determination shall include the reasons for non-renewal. The criteria in Section 12.37.130 LCC shall apply when determining whether to grant or deny the application, and the Board may also consider Grantee's compliance with the requirements of Chapter 12.20 LCC, and this Franchise.

**1.7 Obligation to Cure as a Condition of Renewal.** This Franchise shall not be renewed until any ongoing violations or defaults in Grantee's performance of this Franchise, of the

requirements of the Ordinance, and all applicable laws, statutes, codes, ordinances, rules, and regulations have been cured; or a plan detailing the corrective action to be taken by Grantee has been approved by the Administrator. Failure to comply with the terms of an approved plan shall be grounds for non-renewal or immediate revocation of this Franchise.

**1.8 Franchise Territory.** The Franchise territory shall be that territory described herein on Exhibit A. The Franchise granted herein does not give or grant to Grantee the right, privilege, or authority to install water facilities at any other location in the County. Grantee agrees not to install water facilities at any other County location without written County approval.

**1.9 Amendment of Franchise for Territory Changes.** Should Grantee not be able to install a water facility within the Franchise territory, Grantee shall request from the County, in writing, a deviation from the territory set out herein. If Grantee desires to extend or locate its utilities in rights of way which are not included in this Franchise, Grantee shall apply in writing for an amendment to the Franchise. If the County orders Grantee to locate or relocate its water facilities in rights of way not included in this Franchise, the County shall grant a Franchise amendment for the territory change without further application.

**1.10 Right to Require Removal of Property.** At the expiration of this Franchise, and if Grantee has not obtained a new franchise from the County, the County shall have the right to require Grantee to remove all or any part of Grantee's water facilities under this Franchise from the rights of way and restore the affected area, all at Grantee's expense. Removal and restoration shall be to the satisfaction of the County Engineer. If Grantee fails to do so, the County may perform the work or cause it to be done and collect the cost thereof from Grantee. The actual cost thereof, including direct and indirect administrative costs, shall be a lien upon all property of Grantee effective upon filing of the lien with the Lewis County Auditor.

## **Section 2. Operation in Rights of way**

### **2.1 Construction or Alteration.**

- A. Facilities shall be constructed, operated, and maintained in accordance with this Franchise and all applicable Federal, State, and County codes, rules, and regulations; including, but not limited to, Chapter 12.20 LCC. Grantee shall comply with all lawful County resolutions and ordinances regarding the acquisition of permits and/or such other items as may be required in order to construct, operate, and maintain its facilities. Grantee shall pay to the County all reasonable costs of granting or enforcing the provisions of this Franchise including, but not limited to, County fees related to the issuance of utility permits.
- B. Grantee shall not construct, maintain, repair, relocate, or remove its facilities within the rights of way without obtaining a utility permit. Applications for utility permits to construct Grantee's facilities shall be in compliance with the provisions of Chapter 12.20 LCC. As part of the permitting process, the County may impose such conditions and regulations as are necessary for the purpose of protecting any

structures in such rights of way, proper restoration of such rights of way and structures, the protection of the public, and the continuity of pedestrian or vehicular traffic. Such conditions may also include the provision of a construction schedule and maps showing the location of the facilities to be installed in the right of way. All work authorized and required hereunder shall be done in a safe, thorough, and workmanlike manner. All installations of equipment shall be permanent in nature, durable, and installed in accordance with good engineering practices.

- C. Within limits reasonably related to the County's role in protecting public health, safety, and welfare, the County may require that facilities be installed at a particular time, at a specific place, or in a particular manner as a condition of access to a particular right of way; may deny access if Grantee is not willing to comply with County's requirements; may remove, or require removal of, any facility that is not installed in compliance with the requirements established by the County; and may require Grantee to cooperate with others to minimize adverse impacts on the rights of way through joint trenching and other arrangements.

**2.2 Non-Interference.** In installing, constructing, operating, repairing, and maintaining its facilities, Grantee shall not interfere with the use of the rights of way by the County, the general public, or other Persons authorized to use or be present in or upon the rights of way. Work in the right of way, on other public property, near public property, or on or near private property shall be done in a manner that causes the least interference with the rights and reasonable convenience of property owners and residents. Grantee's facilities shall be constructed and maintained in such manner as not to interfere with any other pipes, wires, conduits, pedestals, structures, or other facilities that may have been laid in the rights of way by, or under, the County's authority. In the event of such interference, the County may require the removal or relocation of Grantee's facilities from the property in question at Grantee's expense.

**2.3 Construction Schedule and Notice of Work.** Unless otherwise provided herein, Grantee, or any Person acting on Grantee's behalf, shall comply with the notice provisions set out in Chapter 12.20 LCC.

**2.4 Traffic Control.** Grantee shall comply with the traffic control provisions set out in Chapter 12.20 LCC.

**2.5 Relocation or Removal of Facilities.** Chapter 12.20 LCC shall govern the relocation and removal of Grantee's facilities in the rights of way.

**2.6 Consistency with Designated Use.** Notwithstanding this Franchise to use County rights of way, no right of way shall be used by Grantee if the County determines that such use is inconsistent with: (1) the terms and conditions of dedication or establishment of the right of way; (2) the present use of the right of way; or (3) applicable federal, state or local laws.

**2.7 Restoration of Rights of way.** Grantee shall comply with the restoration of rights of

way conditions set out in Chapter 12.20 LCC.

**2.8 Restoration of Improvements.** Upon completion of any construction work, Grantee shall make restoration in accordance with Chapter 12.20 LCC.

**2.9 Rights of way and Other Public Property.** Grantee shall warrant any restoration work performed by or for Grantee in the right of way or on other public property for one (1) year. If restoration is not satisfactorily performed by the Grantee within a reasonable time, the County may, after 48 hours prior notice to the Grantee, or without notice where the disturbance or damage may create a risk to public health or safety, cause the repairs to be made and recover the cost of those repairs from the Grantee. The Grantee shall pay the County within thirty (30) days of receipt of an itemized list of those costs, including the costs of labor, materials and equipment.

**2.10 Facilities Maps.** Grantee shall provide the County with facilities maps in accordance with Section 12.20 LCC.

**2.11 As-Built Drawings.** If an Engineer's Certification is required under Chapter 12.20 LCC, then, in addition to the requirements of Section 2.10 of this Franchise regarding facilities maps, Grantee shall provide as-built drawings in accordance with Chapter 12.20 LCC.

**2.12 Aesthetic and Scenic Considerations.** Grantee shall comply with Chapter 12.20 LCC.

**2.13 Damage to Grantee's Facilities.** To the extent permitted by Washington law, the County shall not be liable for any damage to or loss of any of Grantee's facilities or any interruption in water services within the rights of way as a result of or in connection with any emergency removal or relocation, public works, public improvements, construction, excavation, grading, filling, or work of any kind in the rights of way by or on behalf of the County or any Person under contract with the County, except for damage caused by the sole negligence of the County.

**2.14 Location of Facilities.** All water facilities shall be constructed, installed, and located in accordance with Chapter 12.20 LCC. Consistent with any general County undergrounding policy or program now or hereafter developed, the County may require Grantee's participation in County-imposed undergrounding or related requirements at Grantee's expense. Grantee agrees to coordinate its underground installation and planning activities with the County's underground plan.

**2.15 Hazardous Substances.**

- A. Grantee shall comply with any and all applicable laws, statutes, regulations, and orders concerning hazardous substances relating to Grantee's facilities in the rights of way.
- B. Grantee agrees to indemnify the County against any claims, costs, and expenses, of any kind, whether direct or indirect, incurred by the County, arising out of Grantee's release of hazardous substances caused by or related to the construction, operation or maintenance of Grantee's facilities.

**2.16 Notice to Private Property Owners.** Grantee shall give notice to private property owners of work on or adjacent to private property.

**2.17 County Use of Trenching.** The Grantee and the County recognize that situations may occur in the future where the County may desire to place its own cable or conduit in trenches or bores opened by the Grantee. The Grantee agrees to cooperate with the County in any construction by the Grantee that involves trenching or boring, provided that the County has first notified the Grantee in some manner that it is interested in sharing the trenches or bores in the area where the Grantee's construction is occurring. The Grantee shall allow the County to lay its cable or conduit in the Grantee's trenches and bores, provided the County shares in the cost of the trenching and boring on the same terms and conditions as the Grantee at that time shares the total cost of trenches and bores. The County shall be responsible for maintaining its respective cable or conduit buried in the Grantee's trenches and bores under this paragraph.

**2.18 Movement of Facilities for Other Franchise Holders.** If any removal, replacement, modification, or disconnection of the Grantee's water facilities is required to accommodate the construction, operation, or maintenance of the facilities or equipment of another County franchise holder, Grantee shall, after at least thirty (30) days advance written notice, take action to effect the necessary changes requested by the responsible entity. Grantee may require that the costs associated with the removal or relocation be paid by the benefited party.

**2.19 Work of Contractors and Subcontractors.** Grantee's contractors and sub-contractors shall be licensed and bonded in accordance with state law. Work by contractors and sub-contractors is subject to the same restrictions, limitations, and conditions as if the work were performed by Grantee. Grantee shall be responsible for all work performed by its contractors and sub-contractors and others performing work on its behalf as if the work were performed by it, and shall ensure that all such work is performed in compliance with this Franchise and other applicable laws, and shall be jointly and severally liable for all damages and for correcting all damage caused by them. It is Grantee's responsibility to ensure that contractors, sub-contractors, or other persons performing work on Grantee's behalf are familiar with the requirements of this Franchise and other applicable laws governing the work performed by them.

**2.20 Inspection of Construction and Facilities.** The County may inspect any of Grantee's facilities, equipment, or construction at any time upon at least twenty-four (24) hours notice, or, in case of emergency, upon demand without prior notice. The County shall have the right to charge generally applicable inspection fees therefor. If an unsafe condition is found to exist, the County, in addition to taking any other action permitted under applicable law, may order Grantee, in writing, to make necessary repairs and alterations forthwith to correct the unsafe condition by a stated date and time. The County has the right to correct, inspect, administer, and repair the unsafe condition if Grantee fails to do so, and to charge Grantee therefor.

**2.21 Stop Work.**

A. On notice from the County that any work is being performed contrary to the

provisions of this Franchise, or in an unsafe or dangerous manner as determined by the County, or in violation of the terms of any applicable permits, laws, regulations, ordinances, or standards, the work shall immediately stop.

- B. The stop work order shall:
1. Be in writing.
  2. Be given to the Person doing the work, or posted on the work site.
  3. Be sent to Grantee by overnight delivery at the address given herein.
  4. Indicate the nature of the alleged violation or unsafe condition.
  5. Establish conditions under which work may be resumed.

### **Section 3. Financial Provisions**

**3.1 Financial Security.** Pursuant to LCC 12.20 the County may require financial security to ensure completion of construction before any construction work is started by Grantee. Depending on the nature of the project planned by Grantee a Permit issued by the Public Works Department before construction starts may require a bond.

**3.2 Release, Indemnity and Hold Harmless.** Grantee shall indemnify, defend, and hold the County, its appointed and elective officials, agents, officers, and employees harmless from and against any and all claims, demands, liability, loss, cost, damage, or expense of any nature whatsoever including all costs and attorney's fees, made against the County, its agents, officers, or employees on account of injury, harm, death, or damage to persons or property arising out of or in connection with Grantee's construction, operation, use, or maintenance of Grantee's Facilities, except that such indemnification shall not extend to nor include any liability due to the sole negligence of the County, its elected and appointed officials, agents, officers, and employees acting within the scope of their employment.

Grantee shall indemnify, defend, and hold the County, its appointed and elected officials, agents, officers, and employees harmless from and against any and all claims, demands, liability, loss, cost, damage, or expense of any nature whatsoever including all costs and attorney's fees, made against the County on account of violation of any environmental laws applicable to the Facilities, or from any release of petroleum products or Hazardous Substances on or from the Facilities, except for any such claims, demands, liability, loss, cost, damage, or expense of any nature whatsoever including costs and attorney's fees caused by the sole negligence of the County, its elected and appointed officials, agents, officers or employees acting within the scope of their employment. This indemnity includes, but is not limited to: (a) liability for a governmental agency's costs of removal or remedial action for hazardous substances; (b) damages to natural resources caused by hazardous substances, including the reasonable costs of assessing such damages; (c) liability for any other person's costs of responding to hazardous substances; and (d) liability for any costs of investigation, abatement, correction, or cleanup; or fines, penalties, or other damages arising under any environmental laws.

Grantee's indemnification obligations include assuming potential liability for actions brought by

Grantee's own employees and the employees of Grantee's agents, representatives, contractors, and sub-contractors even though Grantee might be immune under Title 51 RCW from direct suit brought by such employees. It is expressly agreed and understood that this assumption of potential liability for actions brought by the aforementioned employees is limited solely to claims against the County arising by virtue of Grantee's exercise of the rights set forth in this Agreement. The obligations of Grantee under this section have been mutually negotiated by the Parties, and Grantee acknowledges that the County would not enter into this Agreement without Grantee's waiver. To the extent required to provide this indemnification and this indemnification only, Grantee waives its immunity under Title 51 RCW as provided in RCW 4.24.115.

In the event any matter (for which the County intends to assert its rights under this Section 3.2) is presented to or filed with the County, the County shall promptly notify Grantee thereof, and Grantee shall have the right, at its election and at its sole cost and expense, to settle and compromise such matter as it pertains to Grantee's responsibility to indemnify, defend, and hold harmless the County, its agents, officers, or employees. In the event any suit or action is started against the County based upon any such matter, the County shall likewise promptly notify Grantee thereof, and Grantee shall have the right, at its election and at its sole cost and expense, to settle and compromise such suit or action, or defend the same at its sole cost and expense, by attorneys of its own election (subject to approval as set forth below), as it pertains to Grantee's responsibility to indemnify, defend, and hold harmless the County, its agents, officers, or employees. Grantee's selection of legal counsel to defend the County shall be subject to the approval of the Prosecuting Attorney of County; furthermore, Grantee shall exercise its best efforts to provide legal counsel that is acceptable to the Prosecuting Attorney of County. In addition, the Office of the Prosecuting Attorney may participate in the defense of the County in any such litigation without thereby waiving Grantee's indemnity obligations or any other right or protection in this Agreement; and Grantee agrees to cooperate with the Office of the Prosecuting Attorney as necessary in order to facilitate its participation in the litigation.

Acceptance by the County of any work performed by Grantee under this Agreement shall not be grounds for avoidance of this Section 3.2.

The provisions of this Section 3.2 shall survive the termination or expiration of this Agreement.

- 3.3 Insurance.** As a condition of this Franchise, Grantee shall secure and maintain the following liability insurance policies.
- A. Commercial General Liability insurance, and if necessary, Umbrella Liability insurance, which will cover bodily injury, property damage, and any other exposure which can be reasonably identified as potentially arising from Grantee's activities within the rights of way. The limit of liability shall not be less than two million dollars (\$2,000,000) each occurrence with a five million dollar (\$5,000,000) aggregate. The County, its elected and appointed officers, officials, employees, agents, and representatives shall be named as additional insureds with respect to Grantee's activities occurring within its rights of way. Coverage shall be

comprehensive with respect to Grantee's activities within the rights-of way and shall include completed operations, explosions, collapse, and underground hazards. Any insurance or self-insurance maintained by the County, its officers, officials, boards, commissions, employees, and agents shall be in excess of the Grantee's insurance and shall not contribute to it.

- B. Business Automobile Liability insurance for owned, non-owned, and hired vehicles with limits of not less than one million dollars (\$1,000,000) per person and one million dollars (\$1,000,000) per occurrence.
- C. Workers' Compensation insurance as required by Title 51 RCW and Employer's Liability Coverage with a limit of not less than one million dollars (\$1,000,000).
- D. The insurance policies required by Section 3.3 shall be maintained at all times by Grantee. The insurer or Grantee shall notify the County at least thirty (30) days before the policy can be canceled by either party to be mailed to the Lewis County Public Works, Real Estate Services Division (2025 NE Kresky Ave., Chehalis, WA 98532) as well as the named insured. Grantee will be obligated to replace or renew the canceled or expiring policy and show proof in the form of a certificate of insurance, at least fifteen (15) days before the expiration or cancellation of the existing policy(ies).
- E. Grantee shall furnish the Real Estate Services Division with properly executed certificates of insurance naming Lewis County as primary, non-contributory additionally insured, or a signed policy endorsement which shall clearly evidence all insurance required in Section 3.3.
- F. Grantee or its agent will provide a copy of any and all insurance policies specified in this Franchise upon request of the Real Estate Services Manager.
- G. The insurance limits mandated for any insurance coverage required by this Franchise are not intended to be an indication of limits of exposure nor are they limitations on liability or indemnification.
- H. By acceptance of this Franchise, Grantee agrees that failure to procure or maintain the required insurance shall constitute a material breach of this Franchise and that the County may immediately terminate this Franchise or, at the County's discretion, procure or renew such insurance to protect the County's interests and be reimbursed by Grantee for all premiums paid in connection therewith.

**3.4 Compensation.** The Franchise granted hereunder is subject to the County's right, which is expressly reserved, to annually fix a fair and reasonable compensation for the authorization granted hereunder, and to reimburse the County's costs in connection with administration and oversight of this Franchise, and in connection with reviewing, inspecting, monitoring, and supervising the use and occupancy of the rights of way. Nothing herein shall prohibit the County and Grantee from agreeing upon the compensation to be paid.

This Franchise shall not be interpreted to prevent the County from imposing additional lawful conditions, including additional compensation conditions for use of the rights of way, should Grantee provide services other than water facilities.

**3.5 Reimbursement.** Except as provided in Subsection 3.4, Grantee shall reimburse the County within thirty (30) calendar days after receipt of written demand for all reasonable amounts paid and costs incurred by the County in relation to this Franchise or the enforcement thereof.

#### **Section 4. Additional Franchise Provisions**

**4.1 Publication Costs.** Grantee shall assume the costs of publication associated with this Franchise as such publication is required by law.

**4.2 Vacation.**

- A. If the County vacates all or a portion of any County rights of way which are subject to rights granted by this Franchise, and said vacation is for the purpose of acquiring the fee or other property interest in said rights of way for the use of the County in either its proprietary or governmental capacity, the Board may, at its option and by giving forty-five (45) days written notice to Grantee, terminate this Franchise with reference to any County rights of way so vacated, and the County shall not be liable for any damages or loss to Grantee by reason of such termination.
- B. Whenever a County right of way or any portion thereof is vacated upon a finding that it is not useful and the public will be benefited by the vacation, the County may retain an easement in respect to the vacated land for the construction, operation and maintenance of public utilities and services which at the time of the vacation are specifically authorized under this Franchise or physically located on a portion of the land being vacated, but only in accordance with the provisions of RCW 36.87.140. The County shall not be liable for any damages or loss to Grantee by reason of any such vacation.

**4.3 Eminent Domain.** This Franchise is subject to the power of eminent domain and the right of the Board or the people acting for themselves through the initiative or referendum process to repeal, amend, or modify this Franchise. In any proceeding under eminent domain, this Franchise itself shall have no value.

**4.4 Revocation or Termination.**

- A. This Franchise may be revoked as provided in the Ordinance after notice, an opportunity to cure, and a hearing as provided in the Ordinance.
- B. In addition to Section 4.4 A. of this Franchise, upon failure of Grantee, after written notice, to perform properly and completely each term, condition, or obligation imposed upon it pursuant to this Franchise, the County may terminate this Franchise.
- C. At the expiration of the term of this Franchise or upon its revocation or termination, the County shall have the right to require Grantee to remove its water facilities within ninety (90) days from the County rights of way. Grantee shall be liable for any costs incurred in removing the water facilities of Grantee and restoring any County rights

of way. In removing its facilities, Grantee shall refill, at its own expense, any excavation that is made by it and shall leave all rights of way, public places, and private property in as good condition as that prevailing prior to Grantee's removal of its facilities. The indemnification and insurance provisions and the letter of credit shall remain in full force and effect during the period of removal, and Grantee shall not be entitled to, and agrees not to request, compensation of any sort therefor.

- D. If Grantee fails to remove its water facilities to the County's satisfaction in the time frame required by the County, the County may perform the work and collect the cost thereof from Grantee. The actual cost thereof, including direct and indirect administrative costs, shall be a lien upon all plant and property of Grantee effective upon filing of the lien with the County Auditor.
- E. A revocation or termination of this Franchise shall not prejudice any other remedy for breach of contract, damages, non-payment or otherwise which the County has under this Franchise or under law.

**4.5 Modification.** The County and Grantee reserve the right to modify the terms and conditions of this Franchise upon written agreement of both parties to such modification or in the exercise of the County's police power authority or other authority pursuant to applicable laws.

**4.6 Franchise Subject to Future County Ordinances and Regulations.** Nothing herein shall be deemed to restrict the County's ability to adopt and enforce all necessary and appropriate ordinances regulating the performance of the conditions of this Franchise, including any valid ordinance made in the exercise of the County's police powers in the interest of public safety and for the welfare of the public. The County shall have the authority at all times to control by appropriate regulations the location, elevation, manner of construction, operation and maintenance of any water facilities by Grantee. Grantee agrees to promptly conform to all such regulations as if they were in effect at the time this Franchise was executed by the County, unless compliance would cause Grantee to violate other requirements of law. In the event of a conflict between the provisions of this Franchise and any ordinance(s) enacted or action taken under the County's police power authority, such ordinance(s) or other exercise of police power shall take precedence over the provisions set forth herein.

**4.7 Assignments or Transfers.** Grantee shall comply with LCC 12.20 regarding assignments, lease, sharing, transfers, and transactions affecting direct or indirect interest or control. In no event shall a sale, lease, sharing, transfer, assignment, or disposal of ownership, interest, or control be approved without the transferee acknowledging the obligations under LCC 12.20, becoming a signatory to this Franchise, and assuming all rights and obligations hereunder; and assuming all other rights and obligations of the transferor to the County.

**4.8 Receivership and Foreclosure.**

- A. At the option of the County, subject to applicable law, this Franchise may be revoked one hundred twenty (120) days after the appointment of a receiver or trustee to take

over and conduct the business of Grantee whether in a receivership, reorganization, bankruptcy, or other action or proceeding, unless:

1. The receivership or trusteeship is vacated within one hundred twenty (120) days of appointment; or
  2. The receivers or trustees have, within one hundred twenty (120) days after their election or appointment, fully complied with all the terms and provisions of this Franchise and have remedied all defaults under the Franchise. Additionally, the receivers or trustees shall have executed an agreement duly approved by the court having jurisdiction, by which the receivers or trustees assume and agree to be bound by each and every term, provision, and limitation of this Franchise.
- B. If there is a foreclosure or other involuntary sale of the whole or any part of the property and equipment of Grantee, the County may serve notice of revocation on Grantee and the purchaser at the sale, and the rights and privileges under this Franchise shall be revoked thirty (30) days after service of such notice, unless:
1. The County has approved the transfer of the Franchise, in accordance with the procedures set forth in this Franchise and as provided by law; and
  2. The purchaser has covenanted and agreed with the County to assume and be bound by all of the terms and conditions of this Franchise.

**4.9 Incorporation and Annexation.**

- A. If any rights of way covered by this Franchise are incorporated into the limits of any city or town, this Franchise shall terminate as to any rights of way within the corporate limits of such city or town; but this Franchise shall continue as to County rights of way not incorporated into a city or town.
- B. If, pursuant to Article XI § 3 of the Washington Constitution, territory is stricken or taken from the County and a new county is established from the territory taken from the County, this Franchise shall terminate as to any rights of way within the territory so taken to establish the new county; but this Franchise shall continue as to County rights of way not taken from the County.

**4.10 Service of Notice.** Except as provided herein, any notices required or permitted to be given under this Franchise shall be deemed properly served when deposited with the United States Postal Service, postage paid, addressed to the party to receive same.

Notice to the County shall be sent to:

Lewis County Public Works Department  
Real Estate Services Division  
2025 NE Kresky Avenue  
Chehalis, WA 98532

Notice to Grantee shall be sent to:

PUD No. 1 of Thurston County  
1230 Ruddell Rd  
Lacey, WA 98503

Grantee shall promptly notify the County of any change in notice address.

**4.11 Open Records.** The County, including the County's Auditor or his/her authorized representative, shall have access to, and the right to inspect, any books and records of Grantee, its parent corporations and affiliates which are reasonably related to the administration or enforcement of the terms of this Franchise. The County may, in writing, request copies of any such records or books and Grantee shall provide such copies within thirty (30) days of the transmittal of such request. One (1) copy of all reports and records required under this or any other subsection shall be furnished to the County, at the sole expense of Grantee.

**4.12 Severability.** The parties understand and agree that if a court holds any part, term, or provision of this Franchise to be illegal or invalid in whole or in part, the validity of the remaining provisions shall not be affected, and the parties' rights and obligations shall be construed and enforced as if the Franchise did not contain the particular invalid provision. Should the County determine that the severed portions substantially alter the Franchise so that the original intent and purpose of this Franchise no longer exists, the County may, at its sole discretion, terminate this Franchise without cost or penalty.

**4.13 Remedies.** All remedies and penalties under this Franchise, including termination of this Franchise, are cumulative, and the recovery or enforcement of one is not a bar to the recovery or enforcement of any other such remedy or penalty. The remedies and penalties contained in this Franchise, including termination of this Franchise, are not exclusive, and the County reserves the right to enforce the provisions of any ordinance or resolution and to avail itself of any and all remedies available at law or in equity.

**4.14 Nonwaiver of Rights.** The County and Grantee agree that the excuse or forgiveness of performance, or waiver of any provision(s) of this Franchise, does not constitute a waiver of such provision(s) or future performance, or prejudice the right of the waiving party to enforce any of the provisions of this Franchise at a subsequent time.

**4.15 Choice of Law.** This Franchise has been and shall be construed as having been made and delivered within the State of Washington, and it is agreed by each party hereto that this Franchise shall be governed by the laws of the State of Washington, both as to its interpretation and performance.

**4.16 Jurisdiction.** Any action at law, suit in equity, or judicial proceeding arising out of

this Franchise shall be instituted and maintained only in any of the courts of competent jurisdiction in Lewis County, Washington.

**4.17 Context.** When consistent with the context, words used in the present tense include the future tense, words in the plural number include the singular number, and words in the singular number include the plural number.

**4.18 Entire Agreement.** The parties agree that this Franchise is the complete expression of the terms and conditions hereunder, and supersedes all prior agreements or proposals except as specifically set forth herein. Any oral or written representations or understandings not incorporated herein are specifically excluded. This Franchise is executed in duplicate originals and executed by the persons signing below who warrant that they have the authority to execute this Franchise.

**4.19 Familiarity with Franchise.** The Grantee acknowledges and warrants by acceptance of the rights, privileges and agreements granted herein, that it has carefully read and fully comprehends the terms and conditions of this Franchise and is willing to and does accept all lawful and reasonable risks of the meaning of the provisions, terms and conditions herein.

**4.20 Acceptance.** Within thirty (30) days after adoption of this Franchise by the Board, this Franchise may be accepted by Grantee by executing this Franchise in duplicate, filing it with the Clerk of the Board, and paying publication costs set out in Sec. 4.1 of this Franchise. Further, the executed Franchise shall be returned accompanied by the required evidence of insurance as provided in Sec. 3.3 of this Franchise, the Financial Security as provided in Sec. 3.1 of this Franchise. In the event Grantee fails to accept this Franchise or fails to comply with all conditions of acceptance as set forth herein within thirty (30) days after adoption by the Board, this Franchise shall be null and void.

ACCEPTED by Grantee this 30th day of November, 2020

ACCEPTANCE:

BOARD OF COMMISSIONERS  
for Lewis County, Washington

John Weidenfeller  
Grantee

Gary Stamper  
Gary Stamper, Chair

By: John Weidenfeller  
(Authorized Signatory & Representative)

Edna J. Fund  
Edna J. Fund, Vice Chair

Its: General Manager

Robert C. Jackson  
Robert C. Jackson, Commissioner

ATTEST:

Rieva Lester  
Rieva Lester, Clerk of the Lewis County  
Board of County Commissioners

APPROVED AS TO FORM:  
Jonathan L. Meyer, Prosecuting Attorney



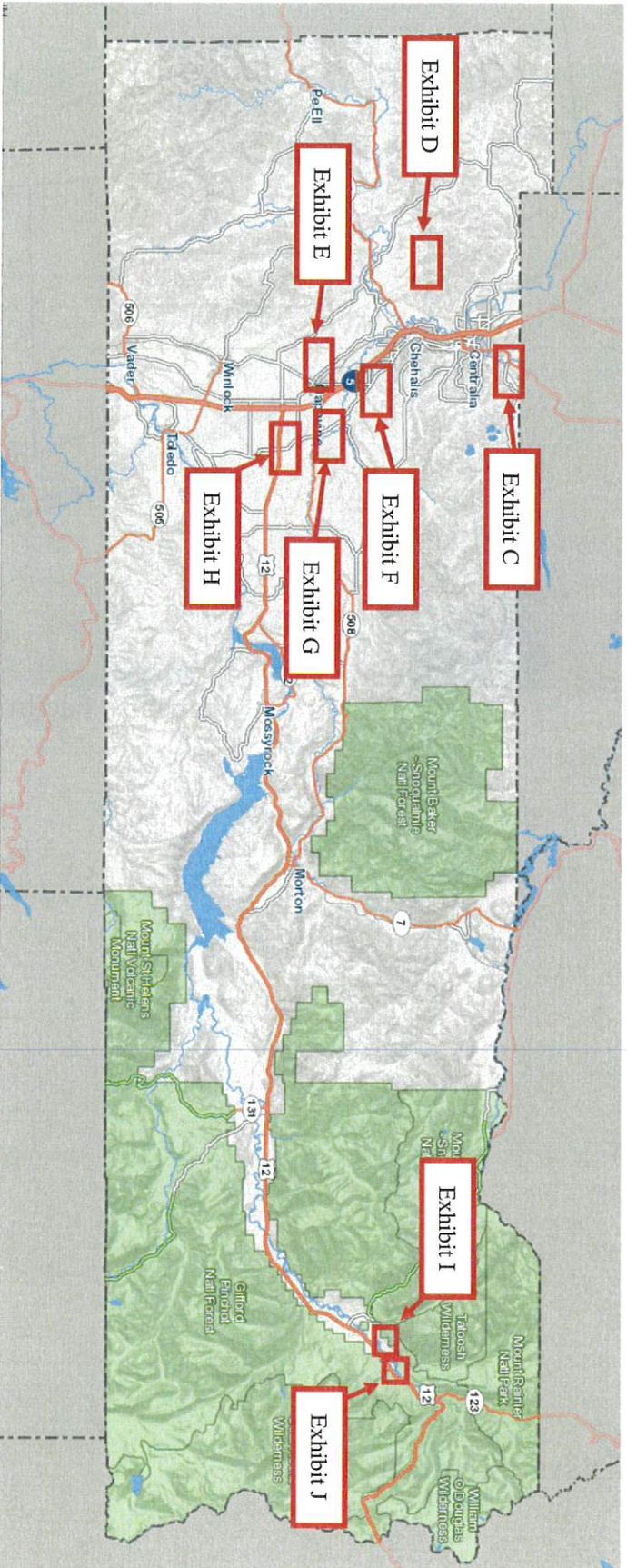
By: Jonathan L. Meyer  
Civil Deputy

## Exhibit A

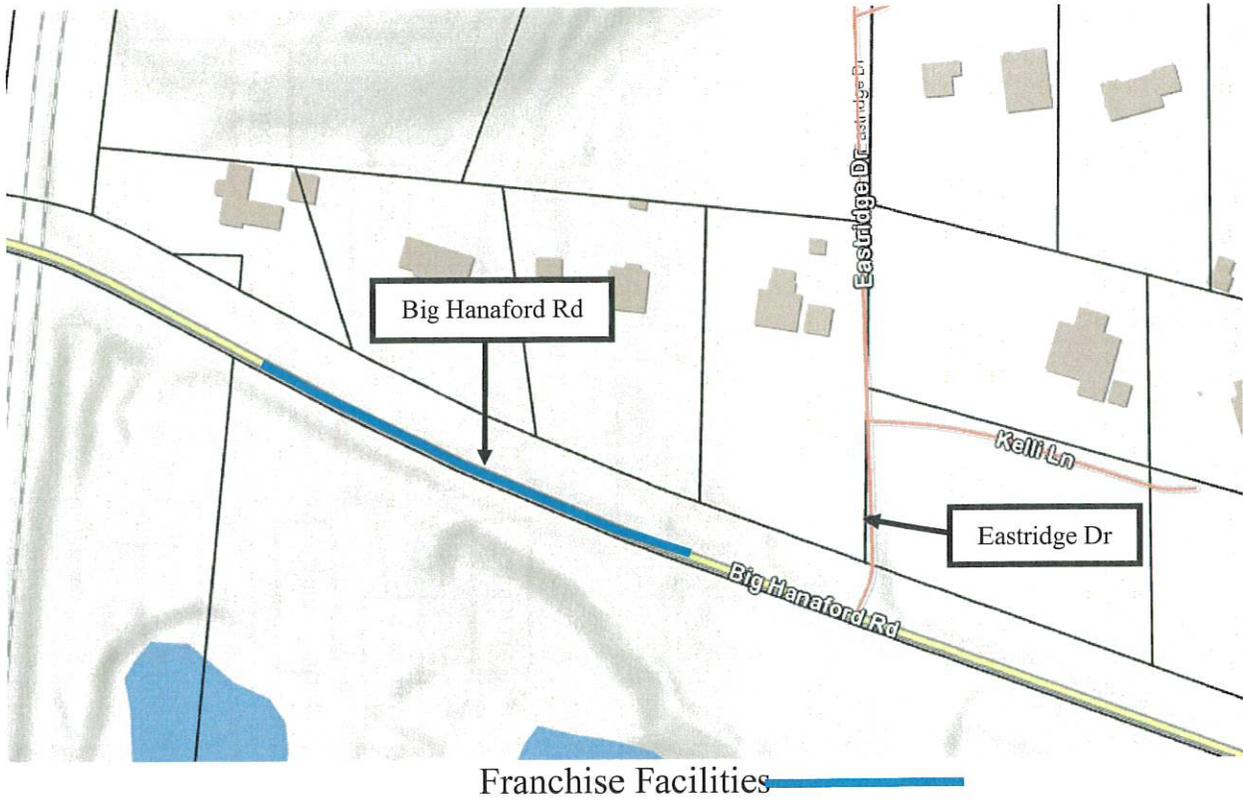
### Lewis County Roads Used by Thurston PUD Water Systems

ThPUD Sys. #	System Name	Address	Portion of County Road
202	4199-A	4199 Jackson Highway	East side Jackson Hwy, starting at Post Ln and going north about 450 feet
208	Brockway #1	106 Walsh Ln	From about 200 to 1200 feet north of Brockway Rd centerline, east side Walsh Lane
210	Aust	2557 Jackson Hwy	On Chehalis Valley Drive
240	Valley Meadows S01-S04	Valley Meadows Drive and Loop	Valley Meadows Drive and Valley Meadows Loop
287 288 289	Brookhaven 1 Brookhaven 2 Brookhaven 3	Romerman Rd	From 200 feet East of Karen Court to Clear View Circle
344	Eastridge West	133 Big Hanaford Rd	North side Big Hanaford Rd, from about 160 feet northwest of Eastridge Drive to about 600 feet northwest of Eastridge Drive.
501 502 503 504 512 513	Raven Maple Bear Cougar Hemlock Eagle	Jack Fir Ct E	Along Jack Fir Ct W, 175 feet west of Hemlock Ln and all of Jack Fir Ct E Also Hemlock Ln and east from Hemlock Ln along Alderwood Dr. continuing onto Cottonwood Ln and 200 feet east along Cannon Rd from Cottonwood Ln.
628	Timberline Village	Timberline Dr.	Timberline Dr., Timberline Dr. W, Cedar Rd., Cottonwood Rd., Cascade Dr., Ponderosa Rd., Bearfoot Rd., Elkhorn Trail, Coal Creek Dr., Trails End Rd. Also, Forest Ridge Dr., Forest Lane, Alderwood Lane, View Ridge Lane, Hemlock Lane, Timber Trail, Huckleberry Lane, Loop Lane, Deer Park Lane, Fir Park Lane, and Long Branch Lane.

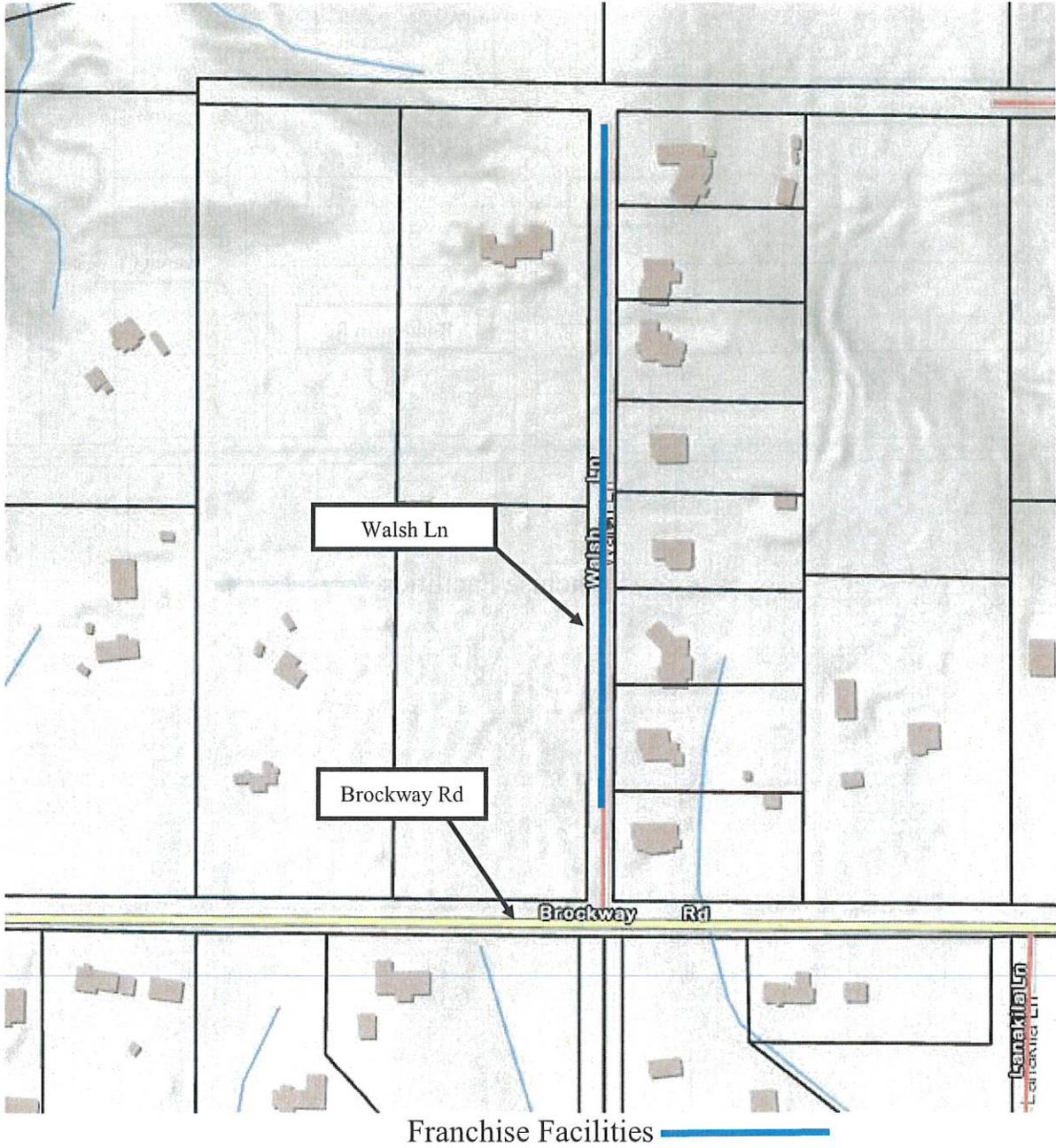
**Exhibit B**



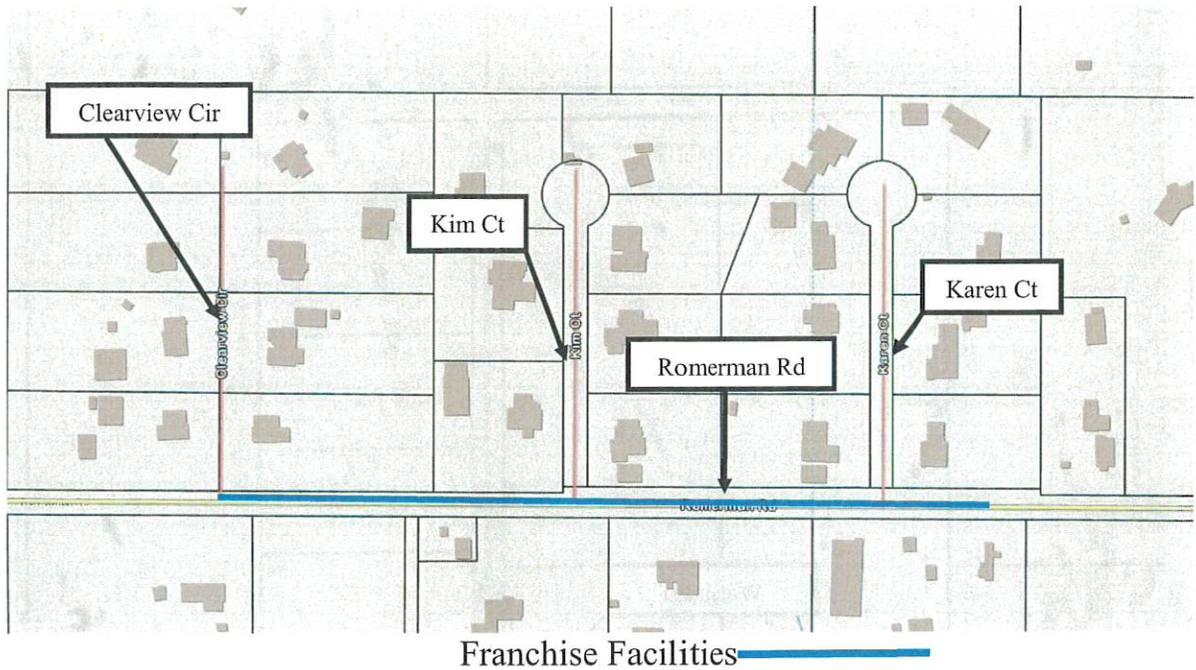
# Exhibit C



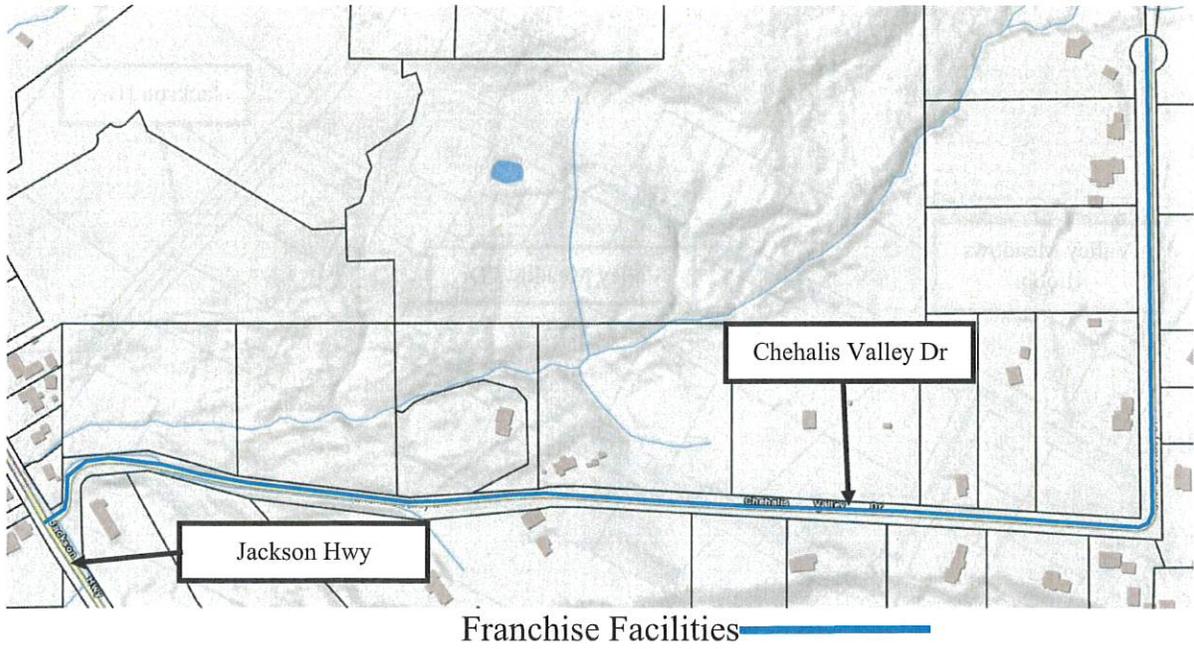
# Exhibit D



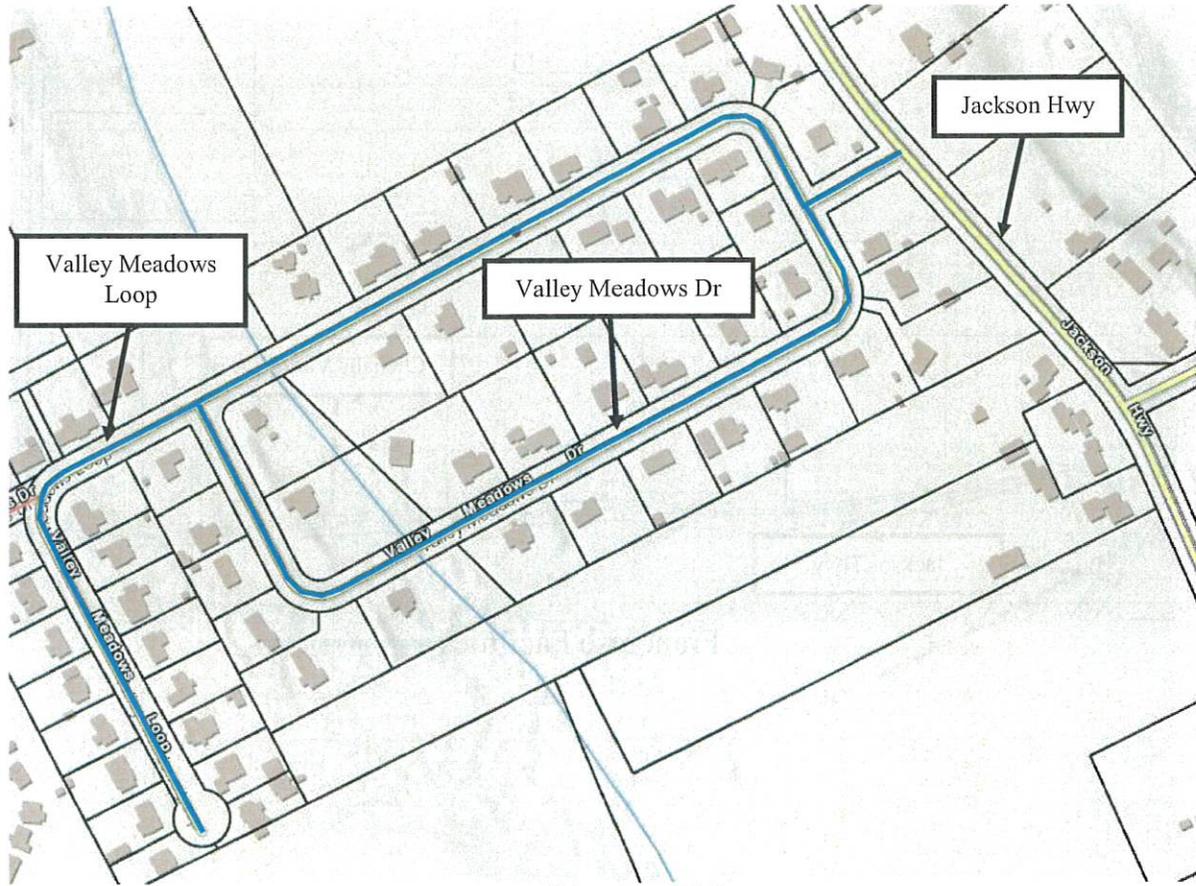
# Exhibit E



## Exhibit F

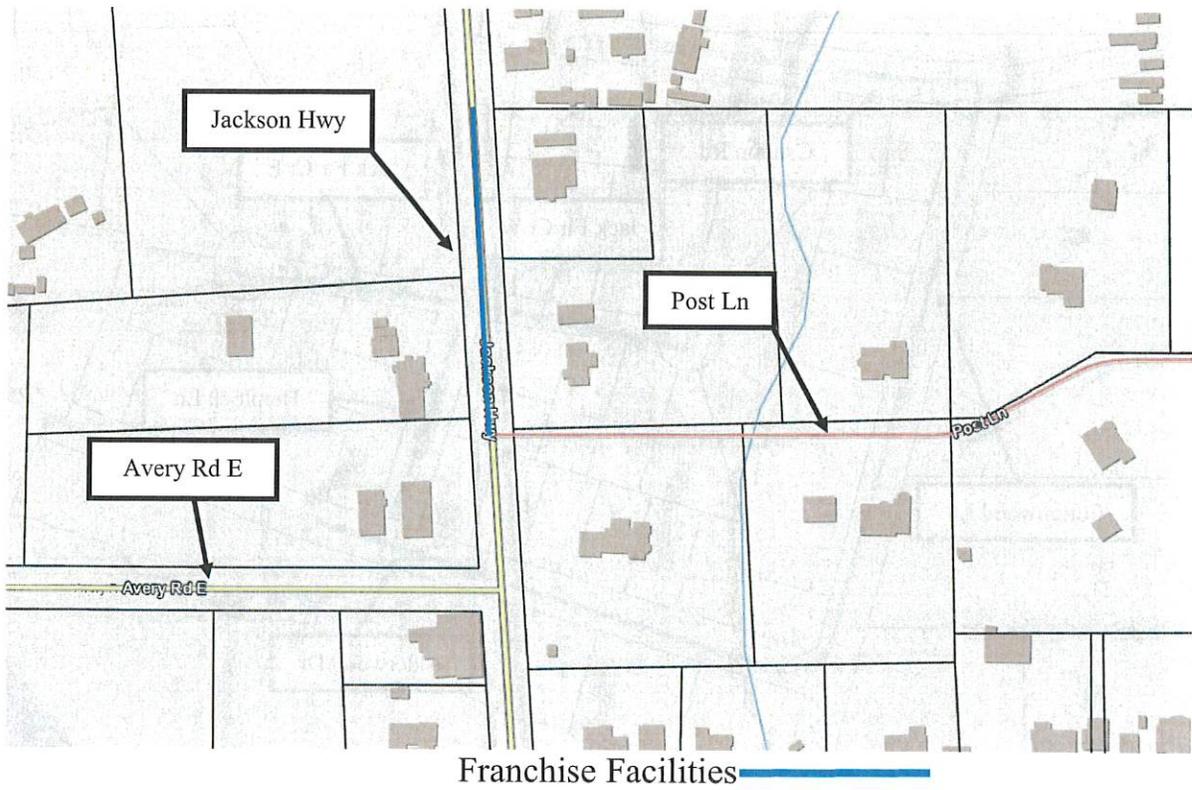


## Exhibit G

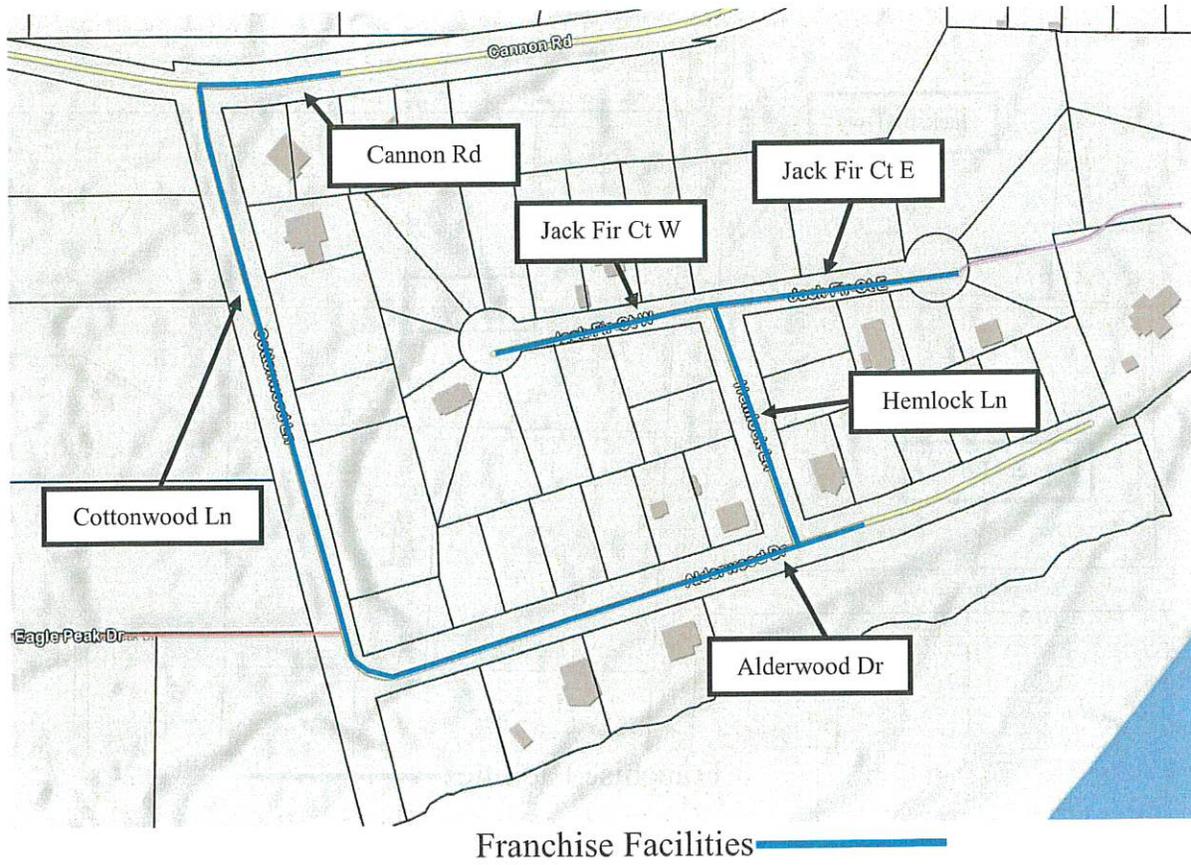


Franchise Facilities 

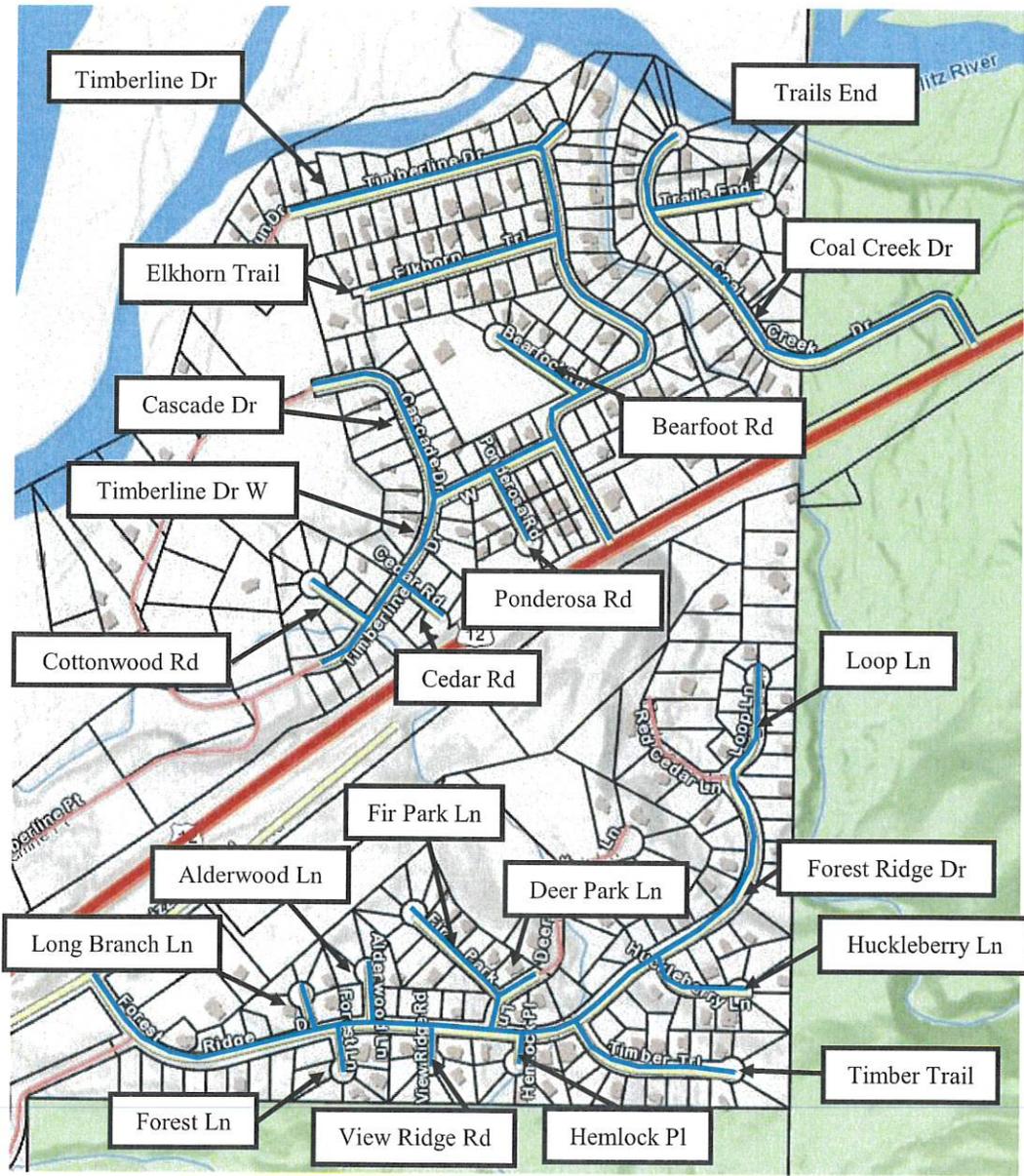
## Exhibit H



# Exhibit I



# Exhibit J



Franchise Facilities

# Appendix F Intertie Agreements

Water System Plan – Part A

**AGREEMENT**  
**Mutual Aid Agreement Between the Public Utility District No. 1 of  
Thurston County and the City of Olympia**  
**For the Use of Emergency Water System Interties**

THIS AGREEMENT is made and entered into this 18 day of August, 2015 by and between the Public Utility District No. 1 of Thurston County, a public utility district of the State of Washington organized under Title 54 RCW, hereinafter referred to as "Thurston PUD," and the City of Olympia, a municipal corporation of the State of Washington, hereinafter referred to as "Olympia", collectively hereinafter referred to as the "parties".

WHEREAS, the purpose of the pre-emergency agreement between the parties is to provide for immediate assistance and coordinated interconnection of the respective potable water system of each city with the other to protect life and property; and

WHEREAS, this Agreement is authorized under chapter 39.34 RCW, WAC 246-290-135, RCW 54.16.090, and RCW 90.03.390; and

WHEREAS, the signatory public entity asking for assistance shall herein be referred to as the "Requesting Agency"; and

WHEREAS, the signatory public entity agreeing to assist another signatory city asking for assistance shall herein be referred to as the "Responding Agency;" and

WHEREAS, it is necessary and desirable that this Agreement be executed for the exchange of mutually beneficial services; and

WHEREAS, this Agreement is consistent with the Thurston County Coordinated Water System Plan and the North Thurston County Coordinated Water System Plan Area-Wide Supplement;

NOW, THEREFORE, the parties agree to this Agreement as follows:

**I. SPECIFIC CONDITIONS**

1. Each signatory to this Agreement agrees in a proclaimed emergency, as defined by RCW 38.52.010(6)(a), to provide potable water service to the Requesting Agency for use in fire fighting, drinking water, and personal hygiene. The emergency will be proclaimed by a public official from both jurisdictions. The City Manager, Public Works Director, City Engineer, Water Resources Manager, General Manager, or Operations Manager (or

their designees) of either public entity or jurisdiction shall proclaim that such emergency exists.

2. Water will be provided whenever there is a jointly declared emergency, but the water use will never exceed water rights (unless permitted by law or by the Department of Ecology), taking into consideration water stored in reservoirs. Washington Department of Health requirements for minimum water storage and minimum water line pressures will also be maintained (unless permitted by law or the Department of Health). There are no seasonal or other restrictions other than those provided by this agreement. Except as otherwise provided by this agreement, there are no additional water conservation programs, data collection, water demand forecasting, and other operational matters required by this agreement.
3. The aforementioned potable water service shall be supplied through an emergency water system intertie located at Location A (Exhibit A).
4. Activation of said interties shall be coordinated and administered by the Requesting and Responding Agencies' Public Works Departments or Operations Division.
5. No emergency intertie activation shall take place without a representative from the Responding and Requesting Agencies present at the intertie location at the time of activation.
6. The purpose of this Agreement is for the mutual benefit; therefore, there shall be no service charge for water service provided for short-term emergencies, defined as the service of water for seventy-two (72) hours or less.
7. For a period greater than seventy-two (72) hours, the Requesting Agency shall be billed for the actual cost incurred (e.g., pumping, chemical and staffing costs, etc.) to provide water based on a methodology from the Responding Agency.
8. The Requesting Agency shall, to the extent feasible, implement conservation measures that restrict non-emergency water consumption to levels that will not impinge on water service levels necessary to protect health and safety, and to meet the reasonable expectations of the customers of the Responding Agency.
9. The Responding Agency shall retain the right to deny or withdraw some or all of its resources at any time should assistance to the Requesting Agency

impinge on the protection of property and life in the Responding Agency's jurisdiction, as determined by the Responding Agency.

10. In addition to financial provisions identified in items 5, 6, and 7 above, it is hereby understood that for services provided beyond a seventy-two (72) hour period, the Responding Agency shall be reimbursed (e.g., labor, equipment, materials, and other related expenses as applicable, including loss or damage to equipment) at its adopted usual and customary rates. The Responding Agency shall submit an itemized voucher of costs to the Public Works Director of the Requesting Agency, or General Manager, with sixty (60) days after completion of work (RCW 38.52.080). Unless otherwise agreed, the Responding Agency shall receive reimbursement within ninety (90) days after the voucher submittal date.

## II. INTERLOCAL ELEMENTS:

1. Duration. This agreement shall be "on-going" until terminated by the parties as provided by paragraph 6 of this section.
2. No separate legal entity is created by this agreement.
3. No joint organization whatsoever is created.
4. No common budget is to be established.
5. No personal or real property is to be jointly acquired.
6. This Mutual Aid Agreement shall be effective immediately upon signature by both parties and shall remain in effect indefinitely, unless terminated by either:
  - A. Unilateral written notice by one party to the other that it intends to withdraw from this Agreement, in which case the termination will be effective immediately, unless otherwise specified, or
  - B. Written agreement signed by both parties, in which case the termination shall be effective immediately upon signature by both parties, unless another termination date, mutually agreed to by both parties, is specified.
7. The Contract Administrator for the City shall be the Olympia Water Resources Director. The Contract Administrator for Thurston PUD shall be the Thurston PUD's Chief Financial Officer.
8. This agreement shall be recorded with the Thurston County Auditor's Office prior to being effective, or, alternatively, listed by subject on each respective public agency's web site or other electronically retrievable public source, and in accordance with the requirements of RCW 39.34.040.

9. Each party shall be responsible for its own finances and for its own personal and real property.

### III. GENERAL CONDITIONS

1. All lawsuits whatsoever in regards to this agreement shall be brought in Thurston County Superior Court. The governing law shall be laws of Washington State.

2. All notices with regard to this agreement shall be sent in addition to any other legal requirement to:

City of Olympia:

City of Olympia Public Works  
Attention: Andy Haub, P.E., Water Resources Director  
PO Box 1967  
Olympia, WA 98507

Thurston PUD:

Thurston PUD  
Attention: John Weidenfeller, General Manager  
921 Lakeridge Way SW, Suite 301  
Olympia, WA 98502

THURSTON PUD:

By:   
General Manager

CITY OF OLYMPIA

By:   
City Manager

ATTEST:

By:   
Clerk

By:   
City Clerk

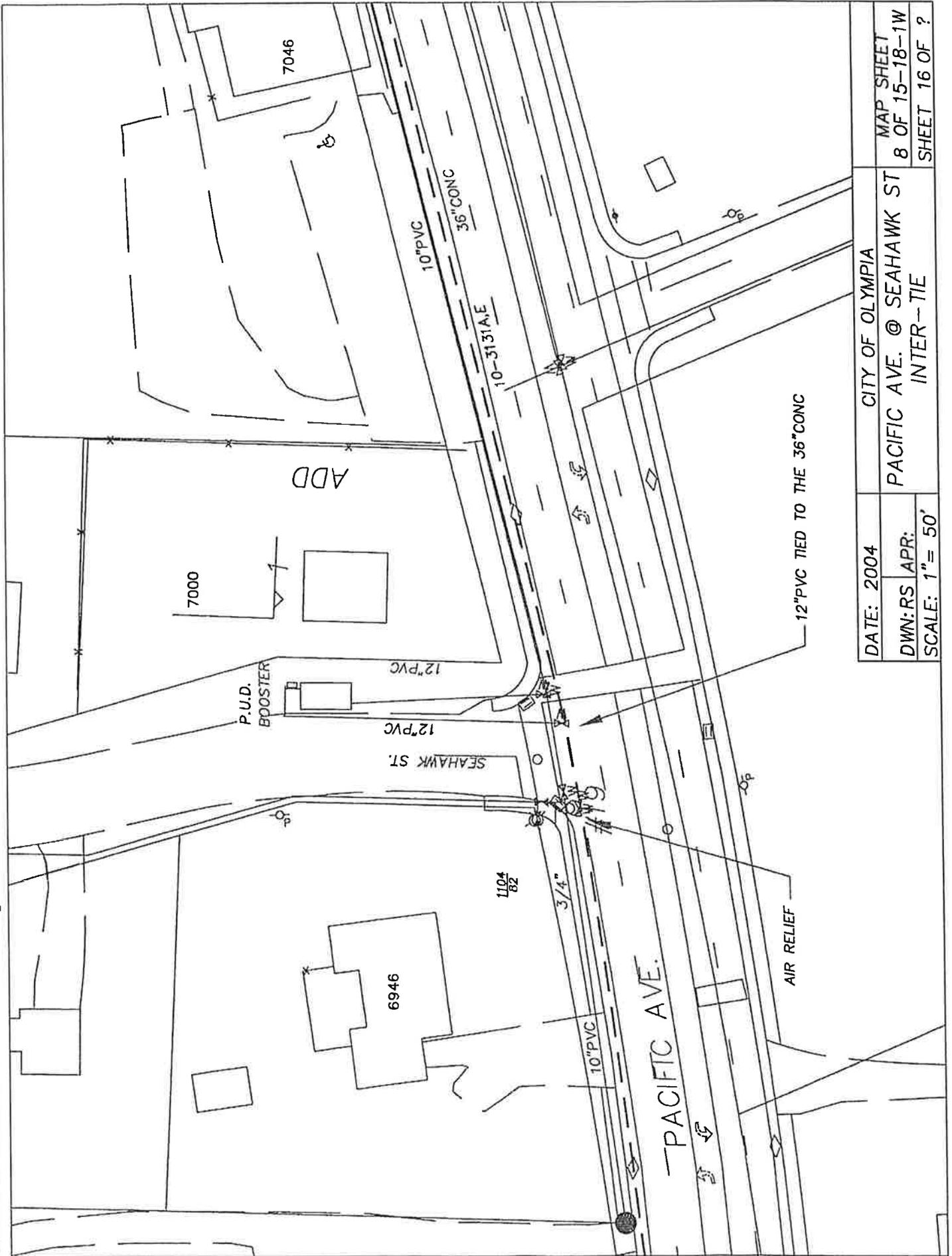
APPROVED AS TO FORM:

By:   
General Counsel

By:   
Deputy City Attorney

Exhibit A – Intertie at Seahawk Street

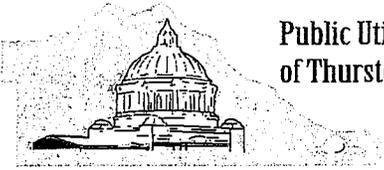
Resolution 15-12 Exhibit A - Seahawk Pump Station



DATE: 2004	CITY OF OLYMPIA	MAP SHEET
DWN:RS APR:	PACIFIC AVE. @ SEAHAWK ST	8 OF 15-18-1W
SCALE: 1" = 50'	INTER-TIE	SHEET 16 OF ?

Covington #212

Commissioners  
Linda Oosterman – District 1  
Russell E. Olsen – District 2  
Chris Stearns – District 3



Public Utility District No. 1  
of Thurston County

October 23, 2013

Carol Litten, CMC  
City Clerk  
City of Lacey  
420 College Street NE  
Lacey, WA 98503

Subject: WHOLESale WATER SUPPLY AGREEMENT EXECUTED CONTRACT

Dear Ms. Litten,

Thank you for your assistance in expediting this Wholesale Water Supply Agreement between the City and the PUD. Your help is greatly appreciated.

Enclosed, find a fully executed Wholesale Water Supply Agreement between the City of Lacey and Thurston PUD. The PUD's Board of Commissioners approved this agreement last night in Resolution 13-32.

If you have any questions, don't hesitate to contact me at [jweidenfeller@thurstonpud.org](mailto:jweidenfeller@thurstonpud.org) or by phone at 357-8783. Again, we appreciate your help and the assistance of the City of Lacey in resolving this public health issue.

Sincerely,

A handwritten signature in cursive script that reads "John Weidenfeller".

John Weidenfeller  
General Manager

Enclosures: (1)

WHOLESALE WATER SUPPLY AGREEMENT  
BETWEEN THE CITY OF LACEY AND PUBLIC UTILITY DISTRICT NO. 1 OF  
THURSTON COUNTY

THIS AGREEMENT is made and entered into by and between the CITY OF LACEY, a municipal corporation of the State of Washington, hereinafter referred to as "City", and the PUBLIC UTILITY DISTRICT NO. 1 OF THURSTON COUNTY, a municipal corporation of the State of Washington, hereinafter referred to as "PUD" (individually, a "Party," collectively, the "Parties").

IT IS MUTUALLY AGREED AS FOLLOWS:

WHEREAS, the City and the PUD each own and operate water systems; and

WHEREAS, the PUD owns and operates the Covington 212 Group A public water supply system, identified by the State of Washington Department of Health ("DOH") ID #02050 (the "Covington Water System"), which water system currently has an arsenic level that exceeds the federal maximum daily allowable level and the PUD has been ordered by DOH to mitigate the problem by no later than October 2013; and

WHEREAS, the City owns and operates a municipal water supply system, identified by DOH ID #43500 (the "Lacey Water System"), which water system's service area is located immediately adjacent to the Covington Water System; and

WHEREAS, the City owns sufficient water rights and authorization to supply water to the PUD and the Covington Water System from the Lacey Water System; and

WHEREAS, the City can provide and is willing to provide and sell wholesale water on a permanent basis to the PUD to serve the Covington Water System and its customers, upon the terms and conditions set forth herein; and

WHEREAS, the PUD is willing to pay the City for the wholesale supply of water necessary to serve the Covington Water System and its customers, upon the terms and conditions set forth herein; and

WHEREAS, the DOH Office of Drinking Water has directed that an intertie agreement be made prior to the City providing water necessary for the aforementioned purpose, and

NOW, THEREFORE, IT IS MUTUALLY AGREED as follows:

1. The City agrees to sell to the PUD and the PUD agrees to purchase from the City wholesale water supply, and the Parties agree to establish an intertie between their respective water systems, in accordance with the terms and conditions of this Agreement.

2. The City hereby grants to the PUD the right to connect to the City's water meter at the corner of Covington Ct. NE and Mark St. NE, and the City shall supply water to the PUD's Covington Water System, in accordance with the terms and conditions of this Agreement. The PUD shall purchase, install and maintain ownership of a double check backflow device installed after the meter and related appurtenances (the "Intertie"). The PUD shall also demonstrate to the satisfaction of the City that the PUD well, which previously served the Covington Water System, has been disconnected from that system. The PUD shall keep that well, and any other wells, disconnected from the Covington Water System for as long as the PUD receives water from the City.

3. The PUD shall comply with all City policies and rules relating to connection to the Lacey Water System including, but not limited to, the City's written approval of plans and specifications for the connection prior to construction.

4. The Intertie described herein will include a water meter for the purpose of metering consumption by the PUD under this Agreement. All water provided by the City to the PUD shall be metered through a meter owned by the City. The City shall maintain and read the meter for billing purposes under this Agreement. Both Parties shall have access to the meter for reading purposes and the PUD shall have access to the City's meter maintenance records, upon request.

5. This Agreement authorizes and permits the PUD to take water from the Intertie connection for the use of residential consumption for the Covington Water System.

6. The quality of water supplied by the City to the PUD under this Agreement shall meet or exceed all applicable federal and state laws, rules, and regulations governing potable water supply for Group A water systems.

7. For all water supplied by the City to the PUD under this Agreement, the PUD shall pay to the City on a monthly basis based on the City's residential out-of-city rate schedule (LMC 13.32.030 (B)), times the number of active connections the PUD is serving. See Attachment A for the 2013 – 2017 rate schedules.

8. The City's supply of water to the PUD through the Intertie under this Agreement may be temporarily interrupted for purposes of making repairs, or doing other necessary work. Except in the case of emergencies, before interrupting the use of water, the City shall provide the PUD two weeks advance written notice. In the event of an emergency, the City shall notify the PUD of the need for immediate supply interruption as soon as reasonably practicable. The City shall make a good faith effort to perform routine maintenance when system usage is at its lowest. Neither party shall be responsible for any damages resulting from the reasonable interruption of the water supply, and the City or PUD

each agree to save and hold harmless each other from any loss, damages, or suits to or by its customers resulting from the interruption of water supply provided by this Agreement, except for any loss, damages, or suits arising out of their own respective negligence.

9. Payment of written invoices, as applicable, will become due and payable in full within twenty five (25) calendar days of their receipt of same. Failure to pay within the time period shall result in the billing being deemed delinquent, and the City may add a 7.5 percent penalty to delinquent accounts. If the City imposes the penalty, it shall mail a notice of penalty to the PUD. If payment of all delinquent utility charges and penalties is not received by the city within nineteen days after the due date, water services to the premises shall be discontinued. After water services have been shut off because of a delinquency in paying utility charges, service shall not be resumed until all charges, penalties and service fees have been paid. Service fees shall include a fee for each service trip which has been made to the premises relative to the delinquent charges at rates established by resolution of the city council.

10. Notices. Any notices required to be given by the Parties shall be delivered at the addresses set forth below. Any notices may be delivered personally to the addressee of the notice or may be deposited in the United States mail, postage prepaid, to the address set forth below. Any notice so posted in the United States mail shall be deemed received three (3) days after the date of mailing.

To the Public Utility District No. 1 of Thurston County:

Public Utility District No. 1 of Thurston County  
Attn: General Manager  
921 Lakeridge Way SW, Suite 301  
Olympia, WA 98502

To the City of Lacey:

Contract Administrator for the City of Lacey  
Attn: Water Resources Manager  
P.O. Box 3400  
Lacey, WA 98509-3400

11. Effective Date and Termination. This Agreement shall become effective as of the date of mutual execution, and shall run for a term of approximately ten (10) years, through December 31, 2023, and shall be automatically renewable without notice for successive five (5) year terms thereafter, unless earlier terminated by agreement of the Parties or in accordance with the terms of this paragraph. The PUD shall have the right to terminate this Agreement upon the provision of one-year advance written notice to the City. Following the termination of the original 10-year term, the City shall have the right to terminate this Agreement by providing two-year advance written notice of intent to discontinue service.

12. Indemnification. Each of the Parties shall indemnify, defend, and hold the other Party harmless from any loss, claim, damages, or liability, arising out of the negligent or tortuous actions or omissions of the indemnifying Party, or its elected officials, officers, employees, or agents, including the reasonable costs of defense counsel of the indemnified party's own choosing. Liability shall be apportioned among the Parties and other third parties in accordance with the laws of the State of Washington. This Section 12 shall survive expiration or termination of this Agreement.

13. Full Force and Effect; Severability. Any provision of this Agreement that is declared invalid or illegal shall in no way affect or invalidate any other provision hereof and such other provisions shall remain in full force and effect. Further, if it should appear that any provision hereof is in conflict with any statutory provision of the State of Washington, the provision appears to conflict therewith shall be deemed inoperative and null and void insofar as it may be in conflict therewith, and shall be deemed modified to conform to such statutory provision.

14. Dispute Resolution. In the event of a dispute arising out of or related to this Agreement, or the breach or alleged breach hereof, which dispute cannot be resolved through negotiations between the Parties, the Parties agree that the dispute shall initially be submitted to mediation. The Parties shall mutually agree on a mediator. In the event they are unable to do so, a mediator shall be chosen by the Thurston County Superior Court Presiding Judge. Either Party may make the initial submission. Each Party shall pay its own costs (including, if applicable, its attorney and expert witness costs) and one-half of the charge levied by the mediator. If any dispute is not resolved through mediation, the resort shall then be to litigation, and jurisdiction and venue shall be in the Superior Court of Thurston County, State of Washington. Jurisdiction and venue as set forth shall be exclusive.

15. General Provisions.

- A. No separate legal entity is created by this Agreement.
- B. No joint organization whatsoever is created.
- C. No common budget is to be established.
- D. No personal or real property is to be jointly acquired or held.
- E. This Agreement may be recorded with the Thurston County Auditor's Office.
- F. Each Party shall be responsible for its own finances and for its own personal and real property.
- G. PUD will retain responsibility for management, maintenance and repairs of infrastructure on their side of the meter, including water use

efficiency requirements and all water system monitoring requirements within the Covington Water System (water system #02050). The City will not perform distribution system testing for coliforms, THMs, or lead and copper in the Covington Water System.

H. The PUD and the City will coordinate on sampling protocol as needed to comply with the Groundwater Rule. Specifically, if the PUD has a failing water sample in the Covington Water System, the PUD must promptly notify the City so, it can perform the required source sampling on its system.

I. The City makes no representation as to the adequacy of this service arrangement for fire flows. It is the responsibility of the PUD to assure that any fire suppression criteria for the Covington Water System are met.

16. Captions. The respective captions of the Sections of this Agreement are inserted for convenience of reference only and shall not be deemed to modify or otherwise affect any of the provisions of this Agreement.

17. Equal Opportunity to Draft. The Parties have participated and had an equal opportunity to participate in the drafting of this Agreement, and the Exhibits, if any, attached. No ambiguity shall be construed against any Party upon a claim that that party drafted the ambiguous language.

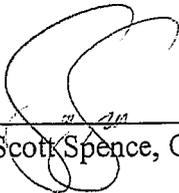
18. Authority. Each individual executing this Agreement on behalf of the City and the PUD represents and warrants that such individuals are duly authorized to execute and deliver this Agreement on behalf of the City and the PUD.

IN WITNESS WHEREOF, the authorized representatives of the Parties have duly executed this Agreement as of the date(s) set forth below.

CITY OF LACEY

PUBLIC UTILITY DISTRICT NO. 1 OF  
THURSTON COUNTY

By:



Scott Spence, City Manager

By:



John Weidenfeller, General Manager

Date:

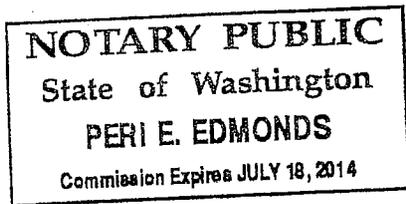
10/10/2013

Date:

10/23/13

STATE OF WASHINGTON )  
 ) ss.  
COUNTY OF THURSTON )

I certify that I know or have satisfactory evidence that **Scott Spence** is the person who appeared before me, and said person acknowledged that he/she signed this instrument and on oath stated he/she was authorized to execute the instrument and acknowledged it as the **[City Manager of the City of Lacey]**, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.



Peri Edmonds  
(Signature of Notary)  
NOTARY PUBLIC in and for the State  
of Washington, residing at Thurston County  
My appointment expires: 7-18-14



Attachment A

The monthly base rate and monthly consumption rate for each one hundred cubic feet of water consumed by the Thurston PUD customers in Covington during the years 2013 through 2017 shall be as follows:

<b>Out-of-City Rates x 15 connections</b>	<b>2013 Rates</b>	<b>2014 Rates</b>	<b>2015 Rates</b>	<b>2016 Rates</b>	<b>2017 Rates</b>
Base Rate	\$212.85	\$226.65	\$241.35	\$257.10	\$273.75
1st 9,000 c.f.	\$1.18	\$1.26	\$1.34	\$1.43	\$1.52
9,001 – 18,000 c.f.	\$2.77	\$2.95	\$3.14	\$3.35	\$3.57
18,001 – 36,000 c.f.	\$3.54	\$3.77	\$4.02	\$4.28	\$4.56
Over 36,000 c.f.	\$4.73	\$5.04	\$5.37	\$5.71	\$6.09

**SPANAWAY WATER COMPANY, Inc.**  
**POST OFFICE BOX 1000**  
**SPANAWAY, WASHINGTON 98387-1000**

**18413 'B' STREET EAST**  
**(253) 531-9024**

**EMERGENCY WATER SERVICE AGREEMENT**

Spanaway Water Company (SWC) agrees to provide an emergency water service connection to the property described below subject to the conditions and terms contained herein. This agreement is intended to update and replace any existing agreements.

**Thurston PUD – Crescent Park Water System**

**This Emergency Water Service Agreement provides for the supply of water from the Spanaway Water Company to the Thurston PUD Crescent Park Water System on an emergency basis for: 1) fire fighting water supply of up to 750 gallons per minute; and, 2) emergency domestic supply during power outages or short term repair of the Crescent Park Water System.**

**This emergency water supply IS NOT to provide additional water supply to meet the Crescent Park Water System normal or peaking water demands, or to provide supply to maintain water pressure to the Crescent Park Water System during such normal or peaking demands.**

**The availability of Spanaway Water Company emergency water supply is secondary to the water supply demands of Spanaway Water Company customers. However, Spanaway Water Company will provide emergency water supply, as agreed to herein, to the Crescent Park Water System in the same manner and level of service as provided the customers of Spanaway Water Company.**

- A. As approval by Pierce County and the Washington State Department of Health, Spanaway Water Company permitted the installation of a six-inch water meter and automatic control valve and two six-inch isolation valves by Thurston PUD on the Thurston PUD's water main between Spanaway Water Company's distribution system and the first connection within the Thurston PUD system. The emergency intertie is constructed on the north side of the 192<sup>nd</sup> Street East right-of-way just east of 12<sup>th</sup> Avenue East.
- B. Thurston PUD retains ownership of the Crescent Park emergency intertie.
- C. The maintenance and operation of all plumbing, fixtures, meters, control valves, pipes, is the responsibility of Thurston PUD.
- D. Spanaway Water Company shall not be liable for any damages of any kind that may result from: 1) any increased water pressure within the Crescent Park water system as a result of the utilization of this emergency intertie; or 2) Spanaway Water Company's inability to provide emergency water supply.

8/20/2010

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- E. Spanaway Water Company shall have sole control of the Spanaway Water Company valve supplying the emergency intertie connection from the Spanaway Water Company distribution system. This valve shall remain open under normal and emergency conditions subject to the terms of this agreement.
- F. Thurston PUD agrees to notify Spanaway Water Company within one business day of any known use of the emergency intertie. The non-authorized use of the emergency water service may result in immediate termination of the emergency water connection.
- G. The monthly billing for the emergency intertie connection shall be the same as rate charged for a fire supply line as established by the Spanaway water company Board of Directors. Emergency interties (fire protection systems, etc) are currently billed at a rate of \$3.00 per inch of nominal pipe diameter per month. The current emergency intertie connection provided for Crescent Park will be billed at \$18.00 per month. This price quotation for water usage is valid for one year after the date of this agreement. Spanaway Water Company reserves the right to revise these fees and usage rates to be consistent with the most current adopted Spanaway Water Company system wide fee rates. For the year 2010 actual water usage will be billed at the following rates:
- |                        |                        |
|------------------------|------------------------|
| \$ .70/100 cubic feet  | 0-500 cubic feet       |
| \$ 1.00/100 cubic feet | 500-1,500 cubic feet   |
| \$ 1.25/100 cubic feet | 1,500-2,500 cubic feet |
| \$1.60/100 cubic feet  | 2,500-4,000 cubic feet |
| \$2.05/100 cubic feet  | 4,000-7,500 cubic feet |
| \$2.35/100 cubic feet  | 7,500+ cubic feet      |
- H. In the event payments are not received by the tenth of any month the account will be considered delinquent. Written notice of any delinquency will be mailed to the Thurston PUD the first business day of the month following regular billing. After grace period of not more than forty-five days after the regular billing date, the emergency intertie may be terminated without further notice at any time. Should the emergency intertie service be closed or disconnected at the connection to the Spanaway Water distribution system valve for any reason, the local fire district and Department of Health shall be notified by Spanaway Water of the unavailability of emergency water supply from Spanaway Water Company.
- I. The use of the emergency intertie is limited to twenty calendar days per year not including acts of nature (i.e. power loss). Use beyond twenty days will require written request from the Thurston PUD manager specifying the reason for the request as well as the anticipated duration of the need for emergency water supply. The final decision to grant emergency water service beyond twenty days per year rests solely with Spanaway Water Company and will be based on the source, storage, and system demands experienced by the SWC at that time.
- J. Spanaway Water Company shall be notified within six (6) hours of any and all non-compliant bacteriological test results and within seventy-two (72) hours of any other testing required under the Safe Drinking Water Act that does not comply with those SDWA standards or backflow incidents within the Crescent Park water system. These same notice requirements also apply to Spanaway Water Company. Failure to provide Spanaway Water Company notification of a non-compliant test result or backflow incident within the specified time frame may result in immediate termination of the emergency intertie.

8/20/2010

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Property address or development and responsible party to which the emergency water service installation is to be provided:

Name Crescent Park Water System  
C/O Thurston PUD Operations Manager  
Street 921 Lakeridge Way SW #201  
City Olympia, WA 98502

Billing Address: (if other than water service address)

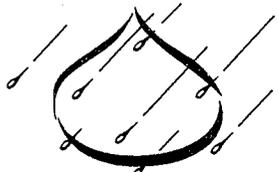
Name \_\_\_\_\_  
Street \_\_\_\_\_  
City \_\_\_\_\_, WA \_\_\_\_\_

The offer of an emergency intertie water service to the Terry Lane Water System by Spanaway Water Company is accepted. The conditions, terms, and fees, stated herein are satisfactory and accepted. Payment will be made in accord with the terms stated above.

By: John Weidenfeller Date: 8-20-10  
(Signature)  
By: John Weidenfeller  
(Print) General Manager  
Thurston PUD

Spanaway Water Company hereby acknowledges receipt of this notice of acceptance and agrees to provide emergency intertie water supply under the conditions, terms, and fees stated herein.

By: Jeffrey N. Johnson Date: 8/20/10  
Jeffrey N. Johnson, Manager  
Spanaway Water Company

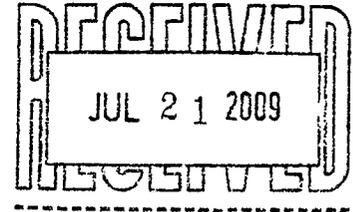


# SPANAWAY WATER COMPANY

P.O. BOX 1000 • SPANAWAY, WA 98387-1000

(253) 531-9024 • Fax (253) 539-9526

Mr. John Weidenfeller  
Thurston County Public Utility District  
921 Lakeridge Way SW, suite 201  
Olympia, WA 98502  
July 20, 2009



Re: Terry Lane Water System  
Emergency intertie connection with Spanaway Water Company

Dear Mr. Weidenfeller:

We are submitting this 'Service Agreement' contract for the re-construction of the emergency intertie connection of the Terry Lane water system to the Spanaway Water Company (SWC) water system.

SWC coordination .....	\$	750.00
SWC inspection and field coordination .....	\$	900.00
Professional engineering services .....	\$	500.00
<b>Total fees .....</b>	<b>\$</b>	<b>2,150.00</b>

Terms:

- Inspection and field coordination fees are estimated only; fees will be based on actual time and materials.** This price estimate is predicated on approval of Thurston County Public Utility District's system improvement drawings by all pertinent governing agencies. All construction drawings shall also be provided to Spanaway Water Company's designated Engineer for review and approval prior to construction. Design modifications may increase the estimated engineering budget.
- SWC must approve the contractor selected by the developer PRIOR to the commencement of any work. A list of pre-approved contractors is available from SWC. Any non-pre-approved contractor shall supply SWC a minimum of three water construction references; additional references may be required. The use of non pre-approved contractor may increase inspection fees. SWC reserves the right to refuse any contractor without cause. SWC will not accept work completed without SWC inspections. All work must comply with the most current SWC 'Developer Standards for the Construction of Water Main Facilities' and the approved water design drawings.
- The owner, his representative, or the contractor shall schedule a pre-construction meeting with the SWC Field Operations and Maintenance Manager and the Water Company's designated Engineer two weeks prior to the commencement of any water construction work. The pre-construction meeting will not be authorized prior to signature and return of this document to Spanaway Water Company.
- The developer's contractor shall work to avoid utility conflicts. Inspection services related to utility conflicts will be considered additional and billed to the owner/developer at a rate of \$75.00 per hour.
- This quotation recognizes the developer's construction that will be shown on the Engineer's design drawings. The design drawings will require Pierce County Fire Prevention Bureau review and approval. This quotation does not include any additional work that may be required to increase the water system's available fire flow, or other fire protection requirements.
- This quotation does not include any additional work required to accommodate on-site or off-site sewer and/or storm water system construction that may require water main replacement or relocation. The costs for any required replacement or relocation is the sole responsibility of the developer.
- The developer warrants, covenants and agrees with SWC to replace, repair and correct any defect in work or materials in respect to the water systems or portions thereof described above for a period of two years from the date of conveyance by Bill of Sale of the water system improvements or portions thereof,

without cost to SWC. This clause includes damage to, but is not limited to, valves, valve boxes, vaults, and piping that may occur during further construction. This clause in no way limits the developer's ability to seek recourse against any party who may cause damage. The developer shall further warrant any corrective or repair work for two years after acceptance of the corrected work by SWC.

9. This price quotation is valid for 60 days after the date of this letter. After the 60-day period, unless connection fees have been paid in full, SWC reserves the right to revise these price/cost quotations.

After review and acceptance of the above prices, terms and conditions please return a signed and dated copy to SWC at least one month prior to the date you desire water system design drawing submittal.

Sincerely,



Tim Wells  
Assistant Manager

The costs, terms, and conditions for the above referenced project as stated herein are satisfactory and accepted. Payment will be made in accord with the terms and conditions stated above.

By: John Weidenfeller Date: 7-21-09  
(Signature)

By: John Weidenfeller  
(Print)

The developer's water system contractor information is as follows:

Contractor: \_\_\_\_\_

Contractor's Address: \_\_\_\_\_  
\_\_\_\_\_

Project Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

Contractor's on-site Supervisor:  
\_\_\_\_\_

Supervisor's phone: \_\_\_\_\_ Mobile: \_\_\_\_\_

# Spanaway Water Company Construction Inspection / Coordination

Thurston County PUD, Terry Lane water system  
emergency intertie connection

Quantity	Item	Item Cost	Cost
	<b>GENERAL SYSTEM FEES</b>		
0	MEMBERSHIP	\$5,325.00	\$0.00
0	ADDITIONAL UNIT MEMBERSHIP FEE (multi-family / duplex)	\$1,935.00	\$0.00
0	ADDITIONAL UNIT MEMBERSHIP FEE (multi-family / triplex or greater)	\$1,475.00	\$0.00
0	IRRIGATION SYSTEM - SYSTEM DEVELOPMENT FEE	\$2,000.00	\$0.00
0	METER INSTALLATION (5/8"x3/4") (installed at right-of-way line)	\$1,200.00	\$0.00
0	METER INSTALLATION (2" compound meter) (installed at right-of-way line)	\$4,700.00	\$0.00
0	FIRE HYDRANT APPROVAL AND INSTALLATION	\$3,500.00	\$0.00
	<b>System fees sub-total:</b>		<b>\$0.00</b>
	<b>ENG / INSP / TESTING / SERVICES</b>		
0	CERTIFICATE OF WATER AVAILABILITY	\$75.00	\$0.00
10	SWC COORDINATION (contracts, dwg review, staff coordination)	\$75.00	\$750.00
12	SWC INSPECTION & ON-SITE COORDINATION*	\$75.00	\$900.00
0	SWC FLUSHING / TESTING / SAMPLING (50 lot or less subdivision)	\$300.00	\$0.00
0	SWC INSP/FLUSHING/TESTING/SAMPLING ADDITIONAL FEES (\$10 per lot over 50 )	\$10.00	\$0.00
0	P.C. RIGHT-OF-WAY PERMIT FEE	\$100.00	\$0.00
0	P.C. FIRE PREVENTION BUREAU REVIEW FEE	\$180.00	\$0.00
5	PROFESSIONAL ENGINEERING SERVICES	\$100.00	\$500.00
	<b>Engineering/Inspection/Testing total:</b>		<b>\$2,150.00</b>
	*inspection and field coordination fees are estimated minimum only, fees will be based on actual time and materials		
	<b>Total Connection Fees</b>		<b>\$2,150.00</b>
	<b>Total Due</b>		<b>\$2,150.00</b>

Appendix G  
Water Loss Control Action Plan

Water System Plan – Part A

## **Water Loss Control Action Plan**

Through the Water Use Efficiency Rule Washington State has implemented a program in which one of the objectives is to reduce unaccounted for water usage for each water system to 10% or less. Cedar Ridge was purchased by the PUD in 2016 and it was fully meter before that purchase.

The PUD has been actively taking steps to help reduce the DSL, such as repairing leaks when they are found. In April of 2019 the PUD used acoustic leak detection to help find leaks in this water system and no major leaks were found.

The PUD believes that the high level of manganese in the raw water is the cause of the leak loss for two reasons:

1. The PUD flushes the system at least quarterly and that water has not been recorded.
2. Clogging meters causing them to not read all the water going through them.

Currently the PUD is installing new treatment to remove the manganese. Once that treatment has been installed the current flushing schedule will not be needed and all water flushed in the future will be recorded. We also plan on replacing the meters once the treated water has stabilized in the system and this should be completed by the end of 2019.

If completing the two steps above do not bring the DSL below the 10% or above 3 gallons per minute, the PUD is committed to finding, repairing and meeting the established DSL standard.

Future steps:

- Replace all service meters by the end of 2019 – cost \$6,400 budgeted in PUD's current CIP
- Continue with acoustic leak detection – cost labor only
- Repair leaks as found – cost varies and is budgeted in current O&M budget
- Measure all backwash water and water used to flush distribution system. – cost labor only.

# Appendix H

## WUE and Measures Presentation

Water System Plan – Part A

# 2018 WATER USE EFFICIENCY

Thurston PUD

By Erica Schilt

July 2019

# WATER USE EFFICIENCY & CONSERVATION

- PUD Current Conservation Goal
  - New Goal – May 2021
- Distribution Leak Loss
  - Gallons Per Day
  - Tanglewilde-Thompson Place
- Systems over 250 GPD
- Next Steps
- Weather & Average Usage
  - Conservation Measures
    - Garden Timer Program 2018

# CURRENT GOAL

**Reduce and/or maintain the average annual Equivalent Residential Unit (ERU) water usage for all accounts, per Group A system, to a value of 250 gallons per day (gpd) through 2021.**

# SYSTEMS THAT DID NOT MEET GOAL

System Name	Gallons Per Day
Elk Height	270
Glacier Vista	297
Quail Run	251
Roy 325	256
Countrywood	305
Deerfield Park 1	388
Deerfield Park 2	376
Hawley Hills	466
Keanland Park	326

System Name	Gallons Per Day
Marvin Gardens	400
Meadow Wood	274
Nisqually Highlands	251
Prairie Ridge	265
Redtail Hawk	454
Smith Prairie	267
Talcott Ridge	473

# SUMMARY

- All PUD Group A's 201 Average Gallons Per Day
- 14 of 73 systems did not meet goal; 9 formerly H&R and 5 legacy
- May need to create a new goal for some of the larger lots in the future.
- Uniform PUD rates 2020

# AVERAGE USAGE & WEATHER

Year	Gallons per Day per Connection	Average Annual Temperature	Annual Rainfall in Inches
2012	216	50°	57.89"
2013	203	51°	41.46"
2014	195	52°	54.46"
2015	181	53°	57.51"
2016	193	52°	56.93"
2017	204	51°	61.49"
2018	201	51°	45.32"

# SUMMARY OF CONSERVATION GOAL

- 78% Group A systems are **Meeting** the Current Goal.
- 22% Group A systems are Not the Current Goal.
- The PUD brought on new systems 2017 that were not paying PUD rates.
- PUD rates seem to work to encourage conservation.

# 10% DISTRIBUTION LEAK LOSS

- State looks at a three year running average for the leak loss.
- For systems over 10% the PUD will need to develop and implement a water loss control action plan.
- 25 of the 73 Group A's over 10% for 2018.

# GALLONS PER MINUTE LOSS

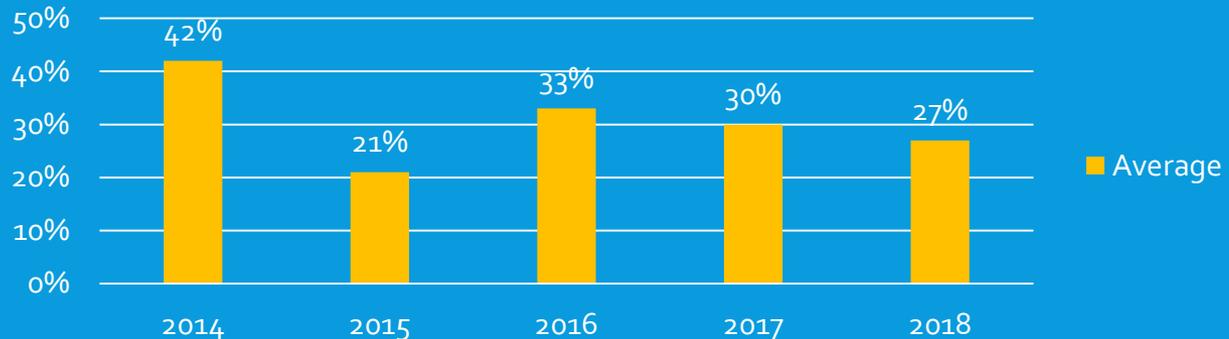
System	2018 gpm loss	3 year average
Tanglewilde-Thompson Place	88.95	32.3%
Spanaway 192 <sup>nd</sup>	30.15	52.6%
Crescent Park	28.28	38%
Meadows	24	21%
Cedar Ridge	6.34	27.3%
Nisqually Highlands	4.71	22%
Elk Heights	3.68	24.4%

# TANGLEWILDE

## Tanglewilde Average Gallons per Minute Loss



## Tanglewilde Average Percentage of Loss per Year



# NEXT STEPS

- Work on systems that have over a 3 gallon minute leak first.
- Install isolation valves in systems that don't have them in good locations to determine where the leaks might be.
- Complete the AWWA Water Loss Control Water Audit for all systems over 10%.

# CONSERVATION MEASURES

- Tiered rates
- Notifying customers of leaks
- Conservation Tips
  - Newsletters
  - CCR's
  - Notes on bills

# GARDEN TIMERS PROGRAM UPDATE 2018

PUD staff delivered 53 Garden Timers to customers. At this time we still do not have enough data to determine the effectiveness of this program.

# QUESTIONS?



[This Photo](#) by Unknown Author is licensed under [CC BY-NC-ND](#)

Appendix I  
WUE Resolutions and Public Notices

Water System Plan – Part A

**CERTIFIED COPY OF RESOLUTION  
ADOPTED AT THE REGULAR MEETING OF THE COMMISSIONERS  
OF  
PUBLIC UTILITY DISTRICT NO. 1 OF THURSTON COUNTY**

We, the undersigned, being the President and Secretary of Public Utility District No. 1 of Thurston County (the District), do hereby certify that the following Resolution was adopted by a majority of the Commissioners of Public Utility District No. 1 of Thurston County, in attendance at the meeting held on Tuesday, November 10, 2020, and that said Resolution has not been revoked.

**RESOLUTION NO. 20-35**

Washington State drinking water regulations governing water use efficiency, WAC 246-290-800, came into effect in 2007 and require the District to adopt a demand-side water conservation goal for all Group A community water systems, and

The District is required to approve a new Water Use Efficiency Goal per planning period to comply with WAC 246-290-800, and

The District has proposed a new goal and advertised and held a customer informational meeting for comment per WAC-246-290-830, and

NOW, THEREFORE, it is hereby

**RESOLVED** that the Commissioners approve a new demand-side water conservation goal for all Group A water systems:

**Reduce and/or maintain the annual average demand per connection, for all Group A systems, to no more than 250 gallons per day.**

Said Resolution was approved and adopted by a majority vote of the Commissioners present.

We do further certify that said meeting was attended by at least two of the three Commissioners of Public Utility District No. 1 of Thurston County and that the Resolution was adopted by a majority vote of the Commissioners in attendance.



Russell E. Olsen  
Commissioner and President of  
Public Utility District No. 1 of Thurston County

ATTEST:



Chris Stearns  
Commissioner and Secretary  
Public Utility District No. 1 of Thurston County

**MINUTES OF THE REGULAR MEETING OF NOVEMBER 10, 2020  
OF  
PUBLIC UTILITY DISTRICT NO. 1  
OF  
THURSTON COUNTY, WASHINGTON**

The first regular meeting for November 2020 of the Commissioners of Public Utility District No. 1 of Thurston County was called to order on Tuesday, November 10, 2020, commencing at 5:00 p.m. Commissioners Russell E. Olsen, Linda Oosterman and Chris Stearns were present for the teleconference meeting hosted via Zoom. The following District employees were also present for the meeting:

- John Weidenfeller, General Manager (GM)
- Julie Parker, Assistant General Manager (AGM)
- Kim Gubbe, Director of Planning and Compliance (DPC)
- Jim Campbell, Director of Field Operations (DFO)
- Ruth Clemens, Administrative Services Manager (ASM)
- TaSeana Tartt, Finance and Customer Service Manager (FCSM)
- Joe Rehberger, Chief Legal Counsel
- Kurin Miller, Clerk to the Board

**Call to Order:**

Commissioner Olsen called the regular meeting to order at 5:00 p.m. The Pledge of Allegiance was recited.

**Approval of Agenda:**

**Commissioner Stearns made a motion to approve the agenda; Commissioner Oosterman seconded the motion; the motion passed with all in favor.**

**Consent Calendar:**

Approval of Minutes: October 20, 2020, October 27, 2020

Prequalification of Contractors: None

SMA Contracts: None

Correspondence: None

Voucher Approval:

- 1) Accounts Payables: October 28, 2020, November 4, 2020
- 2) Payroll: November 5, 2020

Other: None

**Approval of Consent Calendar:**

**Commissioner Oosterman made a motion to approve the Consent Calendar as presented;**

**Commissioner Stearns seconded the motion; the motion passed with all in favor.**

**Public Comment:** None

**Information or Discussion of Operations/Policy Issues:**

**Presentation – Forecast 5 Dashboard Launch**

FCSM Tartt presented a demonstration of the Forecast 5 Dashboard platform which has the capability of publishing financial data for both internal and external users. Each Commissioner addressed staff about this matter.

**1<sup>st</sup> Reading – Resolution 20-45, Capital Budget – 2<sup>nd</sup> Amendment**

AGM Parker presented the resolution that recommends changes to the 2020 Capital Budget, including projects deferred until 2021 or later. Commissioner Oosterman asked about the Knowles Road water system and the associated funds for the project. AGM Parker addressed the Commissioner's question.

**Discussion – Water System Plan Part A Revisions**

GM Weidenfeller and DPC Gubbe presented the revisions to Part A of the District's Water System Plan (WSP) which includes information on water rights and changes based on comments by the Department of Health (DOH). Mr. Rehberger also spoke on water rights. Commissioner Stearns asked about the Pattison water system in relation to water rights and the WSP. DPC Gubbe and Mr. Rehberger addressed the Commissioner's question.

**Discussion – New Water System Consolidation Funding**

GM Weidenfeller announced that the members of the Country Club Estates HOA voted to become part of the District's water systems. DPC Gubbe presented the two Drinking Water State Revolving Fund (DWSRF) applications for the Vista by the Sea and Pattison water systems. Both systems have several issues that need to be upgraded or replaced. Commissioner Oosterman asked about the proposed surcharge to Vista by the Sea customers; Commissioner Stearns asked about paying the surcharge in advance. GM Weidenfeller and DPC Gubbe addressed the Commissioners' questions.

**Action/Approval Item(s):**

**Resolution 20-35, Water Use Efficiency Goal for All Group A Water Systems**

Commissioner Stearns made a motion to approve Resolution 20-35: Commissioner Olsen seconded the motion; the motion passed with all in favor.

**Resolution 20-36, Approval of Policies and Procedures Manual**

Commissioner Oosterman made a motion to approve Resolution 20-36: Commissioner Olsen seconded the motion; the motion passed with all in favor.

**Resolution 20-37, Professional Services Agreement (PSA) with Skillings, Inc. for the Update of the Tanglewilde-Thompson Place Water System Plan Part B**

Commissioner Stearns made a motion to approve Resolution 20-37: Commissioner Olsen seconded the motion; the motion passed with all in favor.

**Resolution 20-38, 2021 Ad Valorem Tax Levy**

Commissioner Oosterman made a motion to approve Resolution 20-38: Commissioner Olsen seconded the motion; the motion passed with all in favor.

**Resolution 20-39, Substantial Needs Resolution**

Commissioner Oosterman made a motion to approve Resolution 20-39: Commissioner Olsen seconded the motion; the motion passed with all in favor.

**Resolution 20-40, Refund Tax Levy**

Commissioner Oosterman made a motion to approve Resolution 20-40: Commissioner Olsen seconded the motion; the motion passed with all in favor.

**Resolution 20-44, 2020 Operating Budget – 2<sup>nd</sup> Amendment**

**Commissioner Oosterman made a motion to approve Resolution 20-44: Commissioner Stearns seconded the motion; the motion passed with all in favor.**

**Resolution 20-46, Designation of Applicant Agent**

**Commissioner Oosterman made a motion to approve Resolution 20-46: Commissioner Olsen seconded the motion; the motion passed with all in favor.**

**Commissioner Signatures/Break:**

There were no physical documents to sign. The Board took a short break at 5:38 p.m., and the meeting resumed at 5:53 p.m.

**Presentations:**

GM Weidenfeller had no additional information to add to his report, though he announced the vacation time he will be taking later in the week. During the break, AGM Parker made arrangements with Commissioners Olsen and Stearns to get three resolutions signed and sent to Thurston County.

Commissioner Oosterman asked about technical information for the Knowles Road water system. DPC Gubbe, DFO Campbell, and GM Weidenfeller addressed the Commissioner's questions. ASM Clemens spoke about vaccination and essential workers.

**Commissioner Topics, Discussions and Reports:**

Commissioner Olsen reported on a personal matter. The Commissioner also spoke about the Governor's new Chief of Staff, the State Budget, and the upcoming Legislative Session.

Earlier in the meeting, Commissioner Oosterman asked about emergency radios; GM Weidenfeller addressed the Commissioner's question. Commissioner Oosterman also made a request to have some staff members attend Commission Meetings to discuss their background. The Board and GM Weidenfeller discussed this topic at length.

Commissioner Stearns reported on the meetings he's recently attended, including the Chehalis Basin Partnership group, Thurston Regional Planning Council (TRPC), and the Water Resources Advisory Committee (WRAC).

**Public Comment:** None

**At 6:15 p.m., Commissioner Olsen announced that the Board would enter into an Executive Session to consider the selection of a site or the acquisition of real estate by lease or purchase when public knowledge regarding such consideration would cause a likelihood of increased price, as authorized by RCW 42.30.110 (1)(b), and to discuss with legal counsel representing the agency litigation or potential litigation to which the agency, the governing body, or a member acting in an official capacity is, or is likely to become, a party, when public knowledge regarding the discussion is likely to result in an adverse legal or financial consequence to the agency, as authorized by RCW 42.30.110 (1)(i), for 15 minutes until 6:30 p.m. The District's Chief Legal Counsel, Mr. Joe Rehberger, was present for the Executive Session. At 6:30 p.m., the Executive Session was closed, and the regular meeting resumed.**

**Adjournment: Commissioner Stearns made a motion to adjourn the meeting; Commissioner Oosterman seconded the motion; the motion passed with all in favor. The meeting adjourned at 6:30 p.m.**

**Assignments:**

- 1) Include an article in an upcoming newsletter regarding the Forecast 5 Dashboard launch.
- 2) Coordinate with Commissioner Olsen and Commissioner Stearns to get Resolutions 20-38, 20-39, and 20-40 signed and sent to the Thurston County Treasurer.
- 3) Schedule a discussion topic at a later meeting to plan for a Strategic Planning Session for the Commissioners.
- 4) Send an invitation to Commissioner Oosterman for the November 2020 All Staff Meeting.



\_\_\_\_\_  
Russell E. Olsen, Commissioner and President

Attest:



\_\_\_\_\_  
Chris Stearns, Commissioner and Secretary

## WUE Goal Setting Public Forum Information

Water system managers, you can post your public forum information by completing and submitting the [Water Use Efficiency Goal Setting Public Forum form](#). You must provide 2 weeks notice prior to your public forum. Please allow us 2-3 business days to post your information to our website.

Tanglewilde Thompson Place 600 Water System	
ID Number:	04397K
County:	Thurston, Pierce, Lewis, King, and Grays Harbor
Contact Name:	Erica Cecil
Phone:	(360) 357-8783 ext. 122
Date and Time:	October 19, 2020 at 6:30 p.m.
Location:	Virtual (Zoom)
Purpose of Forum:	Discuss the recently updated Thurston PUD Water System Plan (WSP), Water Use Efficiency (WUE) - Water Conservation Goal for 2021-2030 for all Thurston PUD Group A water systems.
For More Info:	Thurston PUD Water System Plan, Part A and Water Conservation Goal Update for all Group A water systems can be found at <a href="http://www.thurstonpud.org/projects.htm">http://www.thurstonpud.org/projects.htm</a>
Directions to Public Forum	Please email <a href="mailto:erica.cecil@thurstonpud.org">erica.cecil@thurstonpud.org</a> or call (360) 357-8783, ext. 122 to request a Zoom meeting invitation.

Back to [Water Use Efficiency](#)

## Water System Plan and Water Use Efficiency Goal Update

Thurston PUD provides safe and reliable drinking water to approximately 8,000 customers throughout Thurston County and several surrounding counties.

To plan on a long-term basis and meet regulatory requirements, the PUD's Water System Plan (WSP) and Water Conservation Goal is updated every ten years. The PUD has updated the WSP to reflect how the PUD currently meets Washington State Department of Health Drinking Water (DOH) regulations, WAC 246-290.

Part of that process is to update the Water Conservation Goal and hold a public meeting for comment on the updated plan and goal. You can find the updated WSP on the PUD's website at [www.ThurstonPUD.org](http://www.ThurstonPUD.org).

The public is welcome to provide feedback on these updates. Listed below is information on how to attend a Public Meeting held via Zoom regarding the updated WSP and Water Conservation Goal.

<b>Date</b>	Monday, October 19, 2020
<b>Start Time</b>	6:30 p.m.
<b>Phone Number</b>	(253) 215-8782
<b>Webinar/Meeting ID</b>	828 9808 7099

Members of the public are welcome to join this meeting from a personal computer or mobile device. If you wish to attend by telephone audio only, please use the information above to dial into each meeting. If you have comments and are not able to attend the meeting, please email us at [PUDCustomerService@thurstonpud.org](mailto:PUDCustomerService@thurstonpud.org) or mail to Thurston PUD, 1230 Ruddell Road SE, Lacey, WA 98503.

Thurston PUD's Board of Commissioners will review and approve the Water Conservation Goal at the October 27, 2020 Commission Meeting. Please review the questions below for additional information about the WSP and Water Conservation Goal updates.

### **What is the updated Water Conservation Goal?**

For 2021 through 2030, the proposed goal is: reduce and/or maintain the annual average demand per connection, for all Group A systems, to no more than 250 gallons per day.

### **Why is a Water Conservation Goal required?**

Under WAC 246-290-830(4)(a), Thurston PUD is required to set a Water Conservation Goal for the Group A water systems owned by the PUD.

### **Why is a Water System Plan required?**

Thurston PUD is required to update the Water System Plan and have Washington State Department of Health (DOH) approve the update, per WAC 246-290-100.

Meeting was held on Monday, October 19, 2020 at 6:30 pm for both the WSP and WUE public comment period.

The meeting was conducted by a Zoom meeting and there were zero attendees

The PUD staff presented the information below and a WUE presentation. The meeting lasted 10 minutes long.

Kim's Presentation:

Introduce Team

1. Kim – Director of Planning and Compliance
2. Erica – Operations Specialist III
3. Brian – Operations Specialist II
4. Teal – Administrative Assistant

Thurston PUD's Water System Plan is the foundation of a safe, successful and sustainable water system.

There are two parts of the Water System Plan for a water company that owns more than one system:

1. Part A – Umbrella
2. Part B – Specific to that one water system

This public meeting is for Umbrella, the Part A – This plan describes how the District operates all our water system to comply with WA State WAC 246-290 regulations for all Group A water systems.

This plan is for a 10 year planning cycle and it includes:

1. History of the PUD
2. Policy and Procedures
3. Water Use Efficiency Program
4. Asset Management Program
5. Operations and Maintenance Program
6. Financial Program

In the past, the WSP was completed by engineers/planners that knew the regulations but didn't quite know all the tools or how the District really managed their water systems. This WSP was done in house, by the Planning and Compliance Team, and reflects the way that we do business.

Some major highlights to the WSP, that I believe, have made the District much stronger, are:

1. Appendix P – Emergency Response Plan
2. Appendix Q – Water Shortage Plan
3. SMA Plan, Appendix B – A day in the Life of Thurston PUD

The WSP has been submitted to WA State DOH for approval. We have received comments back and will be making the minor changes and resubmitting when all the requirements are met, like this meeting and approval from the Commissioners. The commissioners will be approving the plan at the next regular meeting, Tuesday, October 27.

Any questions?



# 2019 WATER USE EFFICIENCY

Thurston PUD  
By Erica Cecil  
Senior Operations Specialist  
October 2020

## **CURRENT GOAL**

**Reduce and/or maintain the average annual Equivalent Residential Unit (ERU) water usage for all accounts, per Group A system, to a value of 250 gallons per day (gpd) through 2021.**

# SUMMARY

All PUD Group A's Averaged 200 Gallons Per Day

10 of 74 systems did not meet goal

We'll continue to work to get all systems in compliance with current goal.

Uniform PUD rates 2020

# SYSTEMS THAT DID NOT MEET GOAL

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System Name	Gallons Per Day	County
Talcott Ridge	495	Thurston
Redtail Hawk	413	Thurston
Hawley Hills	359	Thurston
Deerfield Park 1	351	Thurston
Deerfield Park 2	350	Thurston
Marvin Gardens	324	Thurston
Keanland Park	315	Thurston
Countrywood Est.	285	Thurston
Maxvale	280	Thurston
Glacier Vista	267	Pierce

# **PROPOSED GOAL 2021 - 2030**

**Reduce and/or maintain the annual average demand per connection, for all Group A systems, to no more than 250 gallons per day.**

## HOW TO CONTACT US

Office (360) 357-8783 or (866) 357-8783

Kim Gubbe, Director Planning & Compliance, ext. 1 25; [kgubbe@thurstonpud.org](mailto:kgubbe@thurstonpud.org)

Erica Cecil, Operations Specialist III, ext. 1 22; [erica.cecil@thurstonpud.org](mailto:erica.cecil@thurstonpud.org)

Brian Wilson, Operations Specialist II, ext. 1 24; [bwilson@thurstonpud.org](mailto:bwilson@thurstonpud.org)

Teal Reopelle, Administrative Assistant, ext. 1 26; [treopelle@thurstonpud.org](mailto:treopelle@thurstonpud.org)

# QUESTIONS?



**CERTIFIED COPY OF RESOLUTION  
ADOPTED AT THE REGULAR MEETING OF THE COMMISSIONERS  
OF  
PUBLIC UTILITY DISTRICT NO. 1 OF THURSTON COUNTY**

The President and Secretary of Public Utility District No. 1 of Thurston County (District) certify that a majority of the Commissioners of Public Utility District No. 1 of Thurston County in attendance at the meeting held at the office of the District, Suite 301, 921 Lakeridge Way S.W., Olympia, Washington, 98502 on Tuesday, May 26, 2015 adopted this resolution. This resolution has not been revoked.

**RESOLUTION NO. 15-16**

**RECITALS**

Public Utility District No. 1 of Thurston County is required to comply with the Washington State drinking water regulations, and

Washington State drinking water regulations governing water use efficiency, Washington Administrative Code 246-290-800, came into effect in 2007 and require the District to adopt a demand-side water conservation goal for all Group A community water systems, and

The District has held a public meeting to take comments on the proposed demand-side water conservation goal for all Group A water systems, "Reduce and/or maintain the average annual Equivalent Residential Unit (ERU) water usage for all accounts, per Group A system, to a value of 250 gallons per day (gpd) through 2021", and the Commissioners have discussed any public comments prior to approving this new goal.

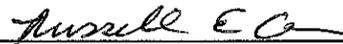
NOW, THEREFORE, THE COMMISSIONERS OF THE DISTRICT DO HEREBY RESOLVE AS FOLLOWS:

The District establishes the following demand-side water conservation goal for all Group A water systems:

**Reduce and/or maintain the average annual Equivalent Residential Unit (ERU) water usage for all accounts, per Group A system, to a value of 250 gallons per day (gpd) through 2021.**

This Resolution was approved and adopted by a majority vote of the Commissioners present.

As the President and Secretary of the District, we additionally certify that this meeting of May 26, 2015 was attended by at least two of the three Commissioners of the District and that this resolution was adopted by a majority vote of the Commissioners of the District in attendance at the meeting.



\_\_\_\_\_  
Russell E. Olsen  
Commissioner and President of  
Public Utility District No. 1 of Thurston County

ATTEST:



\_\_\_\_\_  
Chris Stearns  
Commissioner and Secretary

CERTIFIED COPY OF RESOLUTION  
ADOPTED AT THE REGULAR MEETING OF THE COMMISSIONERS  
OF  
PUBLIC UTILITY DISTRICT NO. 1 OF THURSTON COUNTY

We, the undersigned, being the President and Secretary of Public Utility District No. 1 of Thurston County, do hereby certify that the following Resolution was unanimously adopted by the Commissioners of Public Utility District No. 1 of Thurston County, in attendance at the meeting held at the office of the District, Suite 201, 921 Lakeridge Way S.W., Olympia, Washington, 98502 on Tuesday, June 22, 2010 and that said Resolution has not been revoked.

**RESOLUTION NO. 10-43**

WHEREAS, it is the responsibility of Thurston Public Utility District (TPUD) to comply with Washington State drinking water regulations, and

WHEREAS, it is Washington State drinking water regulations Water Use Efficiency [WAC 246-290] came in to effect July 2007, and

WHEREAS, the Water Use Efficiency requires TPUD to adopt a demand side water conservation goal for all Group A community water systems under 1,000 connections by July 1, 2010, and

WHEREAS, the Thurston PUD has Group A water systems that have under 1,000 connections and has had a public hearing,

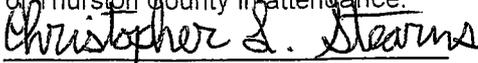
NOW, THEREFORE, it is hereby

RESOLVED that TPUD establishes the following goal for the community Group A water systems with under 1,000 connections:

**Thurston PUD will reduce seasonal summer daily demand by 3 percent on average for residential customers within the next 6 years.**

Said Resolution was approved and adopted by the unanimous vote of the Commissioners present.

We do further certify that said meeting was attended by 3 of the three Commissioners of Public Utility District No. 1 of Thurston County and that the Resolution was adopted by the unanimous vote of the Commissioners of Public Utility District No. 1 of Thurston County in attendance.

  
Christopher Stearns  
Commissioner and President of PUD

ATTEST:

  
Paul Pickett  
Commissioner and Secretary

**CERTIFIED COPY OF RESOLUTION  
ADOPTED AT THE REGULAR MEETING OF THE COMMISSIONERS  
OF  
PUBLIC UTILITY DISTRICT NO. 1 OF THURSTON COUNTY**

We, the undersigned, being the President and Secretary of Public Utility District No. 1 of Thurston County, do hereby certify that the following Resolution was unanimously adopted by the Commissioners of Public Utility District No. 1 of Thurston County, in attendance at the meeting held at the office of the District, Suite 201, 921 Lakeridge Way S.W., Olympia, Washington, 98502 on Wednesday, January 23, 2008, and that said Resolution has not been revoked.

**RESOLUTION NO. 09-26**

WHEREAS, it is the responsibility of Thurston Public Utility District (TPUD) to comply with Washington State drinking water regulations, and

WHEREAS, it is Washington State drinking water regulations Water Use Efficiency [WAC 246-290] came in to effect July 2007, and

WHEREAS, the Water Use Efficiency requires TPUD to adopt a demand side water conservation goal for water systems over 1,000 connections by July 1, 2009, and

WHEREAS, the Tanglewilde #600 water system has over 1,000 connections and has had a public hearing,

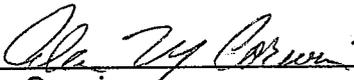
NOW, THEREFORE, it is hereby

RESOLVED that TPUD establishes the following goal for the Tanglewilde #600 water system:

Thurston PUD will reduce the amount of water use by 3% per Tanglewide connection through teaching and encouraging conservation to our customers over the next 6 years.

Said Resolution was approved and adopted by the unanimous vote of the Commissioners present.

We do further certify that said meeting was attended by 3 of the three Commissioners of Public Utility District No. 1 of Thurston County and that the Resolution was adopted by the unanimous vote of the Commissioners of Public Utility District No. 1 of Thurston County in attendance.

  
\_\_\_\_\_  
Alan Corwin  
Commissioner and President of PUD

ATTEST:

  
\_\_\_\_\_  
Paul Pickett  
Commissioner and Secretary

**CERTIFIED COPY OF RESOLUTION  
ADOPTED AT THE REGULAR MEETING OF THE COMMISSIONERS  
OF  
PUBLIC UTILITY DISTRICT NO. 1 OF THURSTON COUNTY**

We, the undersigned, being the President and Secretary of Public Utility District No. 1 of Thurston County, do hereby certify that the following Resolution was unanimously adopted by the Commissioners of Public Utility District No. 1 of Thurston County, in attendance at the meeting held at the office of the District, Suite 201, 921 Lakeridge Way S.W., Olympia, Washington, 98502 on Wednesday, January 23, 2008, and that said Resolution has not been revoked.

**RESOLUTION NO. 08-04**

WHEREAS, it is the responsibility of Thurston Public Utility District (TPUD) to comply with Washington State drinking water regulations, and

WHEREAS, it is Washington State drinking water regulations Water Use Efficiency [WAC 246-290] came in to effect July 2007, and

WHEREAS, the Water Use Efficiency requires TPUD to adopt a water conservation goal for water systems over 1,000 connections by January 22, 2008, and

WHEREAS, the Tanglewilde #600 water system has over 1,000 connections

NOW, THEREFORE, it is hereby

RESOLVED that TPUD establishes the following goal for the Tanglewilde #600 water system:

Thurston PUD will reduce the amount of water we cannot account for (by meters or other estimation methods) to 10% of supply flows over the next 6 years.

Said Resolution was approved and adopted by the unanimous vote of the Commissioners present.

We do further certify that said meeting was attended by 3 of the three Commissioners of Public Utility District No. 1 of Thurston County and that the Resolution was adopted by the unanimous vote of the Commissioners of Public Utility District No. 1 of Thurston County in attendance.

  
\_\_\_\_\_  
Alan Corwin  
Commissioner and President of PUD

ATTEST:

  
\_\_\_\_\_  
Paul Pickett  
Commissioner and Secretary

Appendix J  
Consumer Confidence Reports

Water System Plan – Part A



# Aust #210 Water Quality Report for 2017

<u>Name of water system:</u>	<b>Aust #210</b>	<u>Depth of well:</u>	<b>240 ft</b>
<u>Public ID number:</u>	<b>01222V</b>	<u>Susceptibility rating:</u>	<b>Moderate</b>
<u>Service connections:</u>	<b>17</b>	<u>Treatment:</u>	<b>pH adjustment – soda ash injection</b>

Required Testing (last testing date):

- Monthly Bacteriological
- Annual Nitrate
- Inorganic Contaminants (2016)
- Volatile Organic Contaminants (2016)
- Radionuclide (2015)
- Radium 228 (2015)
- Lead & Copper (2016)
- Pesticide and Herbicides (2010)

We are pleased to announce that once again your water meets or exceeded all federal and local standards. The state requires us to monitor for certain elements less than once per year because the concentrations of these elements are not expected to vary significantly from year to year. See the results of the testing of your water on the back table. For more information about your water, call Kim Gubbe at (360) 357-8783.

**You may reach us** between the hours of 8:00 a.m. to 4:30 p.m., Monday – Friday at (360) 357-8783 or (866) 357-8783. For emergencies, you can call the office numbers above. After normal business hours the call will automatically be transferred to a live operator who will dispatch the call to the service technician.

*Commission meetings are held the second and fourth Tuesday of every month at the PUD office at 1230 Ruddell Road SE, Lacey. The meetings start at 5:00 p.m. and are open to the public.  
Check out our website at [www.thurstonpud.org](http://www.thurstonpud.org)*

**To ensure that tap water is safe to drink**, the Department of Health and EPA prescribe regulations that limit the number of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and the Washington Department of Agriculture regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

**Drinking water, including bottled water**, may be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA’s Safe Drinking Water Hotline (1-800-426-4791).

**The sources of drinking water** (both tap water and bottled water) includes rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

**Some people may be more vulnerable** to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

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## Water Use Efficiency Annual Report

Thurston PUD is required to send you a Water Use Efficiency Report on an annual basis. To comply with this State law, Thurston PUD has approved a new conservation goal for period of 2015 – 2021 for your water system. The goal is as follows:

**Reduce and/or maintain the average annual Equivalent Residential Unit (ERU) water usage for all accounts, per Group A system, to a value of 250 gallons per day (gpd) through 2021.**

The Aust water system is fully metered and the total water produced for 2017 was 1,135,404 gallons. The system had zero leak loss for the year. In 2017, the average household used 199 gallons per day meeting the PUD’s current conservation goal.

A copy of the report filed with the State is available on our website at [www.thurstonpud.org](http://www.thurstonpud.org). To receive a copy by mail, please call our office at (360) 357-8783.

## Water Quality Data for Aust #210

The table below lists all the drinking water substances that were detected in your water. The presence of these substances in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1, 2017 – December 31, 2017.

Inorganic Elements	MCL	MCLG	Your Water System	Sample Date	Violation	Typical Source of Contaminant
Nitrate (ppm)	10	10	<b>0.5</b>	2017	No	Erosion of natural deposits
<b>Lead &amp; Copper</b>	<b>AL</b>	In 2016, 5 Lead and Copper samples were taken and 0 samples exceed the AL				
Copper (ppm)	1.3	1.3	<b>0.43</b>	2016	No	Corrosion of household plumbing systems
Lead (ppb)	15	0	<b>1</b>	2016	No	

*Terms and Abbreviations used above:*

- **Maximum Contaminant Level Goal (MCLG):** the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **Maximum Contaminant Level (MCL):** the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- **Action Level (AL):** the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- **ppm:** parts per million or milligrams per liter **ppb:** parts per billion) **N/A:** not available

**Contaminants that may be present** in source water include:

- *Microbial contaminants*, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants*, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides*, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- *Radioactive contaminants*, which are naturally occurring.

In Washington State, lead in drinking water comes primarily from materials and components used in household plumbing. The more time water has been sitting in pipes, the more dissolved metals, such as lead, it may contain. Elevated levels of lead can cause serious health problems, especially in pregnant women and young children.

To help reduce potential exposure to lead, for any drinking water tap that has not been used for 6 hours or more, flush water through the tap until the water is noticeably colder before using for drinking or cooking. You can use the flushed water for watering plants, washing dishes, or general cleaning. Only use water from the cold-water tap for drinking, cooking, and especially for making baby formula. Hot water is likely to contain higher levels of lead. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water is available from EPA's Safe Drinking Water Hotline at 1-800-426-4791 or online at <http://www.epa.gov/safewater/lead>.

### Backflow and Cross Connections

**Definition of Backflow:** The flow of water or other liquids, mixtures, or substances into the distribution pipes of a potable water supply (your local water system) from any source or sources other than the intended source. Back siphonage is the flowing back of used, contaminated, or polluted water from a plumbing fixture, irrigation system or vessel into a potable water supply due to a negative pressure in the supply piping.

**Examples of Contamination from Cross-connections:**

- In 1993, an Oregon homeowner installed an irrigation system using water pumped from a decorative pond in an area near an old septic drain field. When the pond's pump failed, the homeowner connected a hose from the home's drinking water system to the irrigation piping. When the pump was brought back online, **it forced pond water through the hose connection, through the home, and into the city's potable water system.**
- In 1982, a Michigan resident was spraying his garden with pesticides using a common hose and sprayer attachment. While he was applying the pesticide, the public water system needed to shut down temporarily. The homeowner noticed a drop-in pressure and within a few moments, the pesticide disappeared from the container: **Back siphonage had drawn the pesticide into the hose, through the house plumbing, and into the public drinking water system.**

**To Prevent Cross-connections and backflow incidents:** Install atmospheric vacuum breakers (AVB) on all outside hose bibs. You can get AVB's at any hardware store with a cost around \$5.00 apiece, see example below.

**Two ways to help the PUD keep your water safe from cross-connections:**

1. Fill out a new cross-connection survey form ([www.thurstonpud.com](http://www.thurstonpud.com)) every time you add anything to your system.
2. Send in your required annual test results for any backflow device you have installed on your irrigation system.



Atmospheric Vacuum Breaker (AVB)



# Appendix K Asset Management

Water System Plan – Part A

Name of System Prairie Ridge

System Infrastructure	Aprox. Date Built	Pipe Footage or # of Items	Depreciated on Period Years	Full Depreciated on Date	Replacement Cost per Ft/ 2018	Total Replacement Cost 2018	Replacement Cost at end of Service Life		Costs Per Year																							
									2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039		
<b>Pump House</b>																																
Building Till size: 14x14	1980	1	50	2030	\$25,000.00	\$ 25,000.00	\$35,644																									
Building Electrical 150 AMP 15/30 SP Breaker Panel	2013	1	30	2043	\$ 6,000.00	\$ 6,000.00	\$12,563																									
<b>Well, AAE334</b>																																
size: 6" S02	1996	170	75	2071	\$ 300.00	\$ 51,000.00	\$244,311																									
Water Quality Tests	1996	1	75	2071	\$ 1,200.00	\$ 1,200.00	\$5,748																									
Well Pumps & Controls size: 5HP make:	2011	1	13	2024	\$ 4,500.00	\$ 4,500.00	\$5,373																									
Source Meter size: 2" MASTER METER	1996	1	25	2021	\$ 600.00	\$ 600.00	\$656																									
<b>Well, AKY156</b>																																
size: 8" S01	1980	174	75	2055	\$ 300.00	\$ 52,200.00	\$155,829																									
Water Quality Tests	1980	1	75	2055	\$ 1,200.00	\$ 1,200.00	\$3,582																									
Well Pumps & Controls size: 5HP make:Franklin Cont	1980	1	30	2010	\$ 5,000.00	\$ 5,000.00	\$5,150																									
Source Meter size: 2" MASTER METER	1980	1	25	2005	\$ 1,000.00	\$ 1,000.00	\$1,030																									
<b>Booster Station</b>																																
Booster Pump size: 3 hp make: Goulds VFD	2013	1	20	2033	\$ 3,200.00	\$ 3,200.00	\$4,985																									
Booster Pumps size:5HP make:Goulds VFD	2013	2	20	2033	\$ 4,500.00	\$ 9,000.00	\$14,022																									
VFD drives Yaskawa	2013	3	20	2033	\$ 1,500.00	\$ 4,500.00	\$7,011																									
Pressure Tanks size:80gal make:WelMate#WM-23	2013	1	10	2023	\$ 425.00	\$ 425.00	\$493																									
<b>Water Mains</b>																																
6" # of feet: 8600'	1980	5100	65	2045	\$ 106.00	\$ 540,600.00	\$1,200,829																									
4"	1980	3700	65	2045	\$ 81.00	\$ 299,700.00	\$665,720																									
2.5"	1980	600	65	2045	\$ 81.00	\$ 48,600.00	\$107,955																									
2"	1980	330	65	2045	\$ 31.00	\$ 10,230.00	\$22,724																									
<b>Service Lines</b>																																
1" SERVICE LINES=	1980	100	65	2045	\$ 875.00	\$ 87,500.00	\$194,363																									
<b>Isolation Valves</b>																																
6"	1980	4	65	2045	\$ 1,000.00	\$ 4,000.00	\$8,885																									
4"	1980	2	65	2045	\$ 750.00	\$ 1,500.00	\$3,332																									
2.5"	1980	1	65	2045	\$ 600.00	\$ 600.00	\$1,333																									
2"	1980	1	65	2045	\$ 600.00	\$ 600.00	\$1,333																									
<b>Blowoff Assembly</b>																																
Blowoff Assembly	1980	5	65	2045	\$ 1,500.00	\$ 7,500.00	\$16,660																									
<b>Reservoirs</b>																																
20'x10' concrete	1980	23500	75	2055	\$ 4.00	\$ 94,000.00	\$280,611																									
30'x10' concrete	2000	52,800	75	2075	\$ 4.00	\$ 211,200.00	\$1,138,717																									
<b>Meter Replacement</b>																																
3/4" #	2010	100	20	2030	\$ 85.00	\$ 8,500.00	\$12,119																									
<b>Total Estimated Costs</b>						\$ 1,479,355.00	\$ 4,150,976.68	TOTALS FC	\$ -	\$ -	\$ 6,180	\$ -	\$ -	\$ 493	\$ 5,373	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,119	\$ 47,763	\$ -	\$ -	\$ 34,023	\$ -	\$ -	\$ -	\$ 7,661	\$ -	\$ -

Capital Asset Management Plan Class A Systems

Name of System Prairie Ridge

System Infrastructure		Aprox. Date Built	Pipe Footage or # of Items	Depreciated on Period Years	Full Depreciated on Date	Replacement Cost per Ft/ 2018	Total Replacement Cost 2018	Replacement Cost at end of Service Life
<b>Pump House</b>								
Building TIII	size: 14x14	1980	1	50	2030	\$25,000.00	\$ 25,000.00	\$35,644
Building Electrical	150 AMP 15/30 SP Breaker Panel	2013	1	30	2043	\$ 6,000.00	\$ 6,000.00	\$12,563
<b>Well, AAE334</b>								
size: 6"	S02	1996	170	75	2071	\$ 300.00	\$ 51,000.00	\$244,311
Water Quality Tests		1996	1	75	2071	\$ 1,200.00	\$ 1,200.00	\$5,748
Well Pumps & Controls size: 5HP make:		2011	1	13	2024	\$ 4,500.00	\$ 4,500.00	\$5,373
Source Meter	size: 2" MASTER METER	1996	1	25	2021	\$ 600.00	\$ 600.00	\$656
<b>Well, AKY156</b>								
size: 8"	S01	1980	174	75	2055	\$ 300.00	\$ 52,200.00	\$155,829
Water Quality Tests		1980	1	75	2055	\$ 1,200.00	\$ 1,200.00	\$3,582
Well Pumps & Controls size: 5HP make:Franklin Cont		1980	1	30	2010	\$ 5,000.00	\$ 5,000.00	\$5,150
Source Meter	size: 2" MASTER METER	1980	1	25	2005	\$ 1,000.00	\$ 1,000.00	\$1,030
<b>Booster Station</b>								
Booster Pump	size: 3 hp make: Goulds VFD	2013	1	20	2033	\$ 3,200.00	\$ 3,200.00	\$4,985
Booster Pumps	size:5HP make:Goulds VFD	2013	2	20	2033	\$ 4,500.00	\$ 9,000.00	\$14,022
VFD drives	Yaskawa	2013	3	20	2033	\$ 1,500.00	\$ 4,500.00	\$7,011
Pressure Tanks	size:80gal make:WelMate#WM-23	2013	1	10	2023	\$ 425.00	\$ 425.00	\$493
<b>Water Mains</b>								
6"	# of feet: 8600'	1980	5100	65	2045	\$ 106.00	\$ 540,600.00	\$1,200,829
4"		1980	3700	65	2045	\$ 81.00	\$ 299,700.00	\$665,720
2.5"		1980	600	65	2045	\$ 81.00	\$ 48,600.00	\$107,955
2"		1980	330	65	2045	\$ 31.00	\$ 10,230.00	\$22,724
<b>Service Lines</b>								
1" SERVICE LINES=		1980	100	65	2045	\$ 875.00	\$ 87,500.00	\$194,363
<b>Isolation Valves</b>								
6"		1980	4	65	2045	\$ 1,000.00	\$ 4,000.00	\$8,885
4"		1980	2	65	2045	\$ 750.00	\$ 1,500.00	\$3,332
2.5"		1980	1	65	2045	\$ 600.00	\$ 600.00	\$1,333
2"		1980	1	65	2045	\$ 600.00	\$ 600.00	\$1,333
<b>Blowoff Assembly</b>								
Blowoff Assembly		1980	5	65	2045	\$ 1,500.00	\$ 7,500.00	\$16,660
<b>Reservoirs</b>								
	20'x10' concrete	1980	23500	75	2055	\$ 4.00	\$ 94,000.00	\$280,611
	30'x10' concrete	2000	52,800	75	2075	\$ 4.00	\$ 211,200.00	\$1,138,717
<b>Meter Replacement</b>								
3/4"	#	2010	100	20	2030	\$ 85.00	\$ 8,500.00	\$12,119
<b>Total Estimated Costs</b>							<b>\$ 1,479,355.00</b>	<b>\$ 4,150,976.68</b>

Appendix L  
2020 Capital Improvement Plan

Water System Plan – Part A

Thurston PUD  
2020 Capital Budget (Summary)

Project Code	System Id. No.	Project Description	Purpose	2020 Capital Budget
<b>Capital Improvements</b>				
CI-41	multiple	Isolation valve maintenance	OP	100,000
CI-44	multiple	Rebuild Pumphouses (PW)	OP	75,000
CI-62	multiple	Treatment Systems Upgrade/Media	OP	120,000
CI-65	multiple	Replace Plumbing/Pressure Tanks	OP	30,000
CI-66	multiple	Multiple System Upgrade	OP	150,000
CI-71	multiple	Electrical Controls/Upgrades	OP	50,000
CI-75	multiple	Source and Service Meter Replacement	OP	100,000
CI-76	multiple	Well and Booster Pump Replacement	OP	250,000
CI-96	multiple	Sampling Stations	OP	32,000
CI-98	multiple	New Meter Installation		50,000
CI-99	626	ROM Upgrades (DWSRF)		219,170
CI-100	multiple	Combine 4 Grp A water systems in Thurston Co (DWSRF)		953,945
CI-101	628	Timberline Village Upgrades (DWSRF)		405,111
CI-102	239	Tolmie Upgrades		120,000
CI-103	662	Boots and Saddles New Treatment		60,000
CI-104	610	Webster Hill New Treatment		40,000
		Administrative cost of all projects		150,000
		<i>15% contingency on asset management plan estimates</i>		205,000
<b>Subtotal - Capital Improvements</b>				<b>3,110,226</b>
<b>Water System Management</b>				
WM-1	NA	Acquisitions of New Water Systems	G	25,000
WM-2	NA	Water System Plan - Part A & SMA	OP, G	60,000
WM-4	NA	Water System Plan - Part B	OP, G	60,000
WM-14	NA	Fleet	G	91,000
WM-29	999	Building Upgrades	OP	42,000
WM-34	NA	GIS Program Implementation	OP	105,904
<b>Subtotal - Water System Management</b>				<b>383,904</b>
<b>Total - Capital Improvement Program</b>				<b>3,494,130</b>
<b>Funding</b>				
		Transfer from Vehicle/Equipment Replacement Fund		133,000
		Water Revenue Bond 2018		300,000
		PWTF Loans 2018		75,000
		DWSRF Loan - ROM Upgrades		219,170
		DWSRF Loan/Grant - 4 Group A's Thurston County		953,945
		DWSRF Loan/Grant - Timberline Village		405,111
		Additional Funding needed		1,382,904
		Proposed Additional Loan/Grant Funding		25,000
<b>Total Other Funding</b>				<b>3,494,130</b>
<b>TOTAL CIP FUNDING FROM RATES (TO RESERVES)</b>				<b>-</b>

Appendix M  
Routine Maintenance Checklist

Water System Plan – Part A

# NORTH ROUTE

Technician: \_\_\_\_\_

Month / Year: \_\_\_\_\_

## WEEKLY

Week 1

Week 2

Week 3

Week 4

Treatment	#	System	County	Size	Date	Date	Date	Date
CL2/SALT	249	Brown	PC	B				
CL2	247	Elk Heights	PC	A				
CL2	663	Crocker Creek	PC	A				
CL2	253	Clerget	PC	A				
CL2	665	Glacier Vista	PC	A				
CL2	308	Evergreen Vista	PC	A				
CL2	354	Terry Lane	PC	A				
CL2	355	Crescent Park	PC	A				
CL2	670	Whiskey Hollow	PC	A				
CL2	318	Mathias	PC	B				
CL2/FILTERS	307	Pleasant Valley	PC	A				
CL2	610	Webster Hill	PC	A				
CL2	762	Forest Glen	PC	A				
CL2	256	C Muck 1	PC	B				
CL2	259	H Muck 1	PC	B				
CL2	260	H Muck 2	PC	B				
CL2	261	T Muck 3	PC	B				
CL2	264	Travis Jack	PC	A				
CL2	309	North Roy	PC	B				
CL2	683	Deschutes Village	TC	A				
CL2	251	Smith Prairie	TC	B				
CL2	250	Bald Hills	TC	B				
CL2	618	Maxvale	TC	A				
CL2	708	Campbell	TC	B				

# NORTH ROUTE

## SALT

Week 1      Week 2      Week 3      Week 4

Treatment	#	System	County	Size	Date	Date	Date	Date
SALT	620	Walczak	PC	A				
SALT	380	Hebert	PC	B				
SALT	508	Sales	PC	B				
SALT/FILTERS	245	304th/92nd	PC	B				
SALT	262	Mud Lake	PC	B				
SALT	389	Armstrong	PC	B				
PEROXIDE	319	DWS Little	PC	B				
SALT	386	Enslow 1-3	TC	B				
SALT	265	Tish Hinkle	PC	B				

## BI-WEEKLY FILTERS

Week 1      Week 2      Week 3      Week 4

Treatment	#	System	County	Size	Date	Date	Date	Date
FILTERS	243	200th	PC	B				
FILTERS	273	Boundary	PC	B				
FILTER	662	Boots & Saddle	PC	A				

## MONTHLY pH

Treatment	#	System	County	Size	Date	Notes
CALCITE	608	Horsfall	Thurston	A		West of Deschutes Village
CALCITE	669	Spanaway 192nd	Pierce	A		East of Crescent Park

### Additional Notes

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# SOUTH ROUTE

Technician: \_\_\_\_\_

Month / Year: \_\_\_\_\_

## WEEKLY

Week 1

Week 2

Week 3

Week 4

Treatment	#	System	County	Size	Date	Date	Date	Date
CL2	* 761	Keanland Park	TC	A				
Salt	733	Morris	TC	B				
CL2	* 617	Cedar Ridge	TC	A				
CL2	228	Marshall	TC	B				
CL2	* 763	Cedarwood	TC	A				
CL2	* 612	Skookumchuck	TC	A				
CL2/Soda Ash	* 369	Loma Vista	TC	A				
CL2/Soda Ash	* 213	Crowder	TC	A				
Salt/Media	344	Eastridge 2 & 3	LC	B				
Soda Ash	210	Aust	LC	A				
CL2	* 240	Valley Meadows	LC	A				
Salt	274	Granite 1 & 2	LC	B				
Salt	301	Hunter 1-4	LC	B				
CL2	276	Red Cloud	LC	B				
CL2	* 626	ROM	LC	B				
Salt	282	Res 1 & 2 / Raubuck	LC	B				
CL2/ATEC	630	Hidden Meadows 1-3	LC	B				
Soda Ash/Salt	208	Brockway 1 & 2	LC	B				
CL2	515	Whitney	LC	B				
CL2	629	Foron	LC	B				
Sand Filters	627	Sandra Ave	LC	A				
CL2	290	LCUC	TC	B				
Filters	703	Brandywine	TC	B				
CL2	221	Ivan	TC	B				
CL2	* 616	Redtail Hawk	TC	A				
CL2/Soda Ash	* 230	Prairie Villa	TC	A				
CL2	613	Frog Hollow 1-3	TC	B				
CL2/Soda Ash	* 606	Cornerstone	TC	A				
Soda Ash	604	Pederson Place	TC	A				
Air	351	Lazy Acres	TC	A				
CL2/ATEC	677	Cedar Shores	TC	A				
Filters	731	McLane Point	TC	B				
CL2/ATEC	737	Reserve 1-4	TC	B				
Filters/Media	675	Biscay Acres	TC	A				



# CENTRAL ROUTE

Technician: \_\_\_\_\_

Month / Year: \_\_\_\_\_

## WEEKLY

Week 1      Week 2      Week 3      Week 4

Treatment	#	System	County	Size	Date	Date	Date	Date
CL2/SALT	381	Tracy 1	TC	B				
SALT	382	Tracy 2	TC	B				
SALT	383	Tracy 3	TC	B				
SODA ASH	688	Marvin Gardens	TC	A				
CL2	364	Nisqually Highlands	TC	A				
CL2	600	Tanglewilde	TC	A				

## MONTHLY

Week 1      Week 2      Week 3      Week 4

Treatment	#	System	County	Size	Date	Date	Date	Date
VFD	605	Prairie Ridge	TC	A				
VFD	607	Hawks Acres	TC	A				
VFD	239	Tolmie Estates	TC	A				
CALCITE	685	Giffords	TC	A				
VFD	225	Lew's 81st	TC	B				

### Additional Notes

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System Name: \_\_\_\_\_

Tech: \_\_\_\_\_

### Pumphouse Checklist

Date: \_\_\_\_\_

Assets	Good	Needs work	Other
Well amperage			
GPM well is producing GPM			
Source meter read			
Pumping cycle rate (no more then 20 times per hour)			
Pressure reading READ			
Pressure switch			
Booster pumps working properly			
Well pump working properly, proper draw			
Bladder tanks PSI last aired			
Pneumatic tanks			
Air compressor			
Wellhead vents, openings, electrical			
Leaks			
Storage yes or no if yes, attach storage check list			

Building	Good	Needs work	Other
Buildings venting			
All openings sealed against animals			
Building overall condition			
Roof condition			
Inside clean and neat			
Foundation clear of dirt and debris			
Outside clean and building painted			
Properly insulated and sheathed			
Access to wells and easements			

### Comments:

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System Name: \_\_\_\_\_

Field Tech: \_\_\_\_\_

### Storage Checklist

Date: \_\_\_\_\_

Assets	Good	Needs work	Other
Overflow vents			
Roof condition			
Access hatches			
All opening are protected			
Ladder			
Level indicator			
Foundation			
Exterior cracks, leaks			
Vegetation control			
Control valves			

### Comments:

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2020

77TH AVE, 255 - 52743R

PIERCE

S01

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Appendix N  
Standard Operating Procedures

Water System Plan – Part A

## **Appendix N – Standard Operating Procedures (SOPs)**

1. Chlorination
2. UV Treatment
3. Corrosion Control
4. Iron and Manganese Removal with Softeners
5. Bag Filters
6. Flushing
7. Hydrants
8. Distribution Valves
9. Service Requests

# **Chlorination O&M Procedures**

## **Overview**

The District currently has 57 water systems that are chlorinated. See table below of systems and their disinfection requirement of 4-Log, CT6, precautionary, or for treatment. All chlorinated systems are monitored by a service technician on a weekly basis. Due to the unique nature of the District owning water systems spread across six counties, the District has recruited and trained residential customers to take a daily chlorine residual so federal, state, and local monitoring requirements can be met. If the chlorine residual is out of range, customers will contact the District and a service technician will be dispatched 24/7 to check and adjust the system to meet the required residual within 4-hours.

## **Field Operations Routine Maintenance**

When performing their weekly checks, field staff cover the following maintenance procedures:

- Take chlorine residual;
- Add chlorine, if needed;
- Dispose of empty chlorine bottles properly;
- Check equipment for leaks;
- Check equipment while it's operating, paying close attention to the Stenner tubes;
- Read source meter; and
- Fill out paperwork to document, at a minimum: the residual, any chlorine added, the source read, any changes to the pump settings, and any time a Stenner tube is replaced.

## **Reporting**

Examples of the customer, pumphouse and State reporting forms are included at the end of this section. Forms are returned to the office after the first of each month, processed, and emailed to the appropriate DOH or county agency by the tenth of each month.

## **Residential Chlorine Testers**

To meet federal, state, and local guidelines the District has recruited residential chlorine testers in each reporting system. All testers receive a credit for the base rate on their account for their time and extra water they use to test. The District has a section of our website dedicated to our testers where they can download reporting forms, report low residuals, request more supplies, and watch tutorial videos. Each tester has a customized form based on the required residual in their water system and can contact us by phone or through the web form when the residual is out of range.

## **Chlorine Test Kits**

Both residential testers in reporting systems as well as our field techs use Hach's DR300 Pocket Colorimeter to test the chlorine levels. Annual verification and calibration began in 2020 to ensure test accuracy for our field staff. Test kits outside the standard deviation are being sent back to the manufacturer for recalibration or replacement. The same process for our customers is being developed. In systems that have chlorine for precautionary or treatment purposes, color wheels are used by our residential chlorine testers to test the chlorine levels.

### **Hach Remote Read Systems**

Thurston PUD has 4 systems that utilize Hach Remote readers and are identified in the table below. This allows field techs to see the chlorine residual in real time at systems that are geographically difficult to visit every week. Reads are recorded either every 15 minutes or hourly depending on the system onto a SD data card. The field techs then pick up the SD card every month and turn it into the Planning and Compliance Administrative Assistant to download the data and fill out the appropriate report to turn into the DOH or county agency.

## Chlorinated Systems

Name	System #	County	Group	Route	Reported To	Disinfection Requirement	Frequency	Required Residual	Remote Reads
Cedar Ridge Estates	617	TC	A	S	SW	CT6	5 days / wk	0.3	-
Cedar Shores	677	TC	A	S	-	Treatment	5 days / wk	0.2	-
Cedarwood	763	TC	A	S	SW	CT6	5 days / wk	0.6	-
Clerget	253	PC	A	N	NW	CT6	5 days / wk	0.6	-
Cornerstone Est	606	TC	A	S	SW	CT6	5 days / wk	0.43	-
Crescent Park	355	PC	A	N	NW	CT6	5 days / wk	0.6	-
Crocker Creek	663	PC	A	N	NW	4-Log	7 days / wk	0.6	Hach
Crowder Road	213	TC	A	S	SW	CT6	5 days / wk	0.6	-
Deschutes Village	683	TC	A	N	SW	CT6	5 days / wk	0.3	Hach
Elk Heights	247	PC	A	N	-	Treatment	5 days / wk	0.3	-
Evergreen Vista	308	PC	A	N	NW	Precautionary	5 days / wk	0.2	-
Forest Glen	762	PC	A	N	NW	4-Log	7 days / wk	0.1	-
Glacier Vista	665	PC	A	N	-	Treatment	5 days / wk	0.2	-
Keanland Park	761	TC	A	S	SW	CT6	5 days / wk	0.2	-
Loma Vista	369	TC	A	S	SW	CT6	5 days / wk	0.6	-
Nisqually Highlands	364	TC	A	C	-	Treatment	5 days / wk	0.5	-
Pleasant Valley	307	PC	A	N	NW	Precautionary	5 days / wk	0.2	-
Prairie Villa	230	TC	A	S	SW	CT6	5 days / wk	0.6	-
Redtail Hawk	616	TC	A	S	SW	CT6	5 days / wk	0.5	-
ROM	626	LC	A	S	SW	CT6	5 days / wk	0.6	Hach
Skookumchuck	612	TC	A	S	SW	4-Log	7 days / wk	0.8	-
Smith S Prairie	251	TC	A	N	SW	CT6	5 days / wk	0.2	-
Tanglewilde	600	TC	A	C	SW	Precautionary	5 days / wk	0.2	-
Terry Lane	354	PC	A	N	NW	Precautionary	5 days / wk	0.2	-
Travis Jack	264	PC	A	N	NW	CT6	5 days / wk	0.5	-
Valley Meadows (S02)	240	LC	A	S	SW	CT6	5 days / wk	0.6	-
Valley Meadows (S04)	240	LC	A	S	SW	CT6	5 days / wk	0.6	-
Webster Hill	610	PC	A	N	NW	CT6	5 days / wk	0.3	-
Whiskey Hollow	670	PC	A	N	-	Precautionary	5 days / wk	0.2	-
Bald Hills	250	TC	B	N	-	CT6	5 days / wk	0.6	-
Brown S. Prairie	249	PC	B	N	TPCHD	CT6	5 days / wk	0.6	-
Campbell	708	TC	B	N	-	CT6	5 days / wk	0.2	-
Christensen Muck 1	256	PC	B	N	TPCHD	CT6	5 days / wk	0.6	-
Foron	629	LC	B	S	S. Kennedy	CT6	5 days / wk	0.6	Hach
Frog Hollow 1	613	TC	B	S	-	CT6	5 days / wk	0.6	-
Frog Hollow 2	614	TC	B	S	-	CT6	5 days / wk	0.6	-
Frog Hollow 3	615	TC	B	S	-	CT6	5 days / wk	0.6	-
Hansford Muck 1	259	PC	B	N	TPCHD	CT6	5 days / wk	0.6	-
Hansford Muck 2	260	PC	B	N	TPCHD	CT6	5 days / wk	0.6	-
Hidden Meadows I	630	LC	B	S	-	Treatment	5 days / wk	0.2	-
Hidden Meadows II	631	LC	B	S	-	Treatment	5 days / wk	0.2	-
Hidden Meadows III	632	LC	B	S	-	Treatment	5 days / wk	0.2	-
Ivan St	221	TC	B	S	-	CT6	5 days / wk	0.6	-
LCUC 7	291	TC	B	S	-	CT6	5 days / wk	0.6	-
Marshall	228	TC	B	S	-	CT6	5 days / wk	0.6	-

## Chlorinated Systems

Name	System #	County	Group	Route	Reported To	Disinfection Requirement	Frequency	Required Residual	Remote Reads
Mathias	318	PC	B	N	TPCHD	CT6	5 days / wk	0.6	-
Maxvale	618	TC	B	N	-	Treatment	5 days / wk	0.2	-
North Roy	309	PC	B	N	TPCHD	CT6	5 days / wk	0.6	-
Red Cloud 2	276	LC	B	S	-	CT6	5 days / wk	0.6	-
Reserve CP 1	737	TC	B	S	-	Treatment	5 days / wk	0.2	-
Reserve CP 2	738	TC	B	S	-	Treatment	5 days / wk	0.2	-
Reserve CP 3	739	TC	B	S	-	Treatment	5 days / wk	0.2	-
Reserve CP 4	740	TC	B	S	-	Treatment	5 days / wk	0.2	-
Reserve CP 5	741	TC	B	S	-	Treatment	5 days / wk	0.2	-
Tracy #1	381	TC	B	C	-	CT6	5 days / wk	0.6	-
Trinity Muck 3	261	PC	B	N	TPCHD	CT6	5 days / wk	0.6	-
Whitney	515	LC	B	S	-	Treatment	5 days / wk	0.2	-



# Bald Hills #250 Pumphouse Chlorination Report Form

<b>Residential Chlorine Tester</b> Tyrone Booker 14248 Bald Hill Dr SE (360) 894-3717	Month of: _____ 20__
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<b>System Name:</b> Bald Hills – 250	<b>ID#:</b> 60692 A	<b>County:</b> TC	<b>Report to:</b> NR
<b>Source #: S01</b>	<b>Source Name: Well #1 AAF156</b>		
<b>12.5% liquid bleach</b>	<b>Mix of Solution:    1    Gallons Cl2</b>	<b>To   10   Gallons of Water</b>	
<b>ODW Water Quality Parameter Requirements:</b> Target Chlorine Residual: at least <u>1.0</u> ppm Customer has been told to call when under: <u>0.7</u> ppm Chlorine Residual must be at least: <u>0.6</u> ppm			

Day	Meter Read	Gals	Added Cl <sub>2</sub> + H <sub>2</sub> O	Total Gals	Free Cl <sub>2</sub> Residual	Pump Setting	Initials
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							

**This report is to be returned to the TPUD office by the 5<sup>th</sup> of each month.**  
 Reports are to be submitted to the DOH ODW by the 10<sup>th</sup> of each month.



## Bald Hills #250

### Daily Customer Chlorination Report Form

Thurston PUD 1230 Ruddell Rd SE Lacey, WA 98503 (360) 357-8783	Month of: _____ 20__
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<b>System Name:</b> Bald Hills 250	<b>ID#:</b> 60692A	<b>County:</b> Thurston	<b>Report to:</b> NR
<b>If residual gets below 0.7 ppm or above 2.0 ppm please contact the office at (360)357-8783 <u>ASAP</u>.</b>			
<i>If taking a vacation please contact our Customer Service Department two weeks in advance so we can get the residual done while you are gone.</i>			

Day	Time of Day	Free Cl2 Residual	Initials	Called PUD	Comments
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

**Please mail, email or fax into the PUD office by the 2nd of the following month.** Form needs to be submitted to the State by the 10<sup>th</sup> of each month or the PUD may receive a violation for the system. Email [PUDCustomerService@thurstonpud.org](mailto:PUDCustomerService@thurstonpud.org) Fax # 360-357-1172



## SOURCE DISINFECTION TREATMENT PLANT REPORT FORM

<b>Water System Name</b> Cedar Ridge #617		<b>Month/Year</b> Apr-20	
<b>County</b> Thurston	<b>ID#:</b> 29386	<b>Report submitted by</b> Thurston PUD	
<b>Treatment Plant #</b> 1	<b>Source(s)#</b> S01	<b>Operator Certificate#</b> 7314	
<b>Requirements:</b> Maximum flow rate: 75 gpm		<b>Telephone #</b> 360-357-8783	
Cl <sub>2</sub> Residual: 0.30 mg/L at entry 0.3 mg/L in distribution		<b>Signature:</b>	
Monitoring required: 5 days per week - Digital			

Date	Water		Chlorine Solution Used		Treated Water Quality			
	Source Meter Reading	Tank Level (Gallons)	Volume Used (Gallons)	Cl <sub>2</sub> Residual @ Entry (mg/L)	Distribution Cl <sub>2</sub> Residual (mg/L)	Distribution Sample Location	Troubleshooting Notes Also record additional residual readings following a low or zero residual reading	Sampler Initial
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
<b>Total</b>				0	0	← Total number of measurements collected		
<b>Max</b>				0.00	0.00			
<b>Min</b>				0.00	0.00			

Send report by the 10th of the following month to your Regional Office. See instructions page.	<b>Water Treatment Summary (completed by the operator)</b>	
	Number of days treatment plant produced water:	30
	Number of days entry point free chlorine residual fell below minimum residual:	0
Number of days distribution free chlorine residual fell below minimum residual:	0	

# UV Treatment

## Overview

Ultraviolet (UV) Treatment is used as a disinfectant that kills all bacteria that is exposed to its electromagnetic energy at approximately 260 nanometers. It works by preventing bacteria from multiplying and thus dies off. It is not effective against giardia because it can't penetrate the hard wall of the cyst. In addition, water quality must not exceed the following standards for UV disinfection to be effective:

- Turbidity: < 1 NTU
- Manganese: 0.05 mg/L
- Total Suspended Solids: 10 mg/L
- pH: 6.5 – 9.5
- Color: None
- Hardness: 102.6 ppm
- Iron 0.3 mg/L
- Tannins: < 0.1 ppm (0.1 mg/L)

Thurston PUD has 10 water systems that utilize Sanitron S2400B UV Water Purifiers with the Guardian UV Monitor:

- Violet Meadows A, B, C, and D
- Violet Meadows 1, 2, 3, 4, 5, and 6

## Routine Maintenance Schedule

The water purifier is designed to operate with a minimal amount of maintenance, provided the water quality does not exceed maximum concentration levels.

- Monthly
  - Test the Appliance Leakage Current Interrupter (ALCI).
  - Clean the quartz sleeve using the wiper mechanism.
  - If, after cleaning the quartz sleeve, there is no significant improvement in the ultraviolet intensity, as shown on the intensity meter, it may be necessary to clean the Ultraviolet Monitor's sensor probe.
  - Inspect the germicidal lamp to be sure it is still in operation.
    - On purifiers not equipped with the Ultraviolet Monitor, lamp operation can be verified by a visible glow through the translucent sight port. This provides an indication of lamp operation and does not indicate the level of ultraviolet intensity or transmission through the water.
    - On purifiers so equipped, the GUARDIAN™ Ultraviolet Monitor provides visual indication of the ultraviolet intensity through the quartz sleeve and water in the purifier chamber.

- Quarterly
  - Biological testing to include all eight characteristics listed in the *Overview* section. If four consecutive tests are below the amounts listed in the *Overview* section, testing can be moved to an annual schedule and done when the lamp is replaced.
- Annually
  - Lamp replacement.
- 3 Years
  - Replace quartz sleeve.

### **Safety**

- Always disconnect the power before performing any maintenance to prevent the risk of severe or fatal electrical shock. Keep in mind water is present near electrical equipment in this unit.
- Avoid exposure to direct or strongly reflected germicidal ultraviolet rays to prevent damage to your eyes and skin. If replacing the lamp, do not restore power to the water purifier until the lamp and both easy-off caps have been properly reinstalled.
- Do not operate the water purifier if the power cord or plug is damaged.
- Electrical power supplied to the water purifier **MUST** match power requirements listed on the water purifier.
- Do not operate without a proper electrical ground.
- Do not exceed the water purifier's maximum rated flow capacity.
- Do not exceed maximum operating pressure of 100 PSI.

### **Personal Protective Equipment (PPE)**

When replacing the UV lamp or quartz sleeve, wear safety glasses or a face shield and gloves.

### **Disposal of Mercury Lamps after Annual Replacement**

Germicidal ultraviolet lamps, like standard fluorescent lamps contain small amounts of mercury. Mercury added lamps should not be placed in the trash, they should be taken to HazoHouse for disposal. They are located at 2420 Hogum Bay Rd NE, Lacey, WA 98516. Their phone number is 360-867-2912. They are open 7 days a week from 8:00 am to 4:45 pm.



# UV Treatment

Violet Meadows A - 747

### MONTHLY

- Test the Appliance Leakage Current Interrupter (ALCI)
- Clean the Quartz Sleeve using the Wiper
- Clean the Guardian UV Monitor
- Inspect the Germicidal Lamp

Date	Date	Date	Date	Date	Date
Date	Date	Date	Date	Date	Date

### QUARTERLY

Biological Testing

Test	Less Than	Date	Date	Date	Date
		Results	Results	Results	Results
Turbidity	1 NTU				
Manganese	0.05 mg/L				
Total Suspended Solids	10 mg/L				
pH	6.5 – 9.5				
Color	None				
Hardness	102.6 ppm				
Iron	0.3 mg/L				
Tannins	0.1 ppm				

### ANNUALLY

Replace Lamp

Date Last Changed		Current Date	
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### 3 YEARS

Replace Quartz Sleeve

Date Last Changed		Current Date	
-------------------	--	--------------	--

## Corrosion Control

### Overview

Ensuring a reliable and consistent pH level is one of the primary ways to control corrosion and maintain water quality. Thurston PUD uses soda ash, calcite, and aeration across 17 water systems to achieve this.

Name	System #	pH Adjustment (Corrosion Control)
Brockway #1	208	Soda Ash
Brockway #2	209	Soda Ash
Aust	210	Soda Ash
Crowder Road	213	Soda Ash
Prairie Villa	230	Soda Ash
Lazy Acres	351	Aeration
Loma Vista	369	Soda Ash
Pederson Place	604	Soda Ash
Cornerstone Est	606	Soda Ash
Horsfall	608	Calcite (2.0 ft)
Sandra Avenue	627	Calcite (2.9 ft)
Spanaway 192nd	669	Calcite (2.6 ft)
Burnsville	676	Calcite (2.9 ft)
Giffords	685	Calcite (2.8 ft)
Marvin Gardens	688	Soda Ash
Meadow Wood	689	Calcite (2.0 ft)
Tahoma Meadows	694	Calcite (4.1 ft) Aeration

### Soda Ash Systems

Stenner pumps, controllers, and tubes are used to inject soda ash. Routine maintenance should be documented on the pump house sheet.

Routine Maintenance and Standard Operating Procedures:

- Take a pH sample at the entry point every two weeks.
- Take a pH sample in distribution quarterly.
- Check all tubes to make sure there are no clogs. It's working properly if you can see a bubble move through the tube or if the tube is twitching.
- When Stenner Tube (are any part) is replaced, mark the date on a sheet. In addition to tubes, it's common to have to replace the body/housing, motor, clutch, cam, and cam housing clips before replacing the whole unit.

### **Calcite Systems**

ATEC systems work when water flows through a limestone contactor tank and dissolves calcium carbonate (calcite is the most stable polymorph of calcium carbonate).

Routine Maintenance and Standard Operating Procedures:

- Check the tank level. Each system has a specific measurement on the pumphouse sheet, so field staff knows if more calcite needs to be added.
- After adding more calcite, the field tech emails the Operations Department so that the frequency and amount of calcite can be tracked.

### **Safety**

SDS info can be found on the back of the pumphouse sheet.



**THIS IS NOT A COMPREHENSIVE LIST!**  
**PLEASE REFER TO THE SAFETY DATA SHEET (SDS) FOR MORE DETAILS.**

**Soda Ash Emergency Overview**

White, granular solid. Product is non-combustible. Reacts with acids to release carbon dioxide gas and heat. Irritating to the eyes. Continuous contact may irritate skin.

**Potential Health Effects**

Direct contact with the product causes irritation of the eyes and continuous contact may cause skin irritation (red, dry, cracked skin). Excessive levels of airborne dust may irritate the mucous membranes and upper respiratory tract.

**First Aid Measures**

- EYES: Immediately flush with water for at least 15 minutes, lifting the upper and lower eyelids intermittently. See a medical doctor or ophthalmologist immediately.
- SKIN: Wash with plenty of soap and water. Get medical attention if irritation occurs and persists.
- INGESTION: Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. Never give anything to an unconscious person. See a medical doctor immediately.
- INHALATION: Remove to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.

**Handling Precautions**

Avoid contact with eyes, skin, or clothing. Avoid creating or inhaling dust. Ensure adequate ventilation. Wash hands after use. Launder contaminated clothing before reuse. Use appropriate protective equipment such as gloves, coveralls, and dust proof goggles.

**Storage Information**

Store away from acids to avoid an unsafe amount of carbon dioxide being released into the air. Store in a cool, dry location. Since dry soda ash is not corrosive, it can be stored in steel or concrete bins.

**Disposal Considerations**

Bury in a licensed landfill according to federal, state, and local regulations.

**Fire Fighting Measures**

Suitable extinguishing media are water, water fog, carbon dioxide, and dry chemical.



**Corrosion Control Report Form  
Tahoma Meadows - 694**

**Chemicals:** Calcite (Puri-Cal), aka Calcium Carbonate, CaCO<sub>3</sub>  
**Target pH:** 7.4

Month	Date	Raw pH	Treated pH Entry Point (every 2 weeks)	Treated pH Distribution (quarterly)	Source Meter
<b>JANUARY</b>			/		
February			/		
March			/		
April			/		
May			/		
June			/		
<b>JULY</b>			/		
August			/		
September			/		
October			/		
November			/		
December			/		

**CALCITE TANK LEVEL NEEDS TO BE CHECKED EVERY 6 MONTHS**

Tank Level should be: 4.1 feet from the top

Month	Date	Tank Level (ft from top)	Added Calcite	New Tank Level (ft from top)
<b>JANUARY</b>				
<b>JULY</b>				

**THIS IS NOT A COMPREHENSIVE LIST!  
PLEASE REFER TO THE SAFETY DATA SHEET (SDS) FOR MORE DETAILS.**

**Calcite Emergency Overview**

White solid that looks like sand or gravel. Product is non-combustible. Reacts with acids to release carbon dioxide gas and heat.

**Potential Health Effects**

Carcinogenic – May cause cancer.

**First Aid Measures**

- EYES: Flush thoroughly with water as a precaution.
- SKIN: Wash off with soap and plenty of water.
- INGESTION: Rinse mouth thoroughly with water and drink afterwards plenty of water to dilute material in stomach. Do not induce vomiting. Never give anything by mouth to an unconscious person.
- INHALATION: Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion. If symptoms persist, call a physician.

**Handling Precautions**

Avoid contact with eyes, skin, or clothing. Avoid creating or inhaling dust. Ensure adequate ventilation. Wash hands after use. Launder contaminated clothing before reuse. Use appropriate protective equipment such as gloves, coveralls, dust proof goggles, and respirators.

**Storage Information**

Store away from acids to avoid an unsafe amount of carbon dioxide being released into the air. Store in a cool, dry location that is well ventilated.

**Disposal Considerations**

From a waste perspective, this product is not considered hazardous and may be disposed of as solid waste in accordance with applicable federal, state, provincial, and local regulations.

**Fire Fighting Measures**

This material is not combustible. Appropriate extinguishing media for surrounding fire should be used.

# **Iron and Manganese Removal with Softeners**

## **Overview**

The District currently has 31 water systems that filter for iron and manganese with softeners. A full list is provided below. Treatment consists of an automatic water softener designed to remove hardness, iron and manganese using the sodium ion exchange process.

## **Two Types of Softeners**

1. Contains resin beads. These units are good for iron below 1ppm and have no tolerance for chlorine because it melts the resin beads. Most have Res-up feeders in the brine tanks that drip citric acid into the salt and when it backwashes the citric acid lowers the pH to 3-5 and dissolves the iron from the resin beads.
2. Contains CR100-CR200. These units can handle 25ppm of iron with hardness and manganese. In addition, it can handle chlorinated water, but doesn't function well with low pH. The units generate their own chlorine from the salt brine, this chlorine then squeezes the crystals and wrings the iron off the media, like squeezing water from a sponge.

## **Brine Tanks**

The brine tanks being used have salt shelves. This keeps the salt up and off the bottom of the tank, which lets the debris fall below the shelf. The tanks should be periodically cleaned every 3-5 years. Solar salt (pure salt crystals) is used as much as possible because of its purity. Salt in pellet or compressed forms has filler in it, which ultimately fouls the brine tank.

## **System Check**

- Inspect brine tank fill tube. If it is getting discolored from iron, the units are being run past their capacity and should be adjusted to backwash more frequently. It also is an indication of units running out of salt and could signal a dying unit, fouled media, plugged injector or lack of salt in brine tank for extended time period.
- Check salt level in brine tank, add if necessary. Resin based units should have Res-Up feeders in them, these need to be topped off when adding salt.
- Make Note of Leaks.
- Replace Battery (CR 2031 disc) if the time on the unit is off by more than an hour.

## **Annual Maintenance**

- Replace injector.
- Check for water going to drain when in service. If it is, the seal and spacer kit should be replaced.

## **Systems with Softeners**

<b>Name</b>	<b>System #</b>
304th & 92	245
Armstrong	389
Brockway #1	208
Brockway #2	209
Brown S. Prairie	249
Eastridge 2	347
Eastridge 3	348
Eastridge W	344
Enslow #1	386
Enslow #2	387
Enslow #3	388
Fir Tree #2	372
Granite #1	274
Granite #2	275
Hebert	380
Hunter 1	301
Hunter 2	302
Hunter 3	303
Hunter 4	304
Morris	733
Mud Lake	262
Raubuck	282
RES 1	283
RES 2	284
RES 3	285
Sales	508
Tish Hinkle	265
Tracy #1	381
Tracy #2	382
Tracy #3	383
Walczak	620

## **Bag/Sock Filters**

### **Overview**

There are approximately 20 water systems with sock filters to remove sand from the water. All bag filters have a pressure differential pressure gauge on them. This gauge shows the difference between the incoming and outgoing pressure. A list of systems with a replacement schedule is being developed. When it's complete, the systems will be added to the route North, South, and Central route sheet.

### **Routine Maintenance and Standard Operating Procedure**

- **Frequency** - In general, the filters need to be checked at least once a month. When a new filter is installed, it is checked more frequently to determine the proper replacement schedule based on field data of how fast the filter fills up.
- **When to Replace** - When the needle on the gauge is in the red, it indicates reduced pressure on the outgoing side, and the bag needs to be replaced. Do not reuse the filter.
- **Records** – Write on the pumphouse sheet: “Replaced filter” and the date.

## Flushing – Standard Operating Procedure

### Overview

Flushing water mains is a recommended practice to reduce mineral deposits in the pipe that can impede the flow of water through pipes as well as create color, odor, and taste issues for customers. There are 158 water systems that require routine flushing. 100 systems should be flushed annually, 23 systems should be flushed quarterly, 35 systems should be flushed monthly. A full schedule with water system names is attached at the end. In addition to routine flushing, there is also emergency flushing that occurs when customers call with water quality complaints.

### Flushing Procedure

The flushing procedure for Routine Maintenance is outlined below. The flushing procedure for a quality issue or an emergency is the same except for step 1. The customers may not receive 72-hour advance notice depending on the situation.

Department	Step	Action
OC, FS, or CS	1	Customers are contacted 72 hours in advance by call-em-all, door hanger, street sign, or a combination of all three.
FS	2	Once on site, field staff identifies which blow-off or hydrant will be used for flushing.
FS	3	An initial read is taken from the source meter.
FS	4	The water main being flushed is isolated with inline valves if necessary.
FS	5	The hydrant or blow-off is opened and the flushing begins.
FS	6	Flushing continues for approximately 30 minutes or until the line is clear.
FS	7	The hydrant or blow-off is closed.
FS	8	The source meter is read again to get the final read.
FS	9	For chlorinated systems, the chlorine residual is taken to make sure it's within acceptable range as determined by the pumphouse report.
FS	10	The field staff email the start and end source meter reads to the Planning and Compliance department.
OC	11	The amount of water flushed in gallons is converted to cubic feet as necessary and then put on the monthly consumption report, "MONTHLY DSL-GPDPC YTD 2020". The file is in K:\METERS\Consumption Reports.

### **Department Abbreviations**

OC – Operations and Compliance

FS – Field Staff

CS – Customer Service

### **Tracking/Recordkeeping**

A printed copy of all systems is given to the Director of Field Operations (DFO) at the beginning of every month. Throughout the month, the DFO fills in the date next to the system where a flushing occurred. At the end of the month, the DFO turns in the hand-written report to Planning and Compliance Administrative Assistant (PCAA). The PCAA enters the data into the spreadsheet and prints a new copy for the DFO to fill in for the following month.

The Flushing Schedule is located at K:\Field Staff.

# FLUSHING SCHEDULE

System		Date	Date	Date	Date
2533	201				
141st Ave KPN	661				
200th	243				
304th & 92	245	Q	3-7-18		
304th 1	312				
304th 2	313				
336th 1	310				
336th 2	311				
366th	272				
4199-A	202				
4199-B	203				
4199-C	204				
4199-D	205				
77th	255				
Antrim	378				
Apricot Park 1	697	A			
Apricot Park 2	698	A			
Armstrong	389				
Aust	210				
Bald Hills	250				
Bear	503				
Berry #2	671	A			
Berry #3	672	A			
Berry #6	673	A			
Biscay Acres	675	Q	7-18-18	2-22-19	
Boots & Saddles	662	Q	12-20-18		
Bordeaux Farms 1	699	A			
Bordeaux Farms 2	700	A			
Bordeaux Farms 3	701	A			
Bordeaux Farms 4	702	A			
Boundary SK	273				
Brandywine 1	703	A			
Brandywine 2	704	A			
Brandywine 3	705	A			
Brandywine 4	706	A			
Brighton Creek	270	M	4-19-18		
Brockway #1	208	M	6-21-18		
Brockway #2	209	M	6-21-18		
Brookhaven 1	287				
Brookhaven 2	288				
Brookhaven 3	289				
Brown S. Prairie	249		1-24-18		
Burnsville	676	A	3-28-19		
C&M	707	A	12-18-18		
Campbell	708	A			
Cedar Park	366				
Cedar Ridge Estates	617	Q	11-13-18	1-3-19	4-4-19
Cedar Shores	677	Q			
Champion Estates A	709	A	8-23-18		
Champion Estates B	710	A	8-23-18		
Christensen Muck 1	256		2-1-18		
Christensen Muck 2	257	M	2-1-18		
Christensen Muck 3	258	M	2-1-18		
Clerget	253				
Cooperfield	678	A			
Cornerstone Est	606		5-14-19		
Cougar	504				
Country Club	679	Q			
Country Homes	621	A			
Country Sunrise	711	A			
Countrywood Estates	680	Q	12-6-18		
Covington	212				
Cowlitz	541	M			
Crescent Park	355				
Crocker Creek	663	Q			
Crow	514				
Crowder Road	213		11-5-18		
Deerfield Park 1	681	A			
Deerfield Park 2	682	A			
Deschutes Glen	215	M	2-7-18		
Deschutes River Garden E	712	A			
Deschutes River Garden W	713	A			
Deschutes Village	683	A	12-18-18		
Durkin	367				
DWS Little	319	Q			

System		Date	Date	Date	Date
Eagle	513				
East Olympia	684	A	3-6-18		
Easter Day	271				
Eastridge 2	347	M			
Eastridge 3	348	M			
Eastridge W	344	M			
Eggimann	664	A			
Elk Heights	247	Q			
Empire	714	A			
Enslow #1	386	M			
Enslow #2	387	M			
Enslow #3	388	M			
Evergreen Vista	308	Q	4-5-18		
Fir Tree #1	371		4-4-18		
Fir Tree #2	372		4-4-18		
Fir Tree #3	373		4-4-18		
Fir Tree #4	374		4-4-18		
Fir Tree #5	375		4-4-18		
Fir Tree #6	376		4-4-18		
Fir Tree #7	377		4-4-18		
Forest Glen	762				
Forest Haven #1	622	A			
Foron	629	A			
Frick S Prairie	248	M			
Frog Hollow 1	613				
Frog Hollow 2	614				
Frog Hollow 3	615				
Fuller	379	Q			
Garden Acres 1	601				
Garden Acres 2	602				
Garden Acres 3	603				
Giffords	685	A	1-31-18		
Glacier Vista	665	A			
Granite #1	274	M	5-24-18		
Granite #2	275	M	5-24-18		
Grant	716	A			
Guava	719	A			
Guava St A West	717	A			
Guava St B East	718	A			
Hansford Muck 1	259	M	1-29-18		
Hansford Muck 2	260	M	1-29-18		
Harmon Rd	220				
Hawk Acres	607				
Hawley Hills	686	A	7-20-18		
Hebert	380				
Hemlock	512				
Heslep	329				
Hidden Meadows I	630	A			
Hidden Meadows II	631	A			
Hidden Meadows III	632	A			
Highlands 1	623				
Highlands 2	624				
Hilt Street	720	A			
Homestead 1	315	M			
Homestead 2	316	M			
Horn Creek 1	268	M			
Horn Creek 2	269	M			
Horsfall	608				
Hosch Estates 1	721	A			
Hosch Estates 2	722	A			
Hosch Estates 3	723	A			
Hosch Estates 4	724	A			
Hunter 1	301	A	5-10-18		
Hunter 2	302	A	5-10-18		
Hunter 3	303	A	5-10-18		
Hunter 4	304	A	5-10-18		
Indian Crest #1	539				
Indian Crest #2	540				
Ivan St	221				
James Road A	725	A			
James Road B	726	A			
James Road C	727	A			
James Road D	728	A			
Johnson	359		8-2-18		
Keanland Park	761	A	5-1-18	1-4-19	

## FLUSHING SCHEDULE

System		Date	Date	Date	Date
Knowles Rd	729				
Lake Whitman	314	2-12-18			
Lazy Acres	351				
LCUC 6	290				
LCUC 7	291				
Lew's 81st	225	12-19-18			
Little Donkey	227	M 3-9-18	5-6-19		
Loma Vista	369	Q			
Longhorn Country Est	687	A			
Mallory C #1	730	A 2-12-19			
Maple	502				
Margaret Meadows	633	A			
Marshall	228				
Marvin Gardens	688	A			
Mathias	318				
Maxvale	618	1-23-18			
McGraw	715	3-5-18			
McKenna Estates	267	8-16-18			
McLane Point Seneca West	731	3-13-18			
Meadow Wood	689	A			
Meadows	690	Q			
Middle Street	732	A			
Morris	733	A 2-26-18			
Mound	734	A			
Mountian Lakeview	619				
Mt. Ridge	246				
Mud Lake	262	M 7-24-18			
N. Roy	309	Q 2-8-18			
Nelson Highlands	625	A			
Nisqually Highlands	364	Q 4-25-18	4-19-19		
Nisqually Vista	229				
Offut Lake Estates	735	A			
Olin	330				
Orchard	674	A			
Palermo	691	A			
Pecan Rd.	736	A			
Pederson Place	604				
Pepperwood	317	2-22-18			
Pit	328	12-28-18	2-1-19	4-24-19	
Pleasant Valley	307	M			
Post Lane	206				
Prairie Ridge	605				
Prairie View Estates	759	A			
Prairie Villa	230				
Quail Run	667	Q 11-29-18			
Raubuck	282	M			
Raven	501				
Red Cloud 2	276	Q 5-17-18			
Redtail Hawk	616	4-28-18	4-16-19		
RES 1	283	M			
RES 2	284	M			
RES 3	285	M			
Reserve CP 1	737	A			
Reserve CP 2	738	A			
Reserve CP 3	739	A			
Reserve CP 4	740	A			
Reserve CP 5	741	A			
Rich Rd	231	1-23-18			
Richwood	742	2-27-18			
Ridgewood	609	Q			
Riverlea	692	A			
Rixie Rd	232				
ROM	626	A			
Rommerman Rd	286				
Roseburg	384				
Roy 325th	668	A 8-23-18			
Sales	508				
Salkum	542				
Sandra Avenue	627	A			
Sargent Rd	234				
Scatter	743	A			
Scatter Creek Ranch	760	3-8-18	4-18-19		
Seed Water	235				
Shadowood	236				
Silver Fox	693	A			

System		Date	Date	Date	Date
Skookumchuck	612				
Sky Acres	370				
Smith S Prairie	251	1-25-18	12-28-18		
Spanaway 192nd	669	A			
Sterling Estates East	744	A			
Sterling Estates West	745	A			
Sward	278				
Tahoma Meadows	694	A			
Talcott Ridge	695	A 12-4-18			
Tall Timbers	237				
Tanglewilde	600				
Taylor Cr #1	362				
Taylor Cr #2	363				
Terry Lane	354				
Tilley Rd	238				
Timberline Village	628	A			
Tish Hinkle	265				
Tolmie Estates	239				
Tracy #1	381	Q 2-13-18			
Tracy #2	382	Q 2-13-18			
Tracy #3	383	Q 2-13-18			
Travis	746				
Travis Jack	264				
Trinity Muck 1	241	M 1-31-18			
Trinity Muck 2	242	M 1-31-18			
Trinity Muck 3	261	M 1-31-18			
Valley Meadows	240				
Vineyard, The	696	Q 9-1-18			
Violet Meadows A	747	A			
Violet Meadows B	748	A			
Violet Meadows C	749	A			
Violet Meadows D	750	A			
Violet Meadows Est. 1	751	A			
Violet Meadows Est. 2	752	A			
Violet Meadows Est. 3	753	A			
Violet Meadows Est. 4	754	A			
Violet Meadows Est. 5	755	A			
Violet Meadows Est. 6	756	A			
Walczak	620	A			
Webster Hill	610	M 12-11-17			
Whiskey Hollow	670	A			
Whitney (Legacy)	515	M			
Whitney (H&R)	757	A			
Wild Rose #1	535				
Wild Rose #2	536				
Wild Rose #3	537				
Wilderness Glen	263	M 5-24-18			
Wind Tree Division 1	758	A			
Y-Not	266				

# FLUSHING SCHEDULE

## Frequency

System		
Hunter 1	301	Annually
Hunter 2	302	Annually
Hunter 3	303	Annually
Hunter 4	304	Annually
Walczak	620	Annually
Country Homes	621	Annually
Forest Haven #1	622	Annually
Nelson Highlands	625	Annually
ROM	626	Annually
Sandra Avenue	627	Annually
Timberline Village	628	Annually
Foron	629	Annually
Hidden Meadows I	630	Annually
Hidden Meadows II	631	Annually
Hidden Meadows III	632	Annually
Margaret Meadows	633	Annually
Eggimann	664	Annually
Glacier Vista	665	Annually
Roy 325th	668	Annually
Spanaway 192nd	669	Annually
Whiskey Hollow	670	Annually
Berry #2	671	Annually
Berry #3	672	Annually
Berry #6	673	Annually
Orchard	674	Annually
Burnsville	676	Annually
Cooperfield	678	Annually
Deerfield Park 1	681	Annually
Deerfield Park 2	682	Annually
Deschutes Village	683	Annually
East Olympia	684	Annually
Giffords	685	Annually
Hawley Hills	686	Annually
Longhorn Country Est	687	Annually
Marvin Gardens	688	Annually
Meadow Wood	689	Annually
Palermo	691	Annually
Riverlea	692	Annually
Silver Fox	693	Annually
Tahoma Meadows	694	Annually
Talcott Ridge	695	Annually
Apricot Park 1	697	Annually
Apricot Park 2	698	Annually
Bordeaux Farms 1	699	Annually
Bordeaux Farms 2	700	Annually
Bordeaux Farms 3	701	Annually
Bordeaux Farms 4	702	Annually
Brandywine 1	703	Annually
Brandywine 2	704	Annually
Brandywine 3	705	Annually
Brandywine 4	706	Annually
C&M	707	Annually
Campbell	708	Annually
Champion Estates A	709	Annually
Champion Estates B	710	Annually
Country Sunrise	711	Annually
Deschutes River Garden E	712	Annually
Deschutes River Garden W	713	Annually
Empire	714	Annually
Grant	716	Annually
Guava St A West	717	Annually
Guava St B East	718	Annually
Guava	719	Annually
Hilt Street	720	Annually
Hosch Estates 1	721	Annually
Hosch Estates 2	722	Annually
Hosch Estates 3	723	Annually
Hosch Estates 4	724	Annually
James Road A	725	Annually
James Road B	726	Annually
James Road C	727	Annually
James Road D	728	Annually
Mallory C #1	730	Annually
Middle Street	732	Annually

## FLUSHING SCHEDULE Frequency

Morris	733	Annually
Mound	734	Annually
Offut Lake Estates	735	Annually
Pecan Rd.	736	Annually
Reserve CP 1	737	Annually
Reserve CP 2	738	Annually
Reserve CP 3	739	Annually
Reserve CP 4	740	Annually
Reserve CP 5	741	Annually
Scatter	743	Annually
Sterling Estates East	744	Annually
Sterling Estates West	745	Annually
Violet Meadows A	747	Annually
Violet Meadows B	748	Annually
Violet Meadows C	749	Annually
Violet Meadows D	750	Annually
Violet Meadows Est. 1	751	Annually
Violet Meadows Est. 2	752	Annually
Violet Meadows Est. 3	753	Annually
Violet Meadows Est. 4	754	Annually
Violet Meadows Est. 5	755	Annually
Violet Meadows Est. 6	756	Annually
Whitney (H&R)	757	Annually
Wind Tree Division 1	758	Annually
Prairie View Estates	759	Annually
Keanland Park	761	Annually
Brockway #1	208	Monthly
Brockway #2	209	Monthly
Deschutes Glen	215	Monthly
Little Donkey	227	Monthly
Trinity Muck 1	241	Monthly
Trinity Muck 2	242	Monthly
Frick S Prairie	248	Monthly
Christensen Muck 2	257	Monthly
Christensen Muck 3	258	Monthly
Hansford Muck 1	259	Monthly
Hansford Muck 2	260	Monthly
Trinity Muck 3	261	Monthly
Mud Lake	262	Monthly
Wilderness Glen	263	Monthly
Horn Creek 1	268	Monthly
Horn Creek 2	269	Monthly
Brighton Creek	270	Monthly
Granite #1	274	Monthly
Granite #2	275	Monthly
Raubuck	282	Monthly
RES 1	283	Monthly
RES 2	284	Monthly
RES 3	285	Monthly
Pleasant Valley	307	Monthly
Homestead 1	315	Monthly
Homestead 2	316	Monthly
Eastridge W	344	Monthly
Eastridge 2	347	Monthly
Eastridge 3	348	Monthly
Enslow #1	386	Monthly
Enslow #2	387	Monthly
Enslow #3	388	Monthly
Whitney (Legacy)	515	Monthly
Cowlitz	541	Monthly
Webster Hill	610	Monthly
304th & 92	245	Quarterly
Elk Heights	247	Quarterly
Red Cloud 2	276	Quarterly
Evergreen Vista	308	Quarterly
N. Roy	309	Quarterly
DWS Little	319	Quarterly
Nisqually Highlands	364	Quarterly
Loma Vista	369	Quarterly
Fuller	379	Quarterly
Tracy #1	381	Quarterly
Tracy #2	382	Quarterly
Tracy #3	383	Quarterly
Ridgewood	609	Quarterly
Cedar Ridge Estates	617	Quarterly

## FLUSHING SCHEDULE Frequency

Boots & Saddles	662	Quarterly
Crocker Creek	663	Quarterly
Quail Run	667	Quarterly
Biscay Acres	675	Quarterly
Cedar Shores	677	Quarterly
Country Club	679	Quarterly
Countrywood Estates	680	Quarterly
Meadows	690	Quarterly
Vineyard, The	696	Quarterly
2533	201	
4199-A	202	
4199-B	203	
4199-C	204	
4199-D	205	
Post Lane	206	
Aust	210	
Covington	212	
Crowder Road	213	
Harmon Rd	220	
Ivan St	221	
Lew's 81st	225	
Marshall	228	
Nisqually Vista	229	
Prairie Villa	230	
Rich Rd	231	
Rixie Rd	232	
Sargent Rd	234	
Seed Water	235	
Shadowood	236	
Tall Timbers	237	
Tilley Rd	238	
Tolmie Estates	239	
Valley Meadows	240	
200th	243	
Mt. Ridge	246	
Brown S. Prairie	249	
Bald Hills	250	
Smith S Prairie	251	
Clerget	253	
77th	255	
Christensen Muck 1	256	
Travis Jack	264	
Tish Hinkle	265	
Y-Not	266	
McKenna Estates	267	
Easter Day	271	
366th	272	
Boundary SK	273	
Sward	278	
Rommerman Rd	286	
Brookhaven 1	287	
Brookhaven 2	288	
Brookhaven 3	289	
LCUC 6	290	
LCUC 7	291	
336th 1	310	
336th 2	311	
304th 1	312	
304th 2	313	
Lake Whitman	314	
Pepperwood	317	
Mathias	318	
Pit	328	
Heslep	329	
Olin	330	
Lazy Acres	351	
Terry Lane	354	
Crescent Park	355	
Johnson	359	
Taylor Cr #1	362	
Taylor Cr #2	363	
Cedar Park	366	
Durkin	367	
Sky Acres	370	
Fir Tree #1	371	

**FLUSHING SCHEDULE**  
**Frequency**

Fir Tree #2	372	
Fir Tree #3	373	
Fir Tree #4	374	
Fir Tree #5	375	
Fir Tree #6	376	
Fir Tree #7	377	
Antrim	378	
Hebert	380	
Roseburg	384	
Armstrong	389	
Raven	501	
Maple	502	
Bear	503	
Cougar	504	
Sales	508	
Hemlock	512	
Eagle	513	
Crow	514	
Wild Rose #1	535	
Wild Rose #2	536	
Wild Rose #3	537	
Indian Crest #1	539	
Indian Crest #2	540	
Salkum	542	
Tanglewilde	600	
Garden Acres 1	601	
Garden Acres 2	602	
Garden Acres 3	603	
Pederson Place	604	
Prairie Ridge	605	
Cornerstone Est	606	
Hawk Acres	607	
Horsfall	608	
Skookumchuck	612	
Frog Hollow 1	613	
Frog Hollow 2	614	
Frog Hollow 3	615	
Redtail Hawk	616	
Maxvale	618	
Mountian Lakeview	619	
Highlands 1	623	
Highlands 2	624	
141st Ave KPN	661	
McGraw	715	
Knowles Rd	729	
McLane Point Seneca West	731	
Richwood	742	
Travis	746	
Scatter Creek Ranch	760	
Forest Glen	762	

## **Hydrant Program – Standard Operating Procedure**

### **Overview**

The Hydrant program is designed to accomplish three things: build a detailed database of all the hydrants, perform routine maintenance, and gather flow data. There are 230 hydrants across 14 water systems. A detailed list is attached at the end. Currently, the program is in phase one of a four-phase rollout. The four phases are as follows:

1. Locate, photograph, number, map, and record basic details of all hydrants.
2. Full Inspection and maintenance (check caps/nozzles, flush, lubricate, check for leaks, etc).
3. Repair/Replace any defective hydrants.
4. Semi-annual inspection of all hydrants.

### **Planning and Compliance**

As the field staff works on phase one, the Planning and Compliance (PC) department will be entering the details into the hydrant records database that includes maps, locations, pictures, service and maintenance records. Once the make and model of all hydrants have been identified, the PC department will acquire operation and service manuals for all hydrants and work with the Director of Field Operations (DFO) to acquire and store common parts for field staff repairs.

### **Dry-Barrel Hydrant Inspection Procedure**

1. Check the hydrant's appearance. Remove obstructions around it. If paint is needed, either paint the hydrant or schedule it for painting. Check to see whether the hydrant needs to be raised or lowered because of a change in the ground surface grade. If adjustments are needed, schedule the work.
2. On traffic-model hydrants, check the breakaway device for damage.
3. Remove one outlet-nozzle cap and use a listening device to check for main-valve leakage.
4. Check for the presence of water or ice in the hydrant barrel by use of a plumb bob or other suitable means.
5. Attach a section of fire hose or other deflector to protect the street, traffic, and private property from water expelled at high velocity. (See Warning About Rigid Diverters in Sec. Dechlorination Regulations in chapter 6.)
6. Open the hydrant and flush to remove foreign material from the interior and lead.
7. Close the hydrant. Remove the deflector and check the operation of the drain valve by placing the palm of one hand over the outlet nozzle. Drainage should be sufficiently rapid to create noticeable suction. For no-drain hydrants, pump the water from the barrel.
8. Using a listening device, check the main valve for leakage.
9. Replace the outlet-nozzle cap. Leave it loose enough to allow air to escape.
10. Open the hydrant only a few turns. Allow air to vent from the outlet-nozzle cap.
11. Tighten the outlet-nozzle cap.
12. Check hydrant lubrication. Open the hydrant fully. Check for ease of operation. Certain water conditions may cause hard-water buildup on the stem threads of toggle and slide-gate hydrants and on the threads of wet-top hydrants. Opening and closing the hydrant repeatedly usually removes this buildup. Other problems that may make operation difficult are stuck packing and bent stems.
13. With the hydrant fully open, check for leakage at flanges, around outlet nozzles, at packing or seals, and around the operating stem. Repair as needed.

14. Partially close the hydrant so the drains open and water flows through under pressure for about 10 sec, flushing the drain outlets.
15. Close the hydrant completely. Back off the operating nut enough to take pressure off of the thrust bearing or packing.
16. Remove all outlet-nozzle caps, clean the threads, check the condition of the gas-kets, and lubricate the threads. (Graphite powder in oil works well, as do several of the never-seize compounds.) Check the ease of operation of each cap.
17. Check outlet-nozzle-cap chains or cables for free action on each cap. If the chains or cables bind, open the loop around the cap until they move freely. This will keep the chains or cables from kinking when the cap is removed during an emergency.
18. Replace the caps. Tighten them, and then back off slightly so they will not be excessively tight. Leave them tight enough to prevent their removal by hand.
19. Check the lubrication of operating-nut threads. Lubricate per the manufacturer's recommendations.
20. Locate and exercise the auxiliary valve. Leave it in the open position.
21. If the hydrant is inoperable, tag it with a clearly visible mark and notify the fire department. This may save firefighters valuable time in an emergency. Schedule the hydrant for repair.

### SYSTEMS WITH HYDRANTS

System Name	System #	# of Hydrants	Address of Hydrants	Hydrants Marked on Map	Field Verified Location	Initial Visual Inspection	Master Record	Detailed Inspection & Maintenance	Flow Test
Country Club	679	7		Yes					
Country Wood	274	1		Yes					
Crescent Park	355	10	X	Yes					
Glacier Vista	665	4		Yes					
Meadows	690	39		Yes					
Prairie View	759	4		Yes					
Quail Run	667	18	X	Yes	Yes	Yes			
ROM	626	4		Yes					
Sales	508	1		Yes					
Spanaway	669	1		Yes					
Tanglewilde	600	120	X	Yes					
Terry Lane	354	9	X	Yes					
Timberline	628	3		Yes					
Travis Jack	264	9		Yes					

**TOTAL      230**

**Other Notes:**

1. Fill out forms completely.
2. Blank hydrant forms have a spot for a map grid. You only need to mark this information for Tanglewilde.
3. Orangish / pink hydrants are located on two maps that overlap. (Meadows)

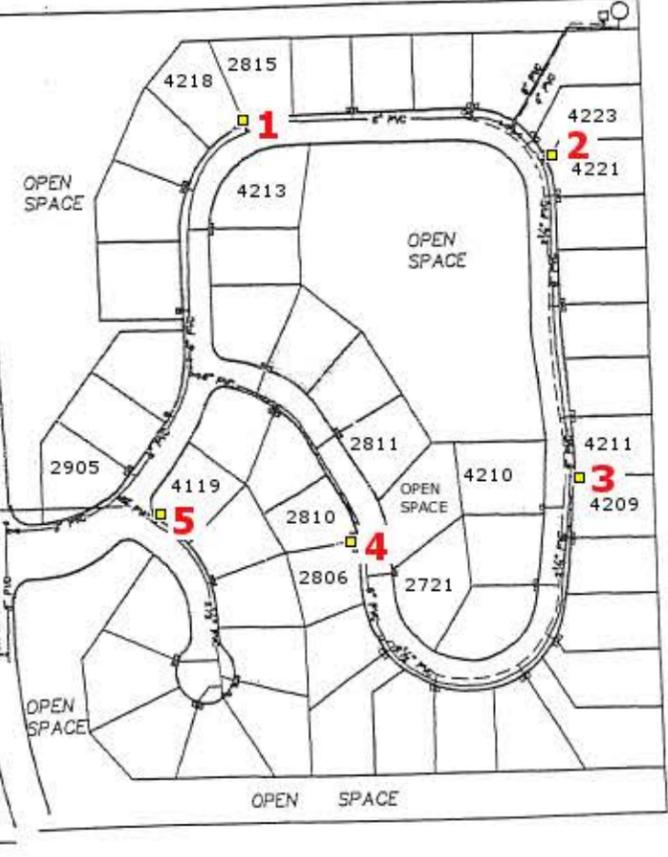
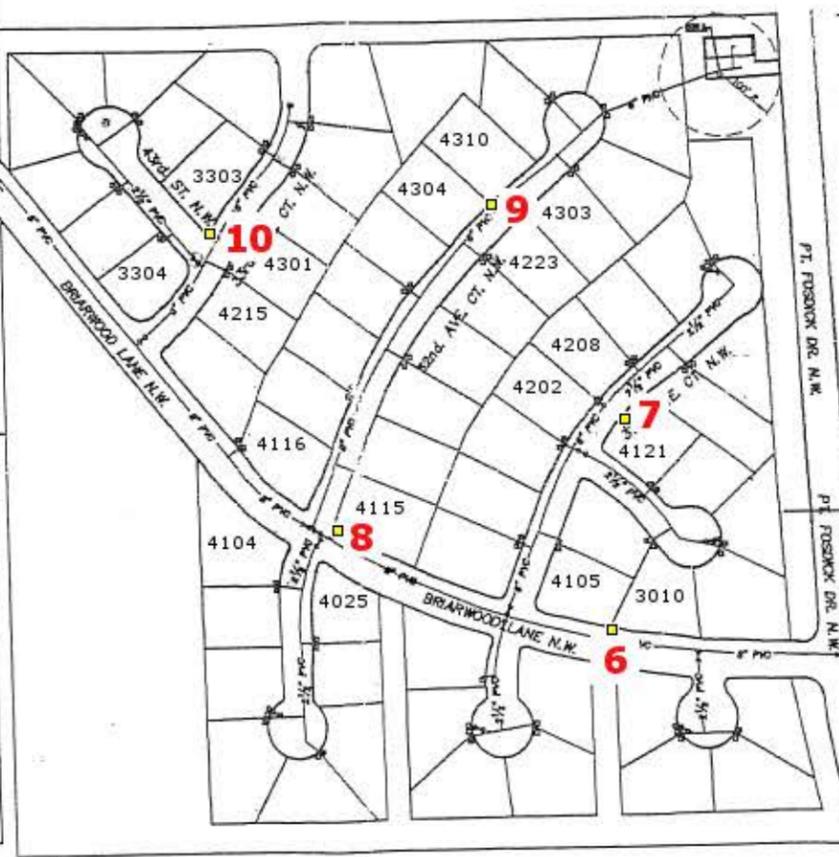
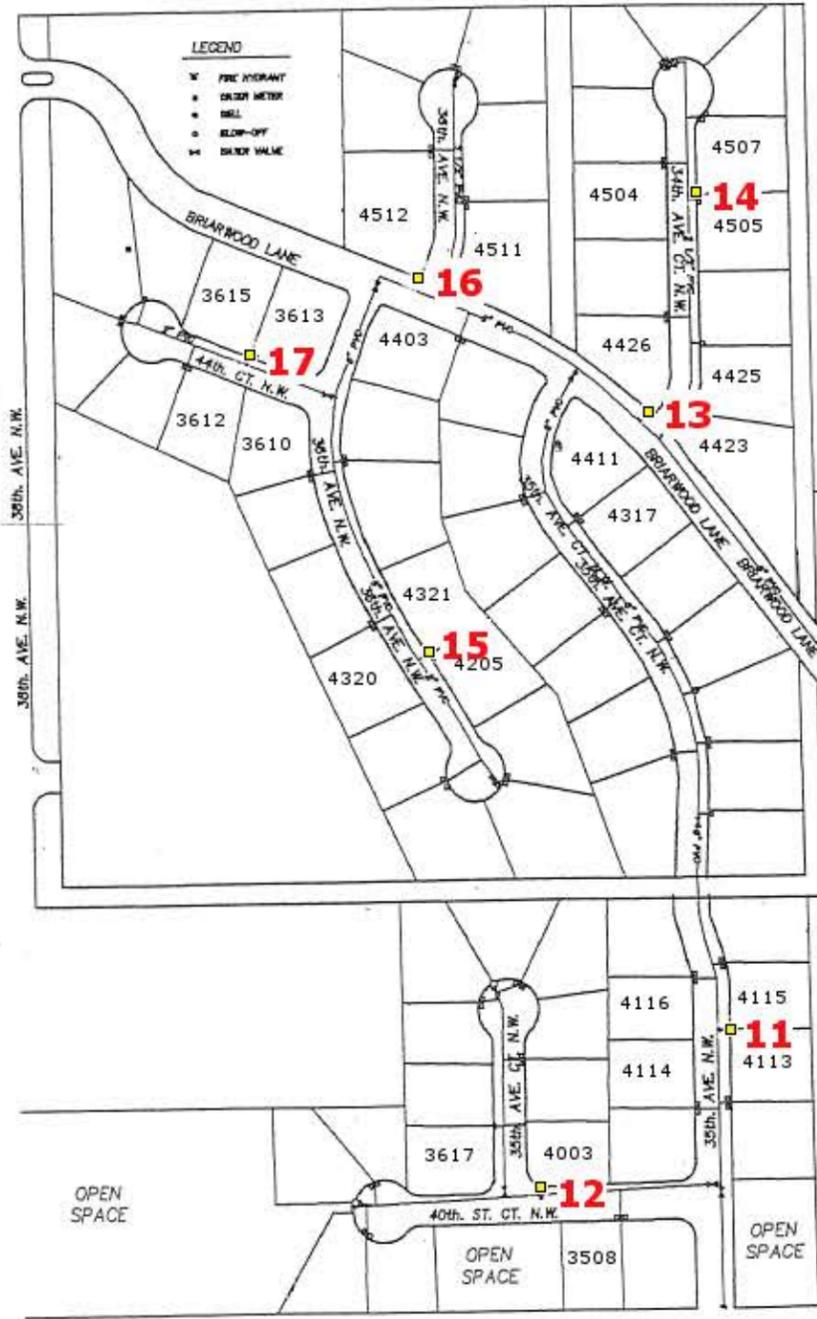
## Blank Hydrant Record for Phase 1

<b>Date</b>	
<b>Water System</b>	
<b>Make / Model / Year</b>	
<b>Location</b>	
<b>Hydrant # on Map</b>	
<b>Access to Hydrant (36")</b>	Clear <input type="checkbox"/> Obstructed <input type="checkbox"/> Notes:
<b>Obvious Leaks or Damage</b>	
<b>Other Notes</b>	

<b>Date</b>	
<b>Water System</b>	
<b>Make / Model / Year</b>	
<b>Location</b>	
<b>Hydrant # on Map</b>	
<b>Access to Hydrant (36")</b>	Clear <input type="checkbox"/> Obstructed <input type="checkbox"/> Notes:
<b>Obvious Leaks or Damage</b>	
<b>Other Notes</b>	

<b>Date</b>	
<b>Water System</b>	
<b>Make / Model / Year</b>	
<b>Location</b>	
<b>Hydrant # on Map</b>	
<b>Access to Hydrant (36")</b>	Clear <input type="checkbox"/> Obstructed <input type="checkbox"/> Notes:
<b>Obvious Leaks or Damage</b>	
<b>Other Notes</b>	

### Example of Hydrant Maps - Quail Run



Quail Run  
HYDRANTS

## **Valve Maintenance Program – Standard Operating Procedure**

### **Overview**

There are 725 distribution valves spread across 112 water systems. This program is in the developmental stage and will be incorporated with the flushing program as much as possible. To get the program running, the **Quick Start Checklist** will be used as guidance. Some of the items in the checklist will be completed and included later in the guide.

### **Quick Start Checklist**

1. Set a goal for the number of distribution valves to be exercised annually based on the percentage of the total valves in the system.
  - a. The AWWA recommends that valves be exercised every three to five years. The PUD can meet that five-year goal by exercising 145 valves a year, or 20% of the total valves.
2. Set a goal to reduce the percent of inoperable valves through repair and replacement.
3. Create written Standard Operating Procedures.
4. Create a record keeping-system so that compliance with this standard can be measured.
5. Create a written training program.
6. Create a new valve selection process.

### **Guidelines for Valve Operation – Standard Operating Procedure for Field Staff**

1. When operating a valve, use the lowest torque possible. Do not force the valve.
2. If a gate valve is difficult to operate, apply low torque in the closed, then open, then closed direction up to 20 times to free up the valve before increasing torque.
3. If a gate valve is difficult to operate and has not been operated for an extended period of time, begin with the lowest torque required to turn the valve in the closed direction, moving through 5 to 10 rotations. Reverse for 2 or 3 rotations. Reverse again and rotate 5 or 10 more turns in the closing direction. Repeat this procedure until full closure is attained. Once the valve is fully closed, it should be opened a few turns so that high velocity water flowing under the gates can move the remainder of the sediment in the valve seat. The reason for this approach is that in many gate valves, debris and sediment can build up on the gates, stem, and slides. If this material is compacted while the valve is being closed, the torque required to close the valve continues to build as the material is compacted. If the procedure above is used, the stem and other parts are “scrubbed” by the series of back-and-forth motions, and water in the system can flush the debris that has broken loose away from the stem gate and slides or guides.
4. When operating a valve, the valve should be slowly closed, opened, closed, and then reopened. This cycling of the valve should continue until the turn count and the torque required to operate the valve stabilizes.
5. During the condition assessment and operation, valves on transmission mains that are associated with the primary source of supply or the only source of supply, should only be cycled partially in order to not cause an inadvertent outage or hydraulic lock of a gate valve.

## **Recordkeeping**

Accurate and up-to-date valve data and information are an integral part of an agency's ability to validate the effectiveness, integrity, and reliability of its system. The blank form at the end will be used by field techs to record the pertinent data in the field. The Operations and Compliance department will then enter that data into the valve database.

## Valve Records

Unique ID	_____
Manufacturer	_____
Year Installed	_____
Model	_____
Size	_____
Type	_____
Depth to Operating Nut	_____
Function	_____
Access	_____
Actuator	_____
Cover	_____
Location	_____
GPS	_____
Direction to close	_____
Turns	_____
Position	_____
Date Last Operated	_____
Operable	_____
Deficiencies	_____

Unique ID	_____
Manufacturer	_____
Year Installed	_____
Model	_____
Size	_____
Type	_____
Depth to Operating Nut	_____
Function	_____
Access	_____
Actuator	_____
Cover	_____
Location	_____
GPS	_____
Direction to close	_____
Turns	_____
Position	_____
Date Last Operated	_____
Operable	_____
Deficiencies	_____

# Valves

System	Valves	
141st Ave KPN	661	2
Aust	210	3
Bear	503	1
Boots & Saddles	662	8
Burnsville	676	6
Cedar Ridge Estates	617	19
Cedar Shores	677	5
Cooperfield	678	2
Cornerstone Est	606	3
Cougar	504	1
Country Club	679	17
Country Sunrise	711	1
Countrywood Estates	680	22
Covington	212	1
Crescent Park	355	16
Crocker Creek	663	2
Crow	514	1
Crowder Road	213	2
Deerfield Park 1	681	8
Deerfield Park 2	682	6
Deschutes River Garden E	712	2
Deschutes River Garden W	713	2
Deschutes Village	683	7
Eagle	513	1
East Olympia	684	6
Eggimann	664	2
Elk Heights	247	7
Evergreen Vista	308	5
Fir Tree #1	371	1
Fir Tree #2	372	1
Fir Tree #3	373	1
Fir Tree #4	374	1
Fir Tree #5	375	1
Fir Tree #6	376	1
Fir Tree #7	377	1
Forest Glen	762	2
Foron	629	2
Garden Acres 1	601	1
Garden Acres 2	602	1
Garden Acres 3	603	1
Giffords	685	3
Glacier Vista	665	7
Hawk Acres	607	5
Hawley Hills	686	11
Hemlock	512	1
Horsfall	608	5

System	Valves	
Indian Crest #2	540	1
Keanland Park	761	49
Lazy Acres	351	4
Lew's 81st	225	13
Loma Vista	369	7
Longhorn Country Est	687	4
Maple	502	1
Marvin Gardens	688	6
Maxvale	618	10
McLane Point Seneca West	731	1
Meadow Wood	689	7
Meadows	690	70
Middle Street	732	3
Nisqually Highlands	364	9
Orchard	674	2
Palermo	691	2
Pederson Place	604	2
Pit	328	2
Pleasant Valley	307	4
Prairie Ridge	605	8
Prairie View Estates	759	2
Quail Run	667	24
Raven	501	1
Redtail Hawk	616	4
Reserve CP 1	737	2
Reserve CP 2	738	1
Reserve CP 3	739	1
Reserve CP 4	740	1
Ridgewood	609	9
Riverlea	692	6
ROM	626	2
Roy 325th	668	14
Sandra Avenue	627	2
Scatter Creek Ranch	760	11
Skookumchuck	612	4
Smith S Prairie	251	1
Spanaway 192nd	669	8
Sterling Estates East	744	1
Sterling Estates West	745	1
Talcott Ridge	695	2
Tanglewilde	600	110
Terry Lane	354	26
Timberline Village	628	17
Tolmie Estates	239	4
Travis Jack	264	5
Valley Meadows	240	8

# Valves

System	Valves	
Vineyard, The	696	1
Violet Meadows A	747	1
Violet Meadows B	748	1
Violet Meadows C	749	1
Violet Meadows D	750	1
Violet Meadows Est. 1	751	1
Violet Meadows Est. 2	752	1
Violet Meadows Est. 3	753	1
Violet Meadows Est. 4	754	1
Violet Meadows Est. 5	755	1
Violet Meadows Est. 6	756	1
Walczak	620	11
Webster Hill	610	10
Whiskey Hollow	670	2
Whitney (H&R)	757	4
Wild Rose #1	535	1
Wild Rose #2	536	1
Wild Rose #3	537	1
Wilderness Glen	263	5
Wind Tree Division 1	758	3

**Total**

**725**

## **Service Request Process**

### **Overview**

Service requests are generated to document and communicate customer issues and other necessary work with the Field Operations department. Service requests are typically created by the Customer Service Department in Springbrook, which is Thurston PUD's customer database management software. Service orders are prioritized into three categories and handled differently accordingly. Rather than label the categories, they are grouped by field staff response time: 24 hours, 72 hours, and as instructed by the Director of Field Operations.

All service orders that require a 24-hour completion time are emailed to the field staff in real time to allow them to quickly respond to critical issues. Service orders with a 72-hour response time are printed at the Satellite (Field) Office on blue paper. Every other service order is printed on yellow paper and organized by the Director of Field Operations to assign at his/her discretion.

The life of a service order and how it's processed is slightly different depending on whether it's emailed or printed.

### **Emailed**

1. Customer service creates the service request in Springbrook.
2. The service order is emailed to the PUD Field Tech Group.
3. Field techs communicate with each other to see who is available and in close proximity to the water system, then let the other field techs know they will take care of it.
4. Once the work is completed, the field tech emails their notes of what they did to the PUD CSR Group.
5. Customer service enters the field staff notes into Springbrook and close the service order.

### **Printed**

1. Customer service creates the service request in Springbrook.
2. The service order is printed at the Satellite (Field) Office on blue or yellow paper.
3. Each morning, the Director of Field Operations goes through the printed orders and assigns them to field staff.
4. Once the work is completed, the field techs write their notes of what they did on the service order and place it in the "Completed" box in the office.
5. Each morning, the Administrative Assistant scans and emails the completed service orders to the PUD CSR group. The service order is then placed in a folder to take to the main office so that the physical copy can be filed and retained in compliance with recordkeeping rules.
6. Customer service enters the field staff notes into Springbrook and close the service order.

### **Service Request Codes and Time Frames**

The following tables provide details about each service code as well as the time frame associated with each code.

<b>Service Request Code</b>	<b>Service Request Description</b>	<b>Response Time</b>	<b>Delivery Method</b>
AFTRHR	After Hours Calls	24 hours	Email
CKTRMT	Check Treatment	24 hours	Email
CONCRN	Customer Concern	24 hours	Email
FINAL	Final Read-Turn Off And Lock	24 hours	Email
FINAL*	Final Read-Leave On	24 hours	Email
INFO	Informational Request	24 hours	Email
LEAK!	Repair Leak (Urgent)	24 hours	Email
LOW	Low Pressure	24 hours	Email
NOWATR	No Water	24 hours	Email
QUAL	Quality Issue	24 hours	Email
RECONN	Reconnection	24 hours	Email
REMOVE	Remove Meter	24 hours	Email
REREAD	Reread Meter	24 hours	Email
RESIDL	Chlorine Residual	24 hours	Email
CL2SUP	CL2 Tester Supplies	72 hours	Printed
LEAK	Check For Leak (Not Urgent)	72 hours	Printed
MTRTST	Meter Test	72 hours	Printed
SHTOFF	Shut Off Meter And Lock	72 hours	Printed
WAL	Water Availability Field Notes	72 hours	Printed
CCCP	Cross Connection Survey	Assigned by the DFC	Printed
CHGOUT	Change Out	Assigned by the DFC	Printed
CONSER	Conservation Devices	Assigned by the DFC	Printed
GEN	Generator	Assigned by the DFC	Printed
INSTAL	Install New Meter	Assigned by the DFC	Printed
MAINT	Misc Maintenance	Assigned by the DFC	Printed
MTRBOX	Meterbox Maintenance	Assigned by the DFC	Printed
RADIO	Install Radio	Assigned by the DFC	Printed
REPLAC	Replace Meter	Assigned by the DFC	Printed
SMART	Install Smart Meter	Assigned by the DFC	Printed
VALVE	Repair/Replace Valve	Assigned by the DFC	Printed

## Service Request Code Descriptions

CKTRMT	CHECK TREATMENT (Treated Systems)	<b>DID YOU USE THE SCRIPT?</b> Use to document water quality issues if the system has treatment installed. If the system is untreated, use the QUAL code.
CONCRN	CUSTOMER CONCERN	Use to report customer concerns/questions not relating to water quality (e.g. employee complaint, water rates, etc.)
FINAL	FINAL READ-TURN OFF	Use to request a final reading for a customer's account and have the field tech turn off and lock the meter.
FINAL*	FINAL READY-LEAVE ON	Use to request a final reading for a customer's account and have the field tech leave the water on.
INFO	INFORMATIONAL REQUEST	Use for information requested by customer from field staff or management. An email is usually more appropriate to the correct person rather than a service order being created.
LEAK!	REPAIR LEAK (Urgent)	Use if a customer says there is a leak that resembles a water fountain stream or more, even a small one. Applies at the meter, the blow off, or anywhere on our side of the meter. Any leak on their side of the meter requires a plumber.
LOW	LOW PRESSURE	<b>DID YOU USE THE SCRIPT?</b> Field technician will note any conversations with customer or if additional follow up is needed.
NOWATR	NO WATER	Note the time water went out, the time it was restored, the issue that caused the outage, and what procedure was used to fix the problem.
QUAL	QUALITY ISSUE (Untreated Systems)	<b>DID YOU USE THE SCRIPT?</b> Use to document water quality issues of the system does NOT have treatment installed.
RECONN	RECONNECTION	This code is typically used to reconnect a meter that was shutoff due to nonpayment after disconnect week has concluded.
REMOVE	REMOVE METER	Use when there is evidence or suspicion that service has been tampered with. Code will not affect the status of the meter in the billing system, only used to request that the meter be removed.
REREAD	REREAD METER	Code is used when it is expected the meter has been misread. For abnormally high reads, use the LEAK code and have a field technician investigate.
RESIDL	CHLORINE RESIDUAL	The date/time of the call should be recorded, along with the residual reading. Note how long customer ran water for and if they retested.
SHTOFF	SHUT OFF METER & LOCK	Use to request a shutoff outside of disconnect week. The reason for disconnection should be noted to allow for better prioritization. A homeowner request is NOT an emergency unless there is a leak on their side and they don't live there. NSF checks are not emergencies.
CL2 SUPPLIES	RESIDENTIAL CHLORINE TESTERS SUPPLIES	Use for residential chlorine testers needing more forms, envelopes, reagent, or other supplies.
LEAK	CHECK FOR LEAK	<b>DID YOU USE THE SCRIPT?</b> Use to request for a field technician to check for a leak if a customer has high usage or verify that a leak has been fixed. Staff should note any correspondence with customer(s) or actions taken. Note: The comment code LEAK LETTER should be used to record that a letter has been sent to the customer.
MTRTST	METER TEST	Use to request a meter test when requested by customer or when staff is suspicious that the meter isn't registering properly. Each customer is eligible for one meter test, free of charge.
WAL	WATER AVAILABILITY FIELD NOTES	Used by Operations Department so field staff can identify how to physically install a new meter.

CCCP	CROSS CONNECTION SURVEY	Use when a new customer says yes to any question on their Cross Connection Control Form.
CHNGOUT	REPLACE METER	Use to request replacement of existing meter. <b>Using this code will automatically put old meter in an inactive status.</b> Only use if positive meter needs to be replaced. Even if you are positive, ask Cathy.
CONSER	CONSERVATION DEVICES	Use when customer is requesting a water timer.
GEN	GENERATOR	Use for those customers that have requested generator installation for their respective water systems. Assign the service request to John, so he can research and contact the interested party. Enter this code on the SOURCE account to document the results of poll taken for water system re: surcharge payments.
INSTAL	INSTALL NEW METER	Use only for installing meter on a new account for a recently acquired system. For all other cases, use CHNGOUT code.
MAINT	MISC MAINTENANCE	Use to dispatch field technicians to perform maintenance requests not described by any other code. This includes replacing and relocating meters.
MTRBOX	METERBOX MAINTENANCE	Use if a meterbox or lid is damaged.
RADIO	INSTALL RADIO READ METER	Use if a radio read meter needs to be installed. Field tech will make this determination.
REPLAC	REPLACE METER	Use if a meter needs to be replaced due to being unreadable.
SMART	INSTALL SMART METER	Use if a customer requests a SMART meter. There is a fee associated with the installation.
VALVE	REPAIR/REPLACE VALVE	Use to request a valve replacement in the meter box that is broken or won't open/close.
AFTRHR	AFTER HOURS CALLS	Inactive code. DO NOT USE.
BKFLO	INSTALL BACKFLOW	Inactive code. DO NOT USE. (Delete code per Kim.)
CONNEC	CONNECT SERVICE	Inactive code. DO NOT USE.
DOORH	DOOR HANGER	Inactive code. DO NOT USE. (Delete code per Kim.)
LOCATE	LOCATE LINES	Inactive code. DO NOT USE.
QUANTI	QUANTITY ISSUE	Inactive code. DO NOT USE.
TLREB	TOILET REBATE PROGRAM	Inactive code. DO NOT USE. DO NOT DELETE.

# Appendix O

## Water Quality Monitoring Plans

Water System Plan – Part A

**COLIFORM MONITORING PLAN (CMP)  
Webster Hill - 610**

*Source – Chlorinated*

**System Information**

**Plan Date:10/2019**

<b>Water System Name</b> Webster Hill	<b>County</b> Pierce	<b>System I.D. Number</b> 59875 5
<b>Name of Plan Preparer</b> Erica Cecil, Thurston PUD	<b>Position</b> Operations Specialist III	<b>Daytime Phone #</b> (360) 357-8783 ext. 122
<b>Source:</b> DOH Source Number, Source Name, Well Depth, Pumping Capacity	S01 – Well #1 AEF407 permanent use well, 166’ depth, 100 GPM (WFI)	
<b>Storage:</b> List and Describe	20,000 gallon	
<b>Treatment:</b> Source Number & Process	S01 – Hypo-Chlorination	
<b>Pressure Zones:</b> Number and name	1	
<b>Population by Pressure Zone</b>	Population: 43 Connections- Active: 20 Approved: 20	
<b>Number of Routine Samples Required Monthly by Regulation:</b> 1 (One)	<b>Number of Sample Sites Needed to Represent the Distribution System:</b> 3 (Three)	

**Routine Sample Rotation Schedule**

Month	Routine Site(s)	Month	Routine Site(s)
January	X-1	July	X-1
February	X-2	August	X-2
March	X-3	September	X-3
April	X-1	October	X-1
May	X-2	November	X-2
June	X-3	December	X-3

**Level 1 and Level 2 Assessment Contact Information**

<b>Name</b> Kim Gubbe	<b>Office Phone:</b> 360-357-8783 ext. 125 <b>After Hours Phone:</b> 360-688-0827
<b>Address</b> 1230 Ruddell Road SE, Lacey WA 98503	<b>Email</b> kgubbe@thurstonpud.org
<b>Name</b> Jim Campbell	<b>Office Phone:</b> 360-357-8783 ext. 120 <b>After Hours Phone:</b> 360-790-2662
<b>Address</b> 1230 Ruddell Road SE, Lacey WA 98503	<b>Email</b> jcampbell@thurstonpud.org

## Routine, Repeat, and Triggered Source Sample Locations

Location/Address for <u>Routine</u> Sample Sites	Location/Address for <u>Repeat &amp; Triggered Source</u> Sample Sites
<b>X1.</b> 8217 273 <sup>rd</sup> Street E	<b>1-1.</b> 8217 273 <sup>rd</sup> Street E
	<b>1-2.</b> 8117 273 <sup>rd</sup> Street E
	<b>1-3.</b> 27311 84 <sup>th</sup> Ave E
	<b>*GWR -S01 – Well 1</b>
<b>X2.</b> 27311 84 <sup>th</sup> Ave E	<b>2-1.</b> 27311 84 <sup>th</sup> Ave E
	<b>2-2.</b> 8217 273 <sup>rd</sup> Street E
	<b>2-3.</b> 27713 Webster Rd E
	<b>*GWR -S01 – Well 1</b>
<b>X3</b> 27713 Webster Road E	<b>3-1</b> 27713 Webster Rd E
	<b>3-2</b> 27311 84 <sup>th</sup> Ave E
	<b>3-3</b> 27723 Webster Rd E
	<b>*GWR -S01 – Well 1</b>

*\*You should mark the lab slip for the source sample “Ground Water Rule GWR” in type of sample and request an analysis for E coli count. **You must sample every groundwater source that was in use when the original routine sample was collected.***

- Important notes for sample collector: Collect samples early in the month and early in the week.
- Check the sample sit/ tap before filling the bottle to make sure there is no reason to invalidate the sample result.
- Do not samples in week when key staff are on vacation or a holiday as it may create schedule conflicts.
- If a sample site is no longer a good sample site, substitute an acceptable site in the same area. If the site issues persist, choose a new permanent site and update CMP accordingly.

### Laboratory Information

<b>Laboratory Name</b> Water Management Laboratories Inc.	<b>Office Phone #</b> (253) 531-3121
<b>Address</b> 1515 80 <sup>th</sup> St. E. Tacoma, WA 98404	<b>After Hours #</b> (253) 841-0732
<b>Hours of Operation</b> Monday – Friday: 8 a.m.- 5 p.m. Saturday: 9 a.m. – 12 p.m.	
<b>Contact Name</b> No specific contact	

## ***E. coli*-Present Sample Response**

<b>Distribution System <i>E. coli</i> Response Plan and <i>E. coli</i> Present Triggered Source Sample Response Plan</b>
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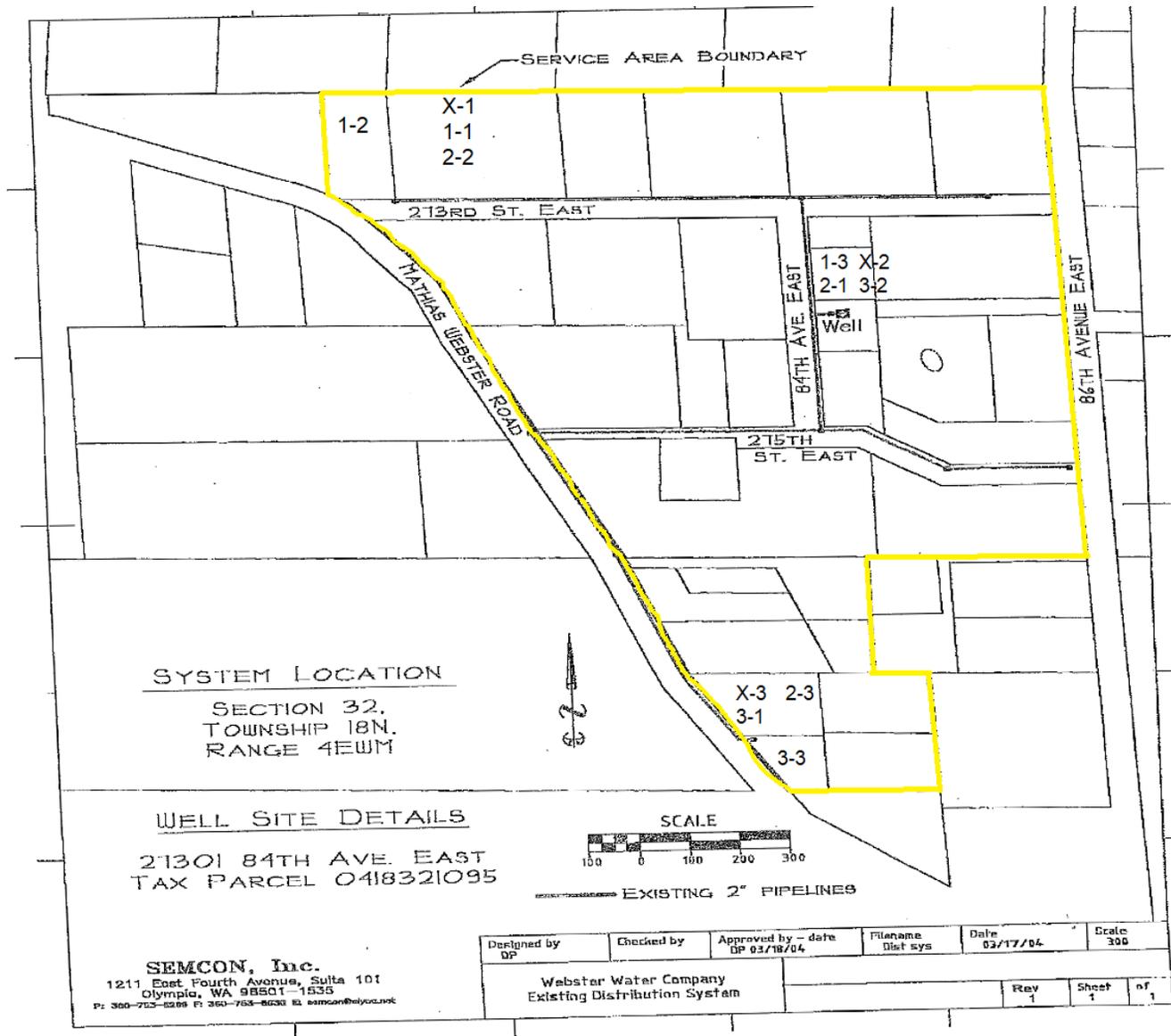
<b>If we have <i>E. coli</i> in our distribution system, we will immediately:</b>
---

- |   |
|---|
| <ol style="list-style-type: none"><li>1. Call DOH.</li><li>2. See attached plan : <i>What To Do When We Get A Positive Fecal Or E.Coli Sample</i></li></ol> |
|---|

### **What To Do When We Get A Positive Fecal Or E-Coli Sample.**

1. Call the agency that governs that system immediately of receiving the results.  
Group A's Pierce - NW Drinking Water, Carol Stuckey 253-395-6776 or Ingrid Salmon 253-395-6775.
2. Work with agency, we could put the customers on boil water now or wait until the next tests come back. We usually put them on boil water now. Distribute door hangers at this time with a copy of the Acute mcl attached.  
K:\FORMS\Mandatory Language Forms\E.Coli Coliform MCL  
K:\FORMS\Mandatory Language Forms\Boil Water Advisory Door Hanger
3. Fax or email form and door hanger to agency after it has been hand delivered to the customers.
4. Take the repeat samples with in 24 hours and run a 24 hour test on them.  
Group A's – follow the Coliform Monitoring Plan. If more than 1 well was in operations then a raw sample from each will need to be taken, plus the three repeats and the GWR source/s.
5. Access the system; try to find where the contamination is coming from. Are there any bad tanks, what does the well head look like, what activity is going on around the well.
6. Call lab in 24 hours from time sample was taken if email or fax has not been received yet. Confirm that samples were good or bad.
7. If samples are negative take another round of samples, immediately. Run another 24 hour test. If next round are also negative lift the boil water notice.
8. If one of the samples comes back positive and we haven't found the problem then we should start continuous temporary chlorination of the system and notify the customers by door hanger of the chlorination.
9. Two repeat samples will be taken under normal operating conditions, and upon confirmation of satisfactory results, the boil water order will be lifted.

# System Map



**COLIFORM MONITORING PLAN (CMP)**  
**Talcott Ridge #695**  
*Chlorinated*

**System Information**

**Plan Date: 01/2020**

<b>Water System Name</b> Talcott Ridge #695	<b>County</b> Thurston	<b>System I.D. Number</b> AA139P
<b>Name of Plan Preparer</b> Kim Gubbe Thurston PUD	<b>Position</b> Director of Planning and Compliance	<b>Daytime Phone #</b> (360) 357-8783 ext. 125
<b>Source:</b> DOH Source Number, Source Name, Well Depth, Pumping Capacity	<b>S01 – Well #1</b> , AGC704 95 ft., 35 gpm <b>Well #2</b> , AEA979, 81 ft., 35 gpm	
<b>Storage:</b> List and Describe	Reservoir, 23,500	
<b>Treatment:</b> Source Number & Process	S01 None	
<b>Pressure Zones:</b> Number and name	One, water system	
<b>Population by Pressure Zone</b>	Population: 102 Connections – Active: 46 Approved: 46	
<b>Number of Routine Samples Required Monthly by Regulation: One</b>	<b>Number of Sample Sites Needed to Represent the Distribution System: Three</b>	
<b>Source Location / Address:</b>	7621 Countrywood Dr. SE Olympia WA 98501	

**Routine Sample Rotation Schedule**

Month	Routine Site(s)	Month	Routine Site(s)
January	#1	July	#1
February	#2	August	#2
March	#1	September	#1
April	#2	October	#2
May	#1	November	#1
June	#2	December	#2

**Level 1 and Level 2 Assessment Contact Information**

<b>Name</b> Kim Gubbe	Office Phone: <b>360-357-8783 ext. 125</b> After Hours Phone: <b>360-688-0827</b>
<b>Address</b> 1230 Ruddell Road SE, Lacey WA 98503	<b>Email</b> kgubbe@thurstonpud.org
<b>Name</b> Jim Campbell	Office Phone: <b>360-357-8783 ext. 120</b> After Hours Phone: <b>360-790-2662</b>
<b>Address</b> 1230 Ruddell Road SE, Lacey WA 98503	<b>Email</b> jcampbell@thurstonpud.org

## A. Routine, Repeat, and Triggered Source Sample Locations

Location/Address for <u>Routine Sample Sites</u>	Location/Address for <u>Repeat &amp; Triggered Source Sample* Sites</u>
<b>X1. 7710 Countrywood Dr</b>  (Front House Faucet)	<b>X1. Sample site #1</b>
	<b>R1-1. 7636 Countrywood Dr</b>
	<b>R1-2. 7825 Countrywood Dr.</b>
	<b>1-3. Pumphouse after storage</b>
	<b>*GWR - S01 – Well #1</b>
	<b>*GWR - S02 – Well #2</b>
<b>X2. 7630 Ostrander Ct SE</b>  (Front House Faucet)	<b>X2. Sample site #2</b>
	<b>R2-1. 7610 Ostrander Ct SE</b>
	<b>R2-2. 7716 Ostrander Ct SE</b>
	<b>2-3. Pumphouse after storage</b>
	<b>*GWR - S01 – Well #1</b>
	<b>*GWR - S02 – Well #2</b>

\* You should mark the lab slip for the source sample “RAW” in type of sample and request an analysis for *E coli* count. **You must sample every groundwater source that was in use when the original routine sample was collected**

### Important notes for Sample Collector:

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### Laboratory Information

<b>Laboratory Name</b> Water Management Laboratories Inc.	<b>Office Phone #</b> (253) 531-3121
<b>Address</b> 1515 80 <sup>th</sup> St. E. Tacoma, WA 98404	<b>After Hours #</b> (253) 841-0732
<b>Hours of Operation</b> Monday – Friday 8a.m.- 5p.m. Saturday 9a.m. – 12p.m.	
<b>Contact Name</b> No specific contact	

## **E. coli-Present Sample Response**

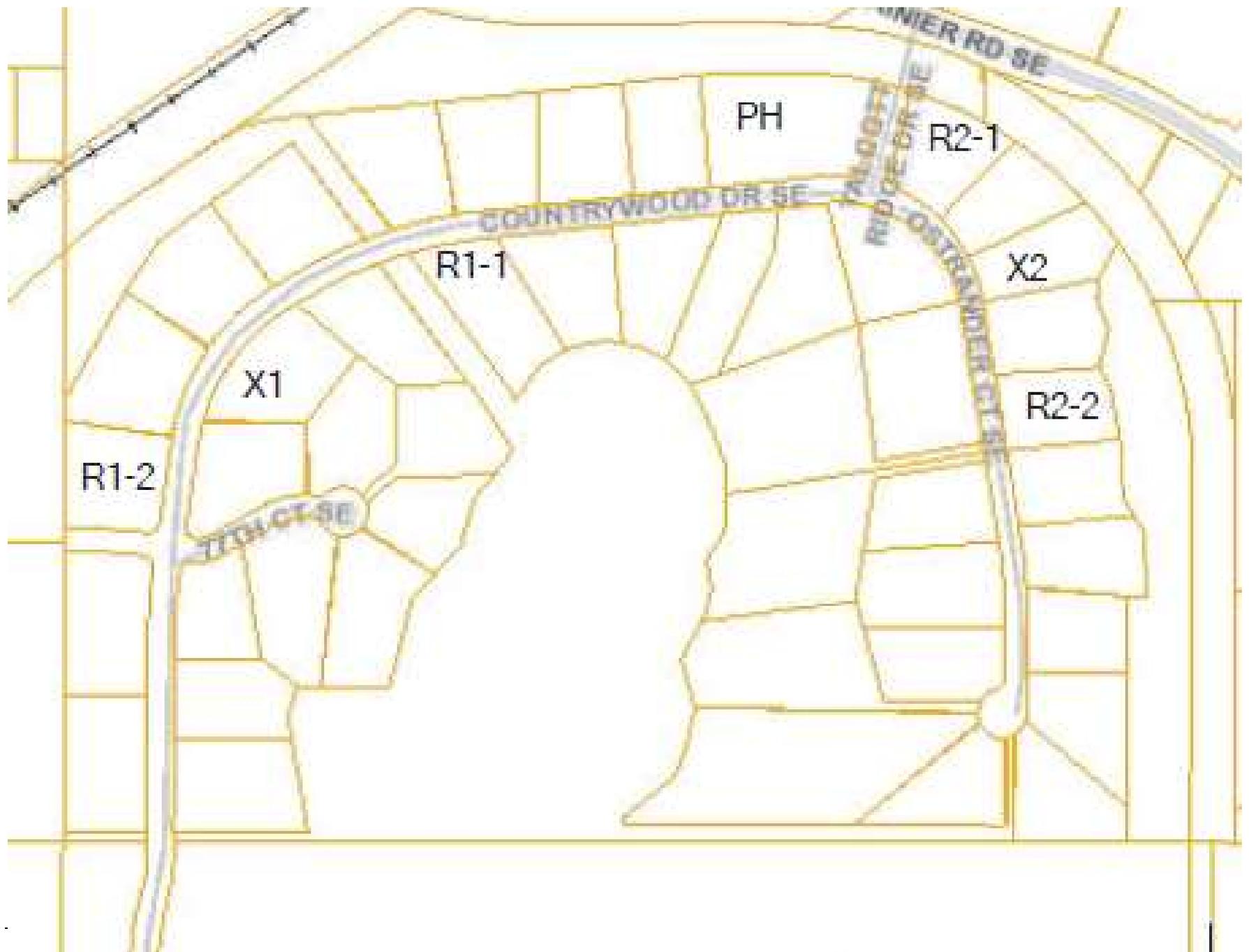
<p style="text-align: center;"><b>Distribution System <i>E. coli</i> Response Plan and <i>E. coli</i> Present Triggered Source Sample Response Plan</b></p>
---

**If we have *E. coli* in our distribution system, we will immediately:**

1. Call DOH.
2. See attached plan : *What To Do When We Get A Positive Fecal Or E.Coli Sample*

### **What To Do When We Get A Positive Fecal Or E-Coli Sample.**

1. Call the agency that governs that system immediately of receiving the results.  
Group A's Thurston, Lewis, Grays – SW Drinking Water, 360-236-3045 or 360-236-3030.
2. Work with agency, we could put the customers on boil water now or wait until the next tests come back. I usually put them on boil water now. Distribute door hangers at this time with a copy of the Acute mcl attached.  
K:\FORMS\Mandatory Language Forms\Acute Coliform MCL  
K:\FORMS\Mandatory Language Forms\Boil Water Advisory Door Hanger
3. Fax form and door hanger to agency after it has been hand delivered to the customers.
4. Take the repeat samples with in 24 hours and run a 24 hour test on them.  
Group A's four samples – follow the Coliform Monitoring Plan. If more than 1 well was in operations then a raw sample from each will need to be taken, plus the four repeats (which should include one well).
5. Access the system; try to find where the contamination is coming from. Are there any bad tanks, what does the well head look like, what activity is going on around the well.
6. Call lab in 24 hours from time sample was taken if fax has not been received yet. Confirm that samples were good or bad.
7. If samples are negative take another round of samples, immediately. Run another 24 hour test. If next round are also negative lift the boil water notice.
8. If one of the samples comes back positive and we haven't found the problem, then we should start continuous temporary chlorination of the system and notify the customers by door hanger of the chlorination. If the system is permanently chlorinated take chlorine residual throughout the water system to determine if chlorinated water is at the desired residual and if not, try to determine the cause of why there maybe no residual. Then flush the system to get the chlorine throughout with monitoring to make sure that chlorine residual is consistent throughout the water system.
9. Once the chlorine is throughout the system then we need to take two rounds of repeat samples under normal operating conditions (i.e., normal chlorine residual, if any, or zero residual if system is not normally not disinfected) to lift the boil water



# Thurston PUD Lead & Copper Sampling Collection Program

- Locate the system spreadsheet with the previous test results and addresses
  - K:\Field Staff\Testing\Lead and Copper\L&C Customer Addresses by System
    - Example: “141st Ave KPN 661 L&C 2018.xlsx”
  - Use Springbrook to confirm or obtain the current customer information for the sample sites.
- Using the customer information collected, update
  - K:\Field Staff\Testing\Lead and Copper
    - “L&C Customer Email Postcard List for merge.xlsx”
      - This has the system name, system id, account number, customer name, service address, mailing address, test schedule date, and email (if available).
      - Overwrite the previous information as this sheet is the working document that will reflect only the current systems and customers used to merge to the site letters and emails.
- One week before the beginning of the month when the testing is scheduled to happen, an email or letter is sent to the sample site customers See Letter 1.
  - Open “L&C Sample Site Letter and Email template.docx”
    - Update the email/letter with correct dates and system information.
  - Use mail merge for both emails and letters.
    - Email subject line is “Thurston PUD – Lead & Copper Sampling in (month of testing)”.
- Create the customer instruction sheet for field staff to deliver with sample bottle.
  - K:\Field Staff\Testing\Lead and Copper\Lead & Copper Forms,
    - L&C Test Form Merge.xlsx
      - From the L&C Customer Address file for the applicable water system, copy and paste the water system name/number, PWSID, account number and service address.
      - Update the “Test\_Schedule\_Date” field with correct testing date, always using the first of the testing month.
    - Open the “2018 L&C Resident Inst & Letter MERGE DOC.docx” file. See Letter 2
      - Select ‘Yes’ when the dialog box opens up asking if you want to use the data from the database.
      - Print all test forms and give to field staff for delivery.
      - Field staff pick-up sample bottles, the resident test sheet should be filled out. These sheets are given to Planning & Compliance staff for water system file.
- Once results are received from the lab, the testing customers are sent their results.
  - Update each of the system address list files with the test results.
    - If the customer included their email address on the test instruction sheet, update in spreadsheet. Results can be sent by email.
  - Using the “Updated2018\_Customer Results Notice Merge.xlsx” file.
    - Update the ‘Merge Sheet’ with the applicable fields, save and close the file.
  - Open “2018 L&C Consumer Results Letter Merge DOH updated 7-2012.docx” See Letter 3
    - Select ‘Yes’ when the dialog box opens up asking if you want to use the data from the database.
      - ‘Edit Recipients’ selecting only the customers with email addresses
      - ‘Finish & Merge’ – send email messages, subject line is “Lead & Copper Results - Thurston PUD”
      - Go back to the ‘Edit Recipients’ and select only the customers without email addresses.

- 'Finish & Merge' – print letters and mail out to customers.
  - 'Edit Recipients' select all customers, and save notices as PDF's here K:\Field Staff\Testing\Lead and Copper\pb and cu results to customer.
- Once customer notices are sent, certification is sent to DOH via email. Forms are located in K:\Field Staff\Testing\Lead and Copper\LEAD & COPPER RULE
  - Open the "System merge to send cert.xlsx" sheet and update the system name and PWSID on the sheet for merge.
  - Open "DOH NOTICE CERT 331-462-F\_merged doc.docx"
    - Select 'Yes' to merge data from database.
    - Print all merged cert forms for signature.
    - PDF signed cert forms and save to K:\Field Staff\Testing\Lead and Copper\LEAD & COPPER RULE\CERTS SENT
    - Email certs and a copy of one customer result to DOH (david.sternberg@doh.wa.gov)

## Letter 1

### Commissioners

Linda Oosterman—District 1

Russell E. Olsen—District 2

Chris Stearns—District 3



Providing safe, reliable, affordable, and sustainable service.

May 14, 2020

RE: «system» Water System Needs Lead & Copper Sampling

You have been selected to participate in Thurston PUD's Lead and Copper Test Collection Program. This is a voluntary program that will help Thurston PUD identify and monitor lead and copper in your drinking water.

### What We're Seeking

Thurston PUD relies on customers like you to collect samples from the convenience of their homes. These samples are collected to meet state monitoring rules for public water systems. You will see a sample collection bottle at your front door this week.

### No Experience Necessary

If you've never taken a water sample before, don't worry! We provide you with clear, easy instructions and sample bottle. Samples are taken directly from inside your home, using the kitchen or bathroom sink's cold water faucet, the water needs to have sat in the pipes for *at least 6 hours* before the sample is drawn.

### Why This is Important

Lead and copper are contaminants that usually do not occur at the water source. They show up in drinking water as a result of building plumbing, faucets, and water fixtures corroding. These tests help us to determine if the water is corrosive at your system.

We will notify test takers of the results for their homes, after the samples have been analyzed by the laboratory. This information is also published in our Consumer Confidence Reports (CCR) each year.

### Where Can I Get More Information?

If you are unable to collect a sample from your home, please contact Senior Operations Specialist Erica Cecil at 360-357-8783 x. 122 or email Erica.Cecil@ThurstonPUD.org as soon as possible. More details about lead and copper monitoring can be found at the Washington State Department of Health [website](#).

1230 Ruddell Rd. SE, Lacey, WA 98503

(866)-357-8783 • Fax (360)-357-1172 • [www.thurstonpud.org](http://www.thurstonpud.org)

## Letter 2

### Instructions for Tap Sample Collection Procedure by Resident

These samples are being collected to determine the lead and copper in your tap water. This testing is being conducted with the cooperation of residents and customers. This monitoring program is required by the U.S. Environmental Protection Agency and the Washington Department of Health.

A sample is to be collected after water has been sitting in the pipes for an extended period (i.e., no water use during this period). Early mornings or evenings upon returning home are the best sampling times to ensure that stagnant water conditions exist. **IMPORTANT: PLACE BOTTLE UNDER THE FAUCET TO IMMEDIATELY FILL IT. DO NOT LET WATER RUN BEFORE FILLING THE BOTTLE.** The collection procedure is described in more detail below.

1. A minimum of a **six-hour** period during which there is no water use throughout the residence must be achieved prior to sampling. It is **important** to use a faucet that is used **every day** for at least 5 minutes. Again, **please** be sure that the last water run through the sample tap is **cold**, prior to setting up for the test.
2. A kitchen or bathroom cold-water faucet is to be used for sampling. Place the open bottle below the faucet and gently open the cold-water tap. Fill the sample bottle to the "shoulder" and turn the water off.
3. Tightly cap the sample bottle. Please review the sample bottle label to insure all the information contained on the label is correct.
4. **If any plumbing repairs or replacement has been done in the residence, please note this information on the back of this form.**
5. **Please leave your sample with this completed and signed form near the same location of delivery so that it may be picked up.** The sample does not need to be refrigerated.
6. Results of this monitoring will be provided to participants when reports are prepared for the state unless excessive levels of lead and/or copper are found. In those cases, immediate notification will be provided (usually within 30 days of sample collection). If you would like to receive the results by email please provide your email address below.

Call TPUD at 360.357.8783 if you have any questions about these instructions.

To be completed by resident at **12302 MAXVALE DR SE**

Water was last used: Time: \_\_\_\_\_ Date: \_\_\_\_\_

Sample was collected: Time: \_\_\_\_\_ Date: \_\_\_\_\_

Year home built: \_\_\_\_\_ Type of Plumbing:  PVC  Copper  Other \_\_\_\_\_

I have read the above instructions and have taken a sample in accordance with these directions.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Email Address: \_\_\_\_\_



We will pick up your sample first thing in the morning on \_\_\_\_\_.

We appreciate your cooperation in taking this sample at your home.

Public Utility District No. 1 of Thurston County

**Community Water System  
CONSUMER NOTICE  
Lead and Copper Water Sample Results**

The «system» Water System, PWSID «id » is providing you with the lead and copper test results on the water sample collected at your location. Please share this notice with everyone who uses or drinks the water.

The results at «service\_address» are: lead-«LEAD AL 0015» mg/L and copper-«COPPER AL 13 » mg/L.

The maximum contaminant level goal (MCLG) is the level of a contaminant in drinking water below which there are no known or expected risks to health. MCLGs allow for a margin of safety. The regulatory limits for lead and copper are called action levels. An exceedance occurs when the concentration of the lead or copper in more than 10 percent of the tap water samples exceeds an action level.

- The MCLG for lead is "0" and the action level is 15 ppb (or .015 mg/L).
- The MCLG and action level for copper is 1,300 ppb (or 1.3 mg/L).

Lead or copper action level exceedances will trigger corrosion control treatment or other requirements. We will notify all water users if our system exceeds the lead action level.

For more information, please contact: Public Utility District 1 of Thurston County  
(operator)

at (360) 357-8783 or 1230 Ruddell Road SE, Lacey WA 98503  
(phone number) (address)

This notice is sent to you by Thurston PUD for the «system» Water System on 5/14/2020.



«acct\_no»

**How Lead Gets Into Water**

Lead in drinking water most often comes from water distribution lines or household plumbing rather than from the water system source. Plumbing sources can include lead pipes, lead solder, faucets, valves, and other components made of brass. Lead from other sources (such as lead-based paint and contaminated dust or soil) can increase a person's overall exposure, which adds to the effects of lead in water.

**Potential Health Effects of Lead**

The greatest risk of lead exposure is to infants, young children, and pregnant women. Lead can cause serious health problems if too much enters the body. Lead is stored in the bones and can be released later in life. Lead can cause damage to the brain and kidneys, interfere with production of red blood cells that carry oxygen, and may result in lowered IQ in children. During pregnancy, the child receives lead from the mother's bones, which may affect brain development. Low levels of lead can affect adults with high blood pressure or kidney problems.

**How Copper Gets Into Water**

Copper is a mineral and natural component in soils. In the correct amounts, it is an essential nutrient for humans and plants. In Washington State, most copper in drinking water comes from corrosion of household plumbing. Plumbing sources can include copper pipe and brass fixtures. Copper from plumbing corrosion can accumulate overnight.

**Potential Health Effects of Copper**

Although copper is an essential mineral in the diet, too much copper can cause health problems. Copper is widely distributed within the tissues of the body, but accumulates primarily in the liver and kidneys. A single dose of 15 mg of copper can cause nausea, vomiting, diarrhea, and intestinal cramps. Severe cases of copper poisoning have led to anemia and to disruption of liver and kidney functions. Individuals with Wilson's or Menke's diseases are at higher risk from copper exposure.

**How you can reduce exposure:**

- When your water has been sitting for several hours, flush the pipe by running the cold water tap until the water is noticeably colder before using the water for drinking or cooking. **(The longer water has been sitting in the pipes, the more dissolved metals it may contain).**
- Use only cold water for drinking, cooking, and making baby formula. Hot water may contain higher levels of lead or copper.
- Frequently clean the filter screens and aerators in faucets to remove captured particles.
- If building or remodeling, only use "lead free" or low lead piping and materials. Avoid using copper piping or brass fixtures for locations where water will be consumed or used in food preparation (such as kitchen or bathroom sinks).

«acct\_no»

Cedar Ridge Lead and Copper Monitoring Plan

system	ID	Year house was built	Type of Pipe	Site Selection Tier	acct_no	service address	Date of Report	COPPER AL 1.3	LEAD AL 0.015
PRAIRIE RIDGE 605	02356 W	2002	unknown	Other	012732-000	4246 LEGACY DRIVE NE	7/27/2018	0.300	<0.001
PRAIRIE RIDGE 605	02356 W	2005	pvc	Other	012761-000	3908 LEGACY DRIVE NE	7/27/2018	0.252	0.0017
PRAIRIE RIDGE 605	02356 W	1991	copper	Tier 1 SFR	012809-000	6808 PRAIRIE RIDE DRIVE NE	7/27/2018	0.662	<0.001
PRAIRIE RIDGE 605	02356 W	1987	copper & pvc	Tier 1 SFR	021441-000	6902 PRAIRIE RIDGE DRIVE NE	7/27/2018	0.027	<0.001
PRAIRIE RIDGE 605	02356 W	1994	copper	Tier 1 SFR	016856-000	7015 44TH AVENUE NE	7/27/2018	0.204	<0.001

Note: This water system doesn't contain any lead service lines

Tier 1 = Single Family Residence (SFR) Contain copper pipes with lead solder installed after December 31, 1982, or contain lead pipes

Tier 2 = Buildings or Multifamily Residence (MFR) Contain copper pipes with lead solder installed after December 31, 1982, or contain lead pipes

Tier 3 = SFR contain copper pipes with lead solder installed before January 1, 1983

**If new site is needed - Review DOH publication 331-111 for guidelines**



# Lead and Copper Monitoring

331-111 • Revised 6/10/2019

All Group A community and nontransient noncommunity public water systems must monitor for lead and copper in drinking water. The state Department of Health (DOH) requires this monitoring to minimize the amount of lead and copper consumers get from drinking water.

Unlike other contaminants, lead and copper do not usually occur in source water. Instead, they result when building plumbing, faucets, and water fixtures corrode. Therefore, the purpose of this monitoring is to determine whether water systems are distributing corrosive water. This is determined by sampling the regularly used fixtures in homes most susceptible to corrosion of lead and copper. Systems with corrosive water must investigate and determine the best way to control corrosion.

High levels of lead can lower birth weights and slow the normal physical and mental development of infants and young children. For adults, it can damage kidneys, slightly increase blood pressure, and impair reproductive function. High levels of copper can cause nausea and diarrhea.

## Distribution System Monitoring Requirements

Lead and copper requirements involve both standard and reduced monitoring. To ensure monitoring results represent the entire community, the Lead and Copper Rule sets a minimum number of required residential water samples based on population served. The rule also provides specific guidance for selecting the homes or locations where sample collection occurs.

**Standard monitoring:** Collect one sample from each site within a set six-month period, and then a second set of samples during the next six months (see center column below for required sites). If both sample sets are at or below the action levels for lead and copper, the water system is eligible for a reduced monitoring schedule (right column).

**Reduced monitoring:** If you qualify for reduced monitoring, you must take samples between June and September. Most systems will need two years of reduced sample sets after standard monitoring. If these samples are at or below the action levels, required monitoring reduces to once every three years between June and September.

Tap Samples Required for Lead and Copper Monitoring		
Population Served	Standard Monitoring— Number of sample sites	Reduced Monitoring— Number of sample sites
More than 100,000	100	50
10,001 to 100,000	60	30
3,301 to 10,000	40	20
501 to 3,300	20	10
101 to 500	10	5
100 or Fewer	5	5

## Selecting Sample Sites

You must establish and maintain a sampling pool of homes large enough to satisfy the number of sample sites required for standard monitoring (see table above). Furthermore, you must identify sample sites that are most vulnerable to lead and copper corrosion. Generally, these are homes with lead service lines or homes built between 1982 and 1986 with copper pipes joined by lead/tin solder. In order to select homes at highest risk for lead and copper corrosion, you should survey records documenting the materials used to construct and repair your distribution system and buildings connected to your distribution system. Sources of information includes historical plumbing codes and permit records, meter installation records, community surveys, county assessor websites and distribution system records.

If your system has enough homes with lead service lines (LSL), 50 percent of your sample sites must be from homes served by LSL, otherwise, you must collect a sample from each available site that is served by a LSL.

When a sufficient number of Tier 1 sites do not exist or are inaccessible (e.g., homeowner denies permission for you to collect a sample), complete your sampling pool with Tier 2 sites. When a sufficient number of Tier 1 and 2 sites do not exist or are inaccessible, complete your sampling pool with Tier 3 sites. Any water system without enough available sample sites that meet the tiering criteria may complete sampling at representative sites throughout the distribution system.

Other considerations in maintaining your sampling pool of lead and copper sample sites.

- ◆ As homeowners opt out of the sampling pool, replace these sites with new sites so that you always maintain a sample pool large enough to accommodate the full number of samples required under standard monitoring.
- ◆ If your water system expands to serve existing nearby homes, or expands through consolidation with another public water system, review the construction and materials records of these newly serviced homes to determine if their "tier" warrants including them in your sampling pool. You may need to add Tier 1 sites from newly expanded areas so that monitoring occurs throughout the distribution system from the highest tier sample site available.
- ◆ Keep a written record of your sampling pool, as required by WAC 246-290-415. DOH may ask to review it during a sanitary survey, or to affirm compliance with 40 CFR 141.86.

When collecting a reduced monitoring set of lead and copper samples, select from the highest tier sites available in your sampling pool.

This table summarizes the Lead and Copper Rule sample site criteria.

Site Selection Tier 40 CFR 141.86(a)(3)	Building Type(s)	Select residential sites that:
1	Single Family Residence (SFR)	<ul style="list-style-type: none"> <li>Contain copper pipes with lead solder installed after December 31, 1982, or contain lead pipes</li> </ul> <p style="text-align: center;"><i>and/or</i></p> <ul style="list-style-type: none"> <li>Are served by a lead service line (may include MFR if they make up more than 20% of the structures on the system)</li> </ul>
2	Buildings including Multifamily Residence (MFR)	<ul style="list-style-type: none"> <li>Contain copper pipes with lead solder installed after December 31, 1982, or contain lead pipes</li> </ul> <p style="text-align: center;"><i>and/or</i></p> <ul style="list-style-type: none"> <li>Are served by a lead service line</li> </ul>
3	SFR	<ul style="list-style-type: none"> <li>Contain copper pipes with lead solder installed before January 1, 1983</li> </ul>
Other	Representative sites	<ul style="list-style-type: none"> <li>Contain plumbing materials typically found at other sites the water system serves</li> </ul>

*Note:* You will need homeowners who volunteer to collect the samples or allow water system staff access to the premises to collect the samples.

Do not use sites with point-of-use or point-of-entry treatment or water softeners. It is best not to include homes with recent plumbing repairs or replacement. These activities can loosen scale build-up on the interior wall of pipes, which may contain lead and could result in abnormally high lead results. You may change locations for reduced sampling if an original sample site is no longer available.

For more information about sample site selection, see the U.S. Environmental Protection Agency (EPA) publication, [Lead and Copper Rule: Monitoring and Reporting Guidance for Public Water Systems \(816-R-10-004\)](#).

## Sample Collection Procedures

You must collect samples from regularly used kitchen or bathroom cold-water taps left undisturbed for at least six hours. We recommend no more than 12 hours of stagnation. Ask homeowners to take samples first thing in the morning or after coming home from work or school. This minimum six-hour standing time represents how many people receive some of their drinking water. Lead and copper levels increase as long as water stands in a home's plumbing

system. Lead levels can increase significantly even after only two hours of nonuse. Water that stands longer than 12 hours may have high lead and copper levels that do not represent typical conditions.

**Be sure to provide sampling instructions for homeowners who will collect samples.** Step-by-step sampling procedures are in DOH's [Lead and Copper Sampling Procedure \(331-227\)](#).

## Action Levels

The "action level" is the amount of lead or copper that triggers the requirement for a water system to investigate and determine the best way to control corrosion.

**The action levels are: 0.015 milligrams per liter (mg/L) for lead  
1.3 mg/L for copper**

Your water system has an "action level exceedance" if more than 10 percent of your results exceed the action levels shown above. This is commonly called your 90<sup>th</sup> percentile level. When you receive the sample results from your lab, send them to us. We will calculate the 90<sup>th</sup> percentile based on all the samples you collect during the monitoring period and contact you if the results exceed an action level. (Check with your lab; most labs will submit results directly to us).

## Exceeding an Action Level

Water systems exceeding the action level for lead or copper must begin follow-up investigations immediately. We may require your system to make improvements or operational changes to make the water less corrosive. If an action level exceedance occurs, you should contact us immediately because there are deadlines associated with both corrective actions and public education requirements.

Water systems that exceed the lead action level must begin a public education campaign that includes specific language and targeted outreach to specific groups that serve sensitive populations (like pediatricians and WIC programs). Two DOH fact sheets explain how lead and copper get into drinking water and the health effects related to drinking water high in lead or copper: [Lead in Drinking Water \(331-177\)](#) and [Copper in Drinking Water \(331-178\)](#). If you need help, call our regional office.

For more detailed information about the types of corrosion control treatment and how to select the right treatment for your system, see EPA's [Optimal Corrosion Control Treatment Evaluation Technical Recommendations for Primacy Agencies and Public Water Systems \(EPA 816-B-16-003\)](#).

## Provide Sample Results To Each Homeowner

You must give the homeowners in your sampling program the results of the tests you took in their homes within 30 days after receiving the results from the testing laboratory. Your consumer notice must also include information on health effects of lead and what consumers can do to reduce their exposure to lead. To help you meet these and other requirements, we developed a

consumer notification form for your use. [DOH 331-462-F](#) includes a link to the notification form. You must inform each consumer who participates in lead and copper sampling of their sampling results. Doing so can also serve as an incentive to keep and recruit participants in your sampling program. You must also send us verification that you completed this notification. Complete and return [DOH 331-462-F](#) within three months after delivering your notices. If you need help, call our regional office.

## For Technical Assistance

[Eastern Region](#), Spokane 509-329-2100

[Northwest Region](#), Kent 253-395-6750

[Southwest Region](#), Tumwater 360-236-3030

Publications referenced in this document are available on our website at [fortress.wa.gov/doh/odwpubs/Publications/](http://fortress.wa.gov/doh/odwpubs/Publications/).



If you need this publication in an alternative format, call 800.525.0127 (TDD/TTY call 711). This and other publications are available at [www.doh.wa.gov/drinkingwater](http://www.doh.wa.gov/drinkingwater).

## **Disinfection Byproducts Monitoring Plan**

Cedar Ridge - 617

**ID #02938**

**Groundwater**

**Population:** 186

**Treatment Provided:**

Hypo-chlorination for bacteria

**Number of Treatment Plants (TP):** 1

TP1 S01 well 1 treatment located inside pumphouse, permanent use

**Disinfectant Monitoring**

Required: Chlorine residuals must be measured at the same time and place as routine or repeat coliform samples. MRDL (maximum residual disinfectant level) for chlorine and chloramines = 4.0 mg/l.

Compliance: Compliance is based on the RAA (running annual average) of 12 consecutive months. DOH will determine compliance for chlorine MRDL. Daily residual measurements **will not** be included in the compliance calculations.

**Byproduct Monitoring**

Required: TTHM & HAA5 – 1 sample per treatment plant per year during month of warmest water temperature, collected at MRT (maximum residence time). TTHM MCL = 0.080 mg/l or 80 ppb, HAA5 MCL = 0.060 mg/l or 60 ppb

Compliance: Must go to quarterly monitoring if annual sample exceeds MCL for either TTHM or HAA5. Compliance is then based on the RAA of quarterly results or averages DOH will determine compliance for TTHM & HAA5 based on data submitted by the lab.

**Sample Location:**

MRT = **Outside tap at 10717 Wilmer**

Sample will be taken in the month of August when water should be the warmest.

**Reduced Monitoring**

To qualify for reduced monitoring the following criteria must be met (and State must approve) TTHM RAA  $\leq$  0.04mg/l and HAA5 RAA  $\leq$  0.03 mg/l for two consecutive years.

OR

TTHM RAA  $\leq$  0.020 mg/l and HAA5 RAA  $\leq$  0.015 mg/l for one year, monitoring may then be reduced to 1 sample per 3 year cycle.

**System has qualified for reduced monitoring with results in August 2017 of Total HAA5 – 6.9 ppb and Total TTHM – 10.1 ppb next sampling to be performed in August 2020.**

Completed by: Kim Gubbe, DPC updated May 31, 2019

# Thurston PUD Group B Water Quality Sampling Program

Thurston PUD has reviewed each of the County Drinking Water policies and standards for the counties in which we own and operate Group B water systems. To simplify our processes surrounding water quality sampling we have chosen to use a standard sampling program for all Group B systems.

**ROUTINE BACTERIA:** Collect a water sample and have it analyzed for coliform bacteria at least once every 12 months. The sample should be taken at the farthest end of the distribution system, or as directed by county Environmental Health (EH), Drinking Water Program.

## **BACTERIA DETECTED:**

- Collect two repeat samples (site of unsatisfactory sample, and source sample) within 48 hours to confirm sample results.
- If system has required continuous disinfection or E.coli detected, samples must be collected within 24 hours of notification.
- Contact applicable county EH within 24 hours
- Acute MCL Violation - E. coli bacteria detected in sample (routine) notice to customers in writing and by Call-Em-All (verbal) before the end of the next business day after notification from lab,
- Non-Acute MCL Violation - Confirmed coliform sample, contact county EH within 24 hours with a plan of action or for more instructions.

**ACUTE MCL VIOLATION:** Public Notice is required within 24 hours if E. coli bacteria is confirmed. Boil water advisory will also be issued to customers. Copies of notice sent to customers will also be sent to county Environmental Health, See Emergency Response Plan, Appendix P.

Public Notice is to include the following information:

1. Description of contamination and known problem(s);
2. What is being done to resolve the problem(s);
3. Where to get information regarding potential health effects;
4. What customers can do to protect their health to include use of another water service;
5. When problem(s) are expected to be resolved;
6. Thurston PUD contact information to include address, phone number, and email address;
7. If necessary multilingual notice will be created; and
8. If any additional information as deemed necessary by Thurston PUD.

**NON-ACUTE MCL VIOLATION:** Public Notice and notice to county EH staff is required no later than 14 days after an unsatisfactory sample if Total Coliform is confirmed in repeat sample.

NITRATE: Collect a water sample and have it analyzed for nitrate every 36 months.

Maximum contaminant level (MCL) violations (non-bacteria sampling): Contact the county Environmental Health before the end of the next business day after the laboratory notifies the system of an MCL violation. Water system customers must be contacted within 14 days.

For Lewis County Only:

NITRATE ABOVE 5 mg/L AND BELOW 10 mg/L: Quarterly sampling will begin, for four consecutive quarters, in the quarter following the quarter in which the nitrate exceeded 5 mg/L. Once quarterly sampling is completed, system must begin annual sampling until directed otherwise by county health.

NITRATE EXCEEDANCE (over 10 mg/L): Notice to LCEH as soon as possible but not later than end of business day of notification of water system by laboratory. A confirmation sample should be collected within five days of notification by laboratory, or by other direction from LCEH. Verbal notification to LCEH is required as soon as possible but not later than end of business day in which the system is notified by laboratory.

ACUTE NITRATE MCL: If routine and confirmation sample results both exceed the MCL of 10 mg/L or average of the two nitrate results exceeds the MCL. Thurston PUD will ensure that LCEH and all water system users are notified as follows, if an Acute nitrate MCL violation occurs.

A 'Do Not Drink the Water' health advisory, and any further action as directed by Lewis County Environmental Health, will be issued. Public notice will include, description of contamination and known problem(s); what is being done to resolve the problem(s); where to get information regarding potential health effects; what customers can do to protect their health to include use of another water service; when problem(s) are expected to be resolved; Thurston PUD contact information to include address, phone number, and email address; if necessary multilingual notice will be created; and if any additional information as deemed necessary by Thurston PUD.

For Kitsap County only:

NITRATE: Quarterly monitoring will be required when the average of the last two nitrate samples reaches 5 mg/L. A sanitary survey completed by the Health District will also be required to help identify the possible sources of contamination.

NITRATE EXCEEDANCE (over 10 mg/l): When a primary chemical MCL violation occurs, the following action are required by Kitsap Public Health.

- Notify the Health District within twenty-four (24) hours; and
- Notify the water system users within twenty-four (24) hours; and
- Determine the cause of contamination; and
- Take corrective action, which may include the installation of treatment, as directed by Kitsap Public Health.
- Kitsap Public Health may require additional monitoring for confirmation of results.

*Where to locate each counties regulations:*

THURSTON COUNTY

<https://www.co.thurston.wa.us/health/ehdw/comply.html>

LEWIS COUNTY

<https://www.codepublishing.com/WA/LewisCounty/html/LewisCounty08/LewisCounty0855.html>

KITSAP COUNTY

[https://kitsappublichealth.org/environment/water\\_managing\\_groupB.php](https://kitsappublichealth.org/environment/water_managing_groupB.php)

GRAYS HARBOR

<http://www.co.grays->

[harbor.wa.us/departments/public\\_services/environmental\\_health\\_division/group\\_b\\_water\\_system.php](http://www.co.grays-harbor.wa.us/departments/public_services/environmental_health_division/group_b_water_system.php)

PIERCE COUNTY

<https://www.tpchd.org/healthy-homes/drinking-water/water-systems/managing-your-water-system>

Appendix P  
Emergency Response Plan

Water System Plan – Part A

## Emergency Response Plan

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Version 2.0

# Executive Summary

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This document supports the Emergency Response Plan for Thurston PUD. This plan outlines the measures to consider in order for all parties to effectively operate during an incident, both emergent and non-emergent. The measures described herein include how Thurston PUD manages an emergency event process, and when to seek assistance and engage in collaborative efforts, and how to ensure that all incidents are communicated to the stakeholders.

## Document Revision History

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Date	Pages and/or Section #s	Description	Author
3/12/2020	All	Emergency Response	Ruth Clemens
3/14/2020	Actions Levels	Updated to reflect decisions by leadership	Ruth Clemens
3/17/2020	Multiple	Addition to Power Sources, Media Contact,	Ruth Clemens
3/19/2020	Page 9	Addition of a Logistics Chief Role and Responsibility	Ruth Clemens

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## **INTRODUCTION AND PURPOSE**

Thurston PUD is required by law to have a drinking water emergency response plan in place to prepare water systems for all kinds of emergencies.

This plan gives specific instructions about who to call if there is an emergency that may affect a water system. This plan contains forms and helpful documentation resources that can help you record details of each situation. This plan organizes several important management and operations procedures into one document for quick and easy reference.

This Plan is to assist in managing and communicating internally and externally during an emergency or crisis.

## **MISSION AND GOAL**

Thurston PUD's mission is to provide clean, reliable, safe drinking water to its customers. Part of protecting our precious resource is the creation of a drinking water emergency response plan. We are committed to developing partnerships with local and state governments and agencies. Protecting public health is at the forefront of our priorities.

Our goals for this plan are to be prepared and respond immediately to events that may disrupt or contaminate drinking water supplies. We must be able to identify an emergency quickly and initiate a response action in a timely and effective manner. We must be able to notify and collaborate with local, state and federal agencies. We must be able to assess water quality and safety in a timely manner. We must be able to respond, repair and re-assess emergencies to minimize disruption.

## **OBJECTIVE**

The objective of this plan to outline what modified operations will look like should an emergency be declared. Emergencies can only be declared by the General Manager which will activate emergency operations/response.

## **ROLES AND RESPONSIBILITIES**

The roles and responsibilities outlined in this plan can help you reference the chain of command during an emergency. This outlines who to report to, who makes decisions during an emergency and who is responsible for what aspect of the emergency response.

## **Workforce Deployment**

In the event that it is necessary to deploy employees to work in other areas of the District, the following will apply:

1. For the duration of an emergency event, the District will commit to ensure critical services are provided to customers.
2. If a need is identified in a critical area of the District, qualified employees from any location or classification may be assigned based on business need to perform the necessary work during the emergency event, regardless of seniority.
3. For the duration of the emergency event, qualified management employees may also perform work to ensure critical services are provided to customers.

## Employee Updates

The Administrative Services Team will be responsible for regular updates to all employees regarding emergency status, community issues, advisories, etc.

## Work Schedule

When an emergency event is declared, modifications may be made to employee work schedules to ensure critical services are met, or for other reasons. In addition, partial or full facility closure may result in reduction of work of some employees.

## Thurston PUD Emergency Response Team

Regardless of day-to-day operation title, a person's role within the emergency response system may be different according to the employee's realm of expertise and responsibility. PUD leadership and their functions during emergencies are listed as follows:

Emergency Response Role	PUD Title	Information	Emergency Response Duties
Incident Commander	General Manager	John Weidenfeller Office: 360-763-5838 Work Cell: 360-791-1739 Email: <a href="mailto:jwedienfeller@thurstonpud.org">jwedienfeller@thurstonpud.org</a>	<ul style="list-style-type: none"><li>• Manages the emergency</li><li>• Provides information to Commissioners</li><li>• Approves all communications</li></ul>
Assistant Incident Commander	Assistant General Manager	Julie Parker Office: 360-763-5840 Work Cell: 360-791-1397 Email: <a href="mailto:julieparker@thurstonpud.org">julieparker@thurstonpud.org</a>	<ul style="list-style-type: none"><li>• Telecommunications Operations</li><li>• Cyber-attack incident commander</li><li>• Internet and County IT liaison</li></ul>
Operations Chief	Director of Planning and Compliance	Kim Gubbe Office: 360-763-5848 Work Cell: 360-688-0827 Email: <a href="mailto:kgubbe@thurstonpud.org">kgubbe@thurstonpud.org</a>	<ul style="list-style-type: none"><li>• Oversees inspections and sampling</li><li>• Relays critical information</li><li>• Assesses facilities</li><li>• Provides treatment recommendations</li><li>• Spokesperson to collaborating agencies</li><li>• Oversees contractor work</li></ul>

Field Operations/Field Facilities	Director of Field Operations	Jim Campbell Office: 360-763-5842 Work Cell: 360-790-2662 Email: <a href="mailto:jcampbell@thurstonpud.org">jcampbell@thurstonpud.org</a>	<ul style="list-style-type: none"> <li>• Oversees field operations and field technicians</li> <li>• Assesses facilities</li> <li>• Provides system recommendations</li> <li>• Implements corrective actions to infrastructure</li> <li>• Oversees door hanging</li> <li>• Organize and carry out repairs</li> </ul>
Financial Chief	Finance, Accounting and Customers Service Manager	TaSeana Tartt Office:360-763-5845 Email: <a href="mailto:Ttartt@thurstonpud.org">Ttartt@thurstonpud.org</a>	<ul style="list-style-type: none"> <li>• Determines finance and budgeting impacts</li> <li>• Oversees Customer Service</li> <li>• Coordinate Customer Service Messaging</li> <li>• Oversees and receives phone calls</li> <li>• Tracks call events</li> <li>• Provides standard of carefully scripted messaging</li> <li>• Contacts customers</li> </ul>
Public Information Officer	Administrative Service Manager	Ruth Clemens Office: 360-357-8783 x106 Office Direct: 360-763-5837 Work Cell: 360-515-6118 Email: <a href="mailto:rclemens@thurstonpud.org">rclemens@thurstonpud.org</a>	<ul style="list-style-type: none"> <li>• Develops Communications Plan</li> <li>• Media releases</li> <li>• Prepares scripts for Customer Service</li> <li>• Human Resources</li> <li>• Public Records</li> <li>• Facility Safety</li> <li>• Clerk of the Board</li> </ul>
Logistics Officer	Customer Service Supervisor	Cathy Easton Office: 360-357-8783 x104 Office Direct: 360-763-5836 Email: <a href="mailto:ceaston@thurstonpud.org">ceaston@thurstonpud.org</a>	<ul style="list-style-type: none"> <li>• Handles vendor supplies</li> <li>• Janitorial needs</li> <li>• Centralized purchasing/tracking</li> <li>• Give updates on office supplies</li> </ul>
IT/Telephone Infrastructure Chief	Operations Specialist III	Erica Cecil Office: 360-763-5847 Email: <a href="mailto:Erica.cecil@thurstonpud.org">Erica.cecil@thurstonpud.org</a>	<ul style="list-style-type: none"> <li>• Coordinate, troubleshoot and set up remote access</li> <li>• Oversee the operation and functionality of phonelines</li> <li>• Ensure connectivity and operations of phone lines</li> <li>• Acts as an alternate liaison to Thurston County IT</li> <li>•</li> </ul>
Commissioner		Chris Stearns Email: <a href="mailto:cstearns@thurstonpud.org">cstearns@thurstonpud.org</a>	<ul style="list-style-type: none"> <li>• Inform</li> <li>• Alternate Spokesperson</li> </ul>

Commissioner		Linda Oosterman Email: loosterma@thurstonpud.org	<ul style="list-style-type: none"> <li>• Inform</li> <li>• Alternate Spokesperson</li> </ul>
Commissioner		Russell E. Olsen Email: rolsen@thurstonpud.org	<ul style="list-style-type: none"> <li>• Inform</li> <li>• Alternate Spokesperson</li> </ul>

## Regulatory Agencies & Emergency Contacts Outside of Thurston PUD

Use these contacts to stay informed (on an hourly basis, if necessary) about the emergency event.

### Health

Agency	Number	Contact Person
Washington State Department of Health, Office of Drinking Water	1-877-481-490 (Emergency 24-hour)	On-call DOH staff
DOH, Office of Drinking Water, Southwest Region	360-236-3030	Kay Rottell, Mark Mazeski
DOH, Office of Drinking Water, Northwest Region	253-395-6750 253-395-6770	John Ryding, Carol Stuckey, Jennifer Kropack; Brietta Carter
Thurston County, Environmental Health	360-867-2630	Stephanie Kenny
Lewis County Environmental Health, Drinking Water Program	360-740-2718	Sue Kennedy
Tacoma-Pierce County Health Department, Drinking Water	800-525-0127 253-798-6470	Kelly Racke or Michelle Harris
Grays Harbor County Environmental Health, Drinking Water/Wells	360-249-4222	Scott Evans
Kitsap County Environmental Health, Drinking Water	360-728-2235	

### Laboratory

Water Management Laboratories, Inc (PUD main lab)	1515 80 <sup>th</sup> Street E. Tacoma, WA 98404	Office 253-531-3121 After Hours 253-841-0732	Monday-Friday 8am-5pm Saturday 9am-12pm
Thurston County Lab	County Courthouse Building 1 2000 Lakeridge Dr. SW Olympia, WA	Erik Iverson 360-867-2631 If after 4pm, call Erik for access to lab	Coliform Sample (need to use county sample bottle) Drop Off: Monday – Wednesday 8am-5pm Thursdays 8am-12pm  Nitrate Sample: Drop off Monday and Tuesdays only
Dragon Analytical Lab	627 Durell RD SE, SUITE B105 Tumwater, WA	360-866-0543	Coliform Samples: need to use same bottle as county Drop off: Monday-Friday 8:30am – 5:30pm

## Power Utility

County	Provider	Phone
Grays Harbor	Grays Harbor PUD	(800) 562-7726
Grays Harbor	City of McCleary	(800) 495-3667
King	Puget Sound Energy	(888) 225-5773
Kitsap	Puget Sound Energy	(888) 225-5773
Lewis	City of Centralia	(360) 330-7657
Lewis	Lewis PUD	(800) 562-5612
Pierce	Puget Sound Energy	(888) 225-5773
Pierce	Elmhurst Mutual Power and Light	(253) 531-4646
Pierce	Ohop Mutual Light	(253) 847-4363
Pierce	Tacoma Public Utilities	(253) 502-8600
Pierce	Peninsula Light	(888)809-8021
Thurston	Puget Sound Energy	(888) 225-5773

## Phones

Thurston	Internet: Comcast	(855) 201-9567
Thurston	Olympic Telephone, Inc	(800) 488-0752 / (360)357-4179
Thurston	AllWorx	1-866-255-9679
Thurston	After-Hours Customer Call Center	(800) 514-8140
Thurston	Consolidated (Telemetry)	(844) 968-7224
Lewis	Century Link	(855) 208-3801
Pierce	Century Link	(855) 208-3801

## Gas Company (Propane)

Acme Service Group	360-943-1133 416 State Ave NE Olympia, WA 98501
Ferrellgas	(360) 753-5877

## Generators

Tacoma Diesel (water systems)	253-922-8171
NC Machinery (1230 Building)	253-896-0878

## IT Software Services

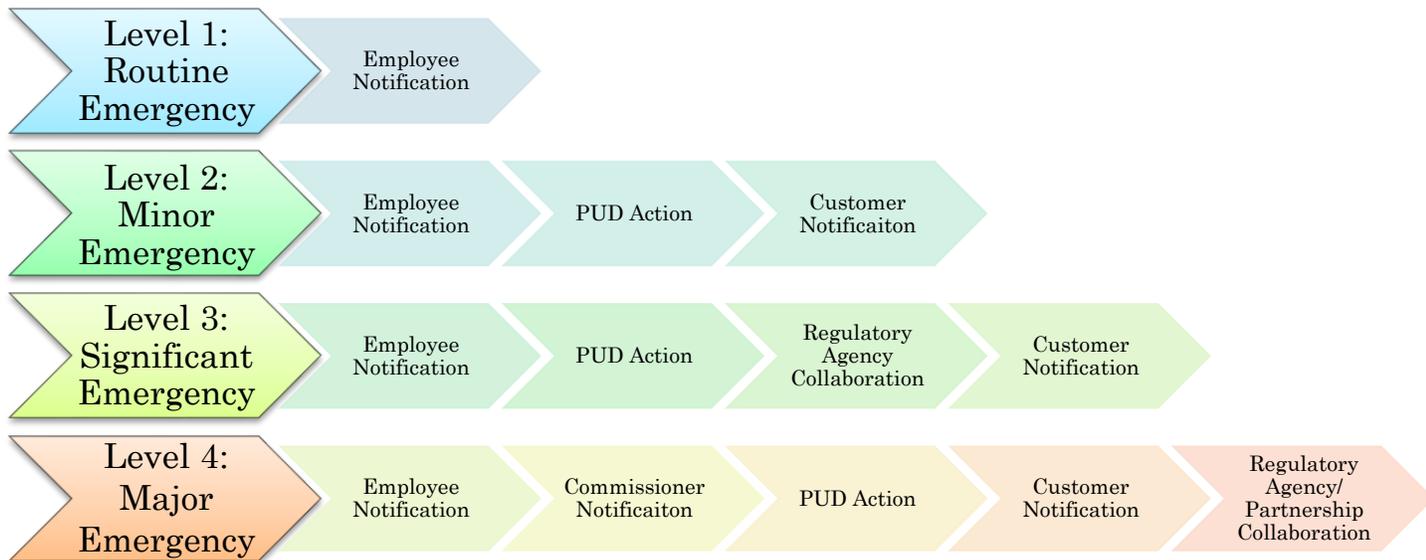
Thurston County IT Help Desk	Email before calling: <a href="mailto:help.desk@co.thurston.wa.us">help.desk@co.thurston.wa.us</a> 360-786-5419
Springbrook/Civic Pay	866-777-0069
Badger Software/General Pacific	800-547-9744

## EMERGENCY RESPONSE AND LEVELS OF ACTION

There are different levels of action that require a corresponding response. Below we've listed the action level and the corresponding response that District employees should take. Also included are the essential duties/functions and what types of emergency responses the District prioritizes during modified operations. The **Action Level** indicates which level of communication should be made. Action Level 1 describe the types of activities that should take place should the announcement of a new epidemic occur. The assumption for Action Level 1 is the epidemic has occurred across international borders. Action Level 2 assumes that the emergent issue has made it to domestic soil, but is handled at a federal level. Action Level 3 assumes that a emergent issue is found at a statewide-county level. Action Level 4 assumes that the emergent issue is directly affecting the organization. Level 4 assumes that the workforce attendance levels are low.

### Water Emergency Response During Modified Operations

Aging infrastructure and infrastructure replacement will be the most common type of emergencies our team will have to respond to during an event. Below is the list of emergencies we will respond to during an emergency operation. The **Action Level** indicates which level of communication should be made.



### List of Essential Functions/Duties

Critical Function	Department	Primary	Alternate	More alternates
Pump Truck	Field Operations	Dan Lovell, Rick Sanchez, Jason Choate	Jim Campbell	
Vactor	Field Operations	Jake Boogerd, Dan Lovell, Rick Sanchez, Kirk Gietz	Jason Choate, Rich Holmes	
Test Samples	Field Operations	Joe Greene, Kirk Gietz	Rick Sanchez, Rich Holmes, Dan Lovell	Kim Gubbe
Treatment Supplies	Field Operations	All <b>except</b> Michael Lane and Brooke West		
Locates	Field Operations	All <b>except</b> Michael Lane and Brooke West		
VFD	Field Operations	Derek Genre	Jim Campbell	

Cross Connection Control	Field Operations	Jason Choate, Dan Lovell	Jim Campbell	Kim Gubbe
Payroll	Finance & Accounting	Kathleen Linnemeyer	Sandy Furth	TaSeana Tartt; Julie Parker
Direct Debits; Recurring Payments	Finance & Accounting	Sandra Furth	Kathleen Linnemeyer	TaSeana Tartt; Julie Parker
New Accounts	Customer Service	Raven Thomas	Cathy Easton	
Water Availability	Customer Service	Cathy Wise	Raven Thomas	Cathy Easton
Water Quality Calls	Customer Service	All CSRs		
Monthly Billing	Customer Service	Raven Thomas	Cathy Easton	
Final Billing	Customer Service	Mariah Rodocker	Raven Thomas	Cathy Easton
Online Payments	Customer Service	All CSRs	Finance & Accounting	
Mail	Customer Service	All CSRs	Finance & Accounting	
Phone Payments	Customer Service	All CSRs	Finance & Accounting	
Cash/ In-person	Customer Service	All CSRs	Finance & Accounting	
Bank Payments	Customer Service	All CSRs	Finance & Accounting	
Office Mail	Customer Service	All CSRs	Finance & Accounting	
Customer Phone Calls	Customer Service	All CSRs	Sandy Furth	TaSeana Tartt; Julie Parker; Kurin Miller; Ruth Clemens
Public Records Responses	Administrative Services	Ruth Clemens	Julie Parker	Kurin Miller
Emergency Communications	Administrative Services	Ruth Clemens	Kurin Miller	Mariah Rodocker
Human Resources	Administrative Services	Ruth Clemens	Julie Parker	Kurin Miller
Facility Safety	Administrative Services	Ruth Clemens	Erica Cecil	Raven Thomas
Clerk of the Board	Administrative Services	Kurin Miller	Ruth Clemens	

## Equipment/Infrastructure Emergencies

Type of Event	Action Level	Probability	Incident Commander
<b>Pump Replacement</b>	Level 1	Medium	DFO
<b>Emergency Locates</b>	Level 1	Medium	DFO
<b>Failed Collapsed Well</b>	Level 2	Low	DFO
<b>Treatment Equipment Failure</b>	Level 2	Low	DFO
<b>Loss of Automated Controls</b>	Level 2	Low	DFO
<b>Water Main Break</b>	Level 2	Medium	DFO

<b>Power Failure</b>	Level 2	Medium	DFO
<b>Chlorine Equipment Failure</b>	Level 4	High	DFO

## Natural Disasters

Type of Event	Action Level	Probability	Incident Commander
<b>Waterborne Disease</b>	Level 4	Medium	DPC
<b>Water Shortage</b>	Level 2	High	DFO
<b>Drought</b>	Level 2	Low	General Manger
<b>Earthquake</b>	Level 4	Low	General Manager
<b>Flood</b>	Level 4	Low	General Manager
<b>Storm</b>	Level 4	Low	General Manager
<b>Mudslide/ Earth Shift</b>	Level 4	Low	General Manager
<b>Wildfire</b>	Level 4	Low	General Manager

## Human-caused Events

Type of Event	Action Level	Probability	Incident Commander
<b>Terrorism</b>	Level 4	Low	General Manager
<b>Riot</b>	Level 4	Low	General Manager
<b>Cyber Attack</b>	Level 3	Medium	AGM

## Accidents

Type of Event	Action Level	Probability	Incident Commander
<b>Construction Accident</b>	Level 2	High	DFO
<b>Chemical Spill</b>	Level 4	Low	General Manager

## EMERGENCY NOTIFICATION

When making a notification of an emergency, the notifier is asked to provide as much information about the system using the forms provided in Appendix A. The list below indicates who is the primary point of contact to conduct these forms of communications.

### NOTIFYING ALL EMPLOYEES

When notifying all employees at one time, the following communication methods have been identified as the most efficient and effective methods and should be used simultaneously. Also listed are alternative modes of communication that should be used when the organization is under modified operations. The table lists the primary contact person(s) that can carry out the task of contacting all employees and their alternates. A list with employee information must be provided to the primary and alternate. Instructions to accomplish these communications can be found in Appendix A.

Call-em-alls are automated phone calls that are mass delivered to a group of people determined by the sender.

Vtexts are emails that are converted text and sent to a group of people determined by the sender.

Communication Method	Primary Contact	Alternate
Email		
Phones		
Call-Em-All	Cathy Easton, Brian Wilson, Erica Cecil, Raven Thomas, Cathy Wise, Mariah Rodocker, Teal Reopelle	Kim Gubbe, Ruth Clemens, TaSeana Tartt
Vtext	Erica Cecil, Brian Wilson	Ruth Clemens

## System Specific Information

All water system information can be found on the Washington State Department of Health, Office of Drinking Water system (Sentry). If access to a computer is not possible, all PUD water system information can be found in the K: drive under the system file or at Field Office, water system folders.

- Public Water System (PWS) ID, WFI
- Contact Person
- Population Served
- Service Connections
- Distribution Map
- Pressure Boundary Map
- Overall Process Flow Diagrams
- Site Plans and Facility “As-Built” Engineering Drawings
  - Pumping and Storage
  - Reservoirs Facilities
  - Water Treatment
  - Booster Pumps
  - Pressure-Regulating Valve
  - Equipment and Operations Specifications
  - Emergency Power and Light Generation
  - Maintenance Supplies
- Operating Procedures and System Descriptions including back-up systems and interconnections with other systems
- Telemetry Systems Operation
- Chemical Handling and/or Storage Facilities and Release Impact Analyses (i.e., chemical releases into air or water).

## DOH Notification Procedures

PUD staff will immediately notify the appropriate DOH Regional Engineer (Group A’s) or County Environmental Health Department (Group B’s) if:

- A water shutdown is threatened or required for more than 24 hours,
- Water quality is determined to be unacceptable, or
- A public health risk associated with the water system is detected.

The PUD has 24 hours to notify its customers of a Tier 1 violation. Tier 1 violations include fecal coliform-positive samples, failure to confirm a positive total coliform for fecal coliform bacteria, maximum contaminant level (MCL) violation for nitrates, and waterborne disease outbreak.

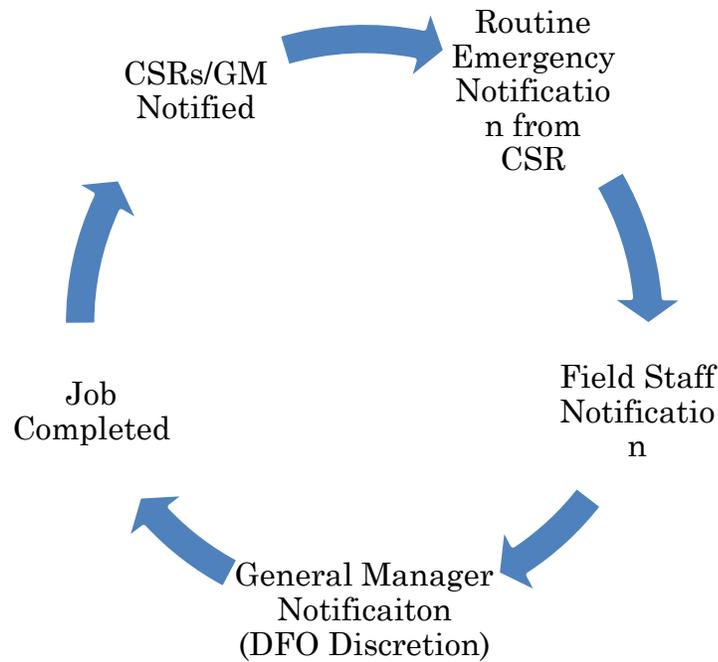
## Location of Critical Information

Below are some critical documents and the locations in which they are store.

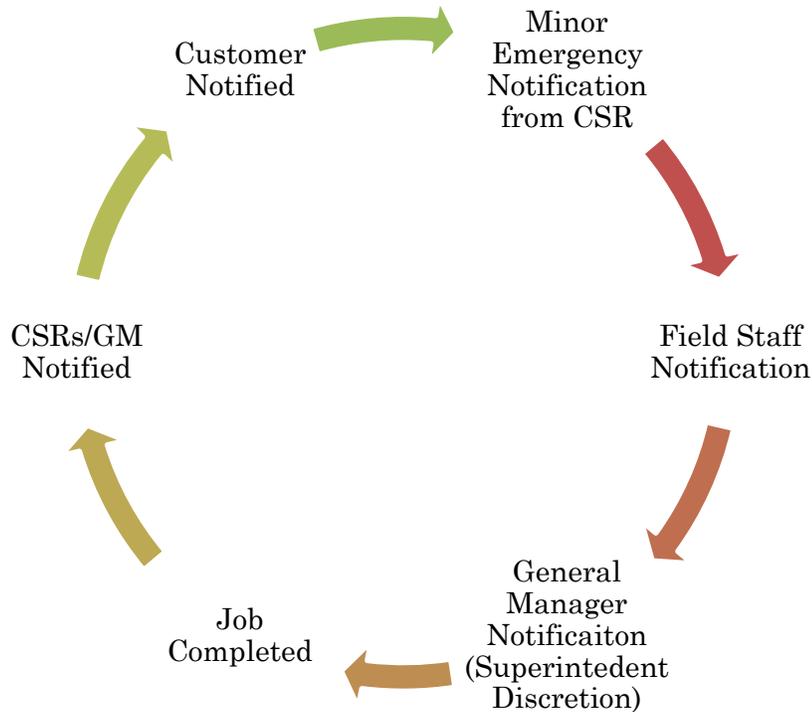
Document	Location	Owner
Water System Maps	Satellite Office	DCP
Well Operation Records	Satellite Office	DFO
Asset Management Plan	Satellite Office; K:drive	DCP
Water System Information	K:drive	DCP
Permits	Satellite Office	DCP
Power Supply Information	Satellite Office	DCP
Account/Customer Information	Springbrook	AGM
Mutual Aid Agreements	Headquarters	GM
Employee Safety Policy	All Locations	AGM
Water Sampling Procedures	Satellite Office	DCP

## Communications Processes

### Internal Notification: Communications within the PUD



## External Communications: Communicating with Customers



## WHO SHOULD BE NOTIFIED?

Stakeholder	Level	Purpose of Notification	
<b>Public Health Agency</b>	State/local health and/or environmental department	3-4	To work with these officials in making the decision on the distribution of “boil water,” “do not drink,” or “do not use” notices. These officials may be involved with public health decisions related to the proper use of the water supply, status of the water distribution system, selection of a short-term alternate water supply, and communicating the necessary public health information.
	Poison Control	4	
<b>Emergency Responders</b>	Emergency Medical Services	4	To notify the organization of the need for assistance with the distribution of an alternate water supply (e.g., bottled water) and whether the contamination impacts the availability of water for firefighting. Also, these agencies should be provided with all information related to public health including information on water notices, alternate water supplies, critical care facilities, and public health notifications.
	Fire Department	4	
	State and Local Office of Emergency Services	4	
<b>Law Enforcement</b>	Federal, State, and local law enforcement	4	Local law enforcement should be notified immediately if a malevolent act is suspected. Law enforcement agencies should also be notified of the need for assistance with getting important information out to the public and the distribution of water from the short-term alternate water supply (i.e., distribution of bottled water, etc.). Law

			enforcement agencies should also be contacted because the public may be contacting them through 911 regarding the incident.
<b>Consecutive Systems (i.e., public water systems that receive water from the water utility where the water contamination threat or incident occurred)</b>		3	To provide information related to restrictions on the use of the drinking water supply, as well as instructions on obtaining alternate sources of drinking water, through the duration of the incident. Also, information should be provided on the status of the water supply, the potential problem, and what is being done to manage the incident.
<b>Customers with special needs</b>	Critical care facilities (hospitals, clinics, nursing homes, dialysis centers)	2-4	These facilities should be some of the first to be notified. Information should be provided regarding the proper use of the water supply for public health purposes as well as the identity of the contaminant, so these facilities can identify the symptoms of exposure as well as potential medical treatment. They may be given information on how water will be provided or how they need to obtain short-term alternate water supplies. Critical care facilities may also need to be notified of any changes in the type of chemical disinfection being used or the concentration of these chemicals in the water as this may affect some of their medical procedures.
	Schools	2-4	To provide information regarding restrictions on water use, alternate water supplies, and other public health information
	Day Care Facilities	2-4	To provide information regarding restrictions on water use, alternate water supplies, and other public health information.
	Businesses (e.g., food and beverage manufacturers, commercial ice manufacturers, restaurants, agricultural operations, power generation facilities, any other businesses identified by the utility)	2-4	To provide information regarding restrictions on water use, alternate water supplies, and other public health information. These customers may also need information regarding whether heating or superheating the water may pose a hazard.
<b>Other</b>	Elected Officials	4	To provide all information related to public health, including: the status of the threat evaluation, information on “boil water,” “do not drink,” or “do not use” notices, alternate water supplies, customers with special needs, and public health notifications.

## APPENDIX A: Documents

---

## A1. Declaration of Emergency

### Declaration of Emergency

[Date]

WHEREAS, the Public Utility District No. 1 of Thurston County (the District) provides services that are essential to the well-being and livelihoods of the people it serves; AND

WHEREAS, the District seeks to promote employee wellness and minimize opportunities for employees to be exposed to an influenza disease while at work; AND

WHEREAS, a wide-spread illness among District employees may impact the provision of essential services to customers; AND

WHEREAS, the Board of Commissioners adopted Resolution No. XX-XX on [Month, Day, Year], authorizing the General Manager to declare an Emergency Event and to suspend certain existing Commission policies during such an event for the purpose of mitigating the impact of an emergency on employees and customers; AND

WHEREAS, Resolution No. XX-XX directs the General Manager to notify the Commission when an Emergency Event has been declared and when existing Commission policies have been suspended; AND

WHEREAS, current conditions meet one or both of the following criteria:

- The Thurston County Health District has advised that an [insert emergency] is imminent
- District employee absenteeism prevents business continuity under existing policies

NOW THEREFORE, pursuant to Resolution No. 2056, the General Manager, or designee, is declaring that an Emergency Event exists, this day of [Month], [Year] .

This Declaration of an Emergency Event remains in force until canceled.

\_\_\_\_\_  
General Manager or Designee

\_\_\_\_\_  
Date

Notification to the Board of Commissioners:	
Date:	Method of Notification:
Cancellation of Emergency Event:	
Date:	Method of Notification:

## A2. Sample Resolution Template

CERTIFIED COPY OF RESOLUTION  
ADOPTED AT THE REGULAR MEETING OF THE COMMISSIONERS  
OF  
PUBLIC UTILITY DISTRICT NO. 1 OF THURSTON COUNTY

*We, the undersigned, being the President and Secretary of Public Utility District No. 1 of Thurston County, do hereby certify that the following Resolution was adopted by a majority vote of the Commissioners of Public Utility District No. 1 of Thurston county, in attendance at the meeting held at the office of the District, 1230 Ruddell Road Se, Lacey, WA 98503 on [Day, Month, Year], and that said Resolution has not been revoked.*

WHEREAS, the Public Utility District No. 1 of Thurston County (the District) provides services that are essential to the well-being and livelihoods of the people it serves; AND

WHEREAS, the District seeks to promote employee wellness and minimize opportunities for employees to be exposed to an influenza disease while at work; AND

WHEREAS, a wide-spread illness among District employees may impact the provision of essential services to customers; AND

WHEREAS, the Board of Commissioners adopted Resolution No. XX-XX on [Month, Day, Year], authorizing the General Manager to declare an Emergency Event and to suspend certain existing Commission policies during such an event for the purpose of mitigating the impact of an emergency on employees and customers; AND

WHEREAS, Resolution No. XX-XX directs the General Manager to notify the Commission when an Emergency Event has been declared and when existing Commission policies have been suspended; AND

WHEREAS, current conditions meet one or both of the following criteria:

- The Thurston County Health District has advised that a [emergency event] is imminent
- District employee absenteeism prevents business continuity under existing policies

NOW THEREFORE, pursuant to Resolution No. 2056, the General Manager, or designee, is declaring that an Emergency Event exists, this day of , 20 .

This Declaration of an Emergency Event remains in force until canceled.

Said Resolution was approved and adopted by a majority vote of the Commissioners present.

We do further certify that said meeting was attended by two of the three Commissioners of Public Utility District No. 1 of Thurston County and that the Resolution was adopted by a majority vote of the Commissioners of Public Utility District No. 1 of Thurston County in attendance.

\_\_\_\_\_  
Russell E. Olsen  
Commissioner and President

ATTEST:

\_\_\_\_\_  
Chris Stearns  
Commissioner and Secretary

## A.3 Critical Vendors

### Critical Vendor List

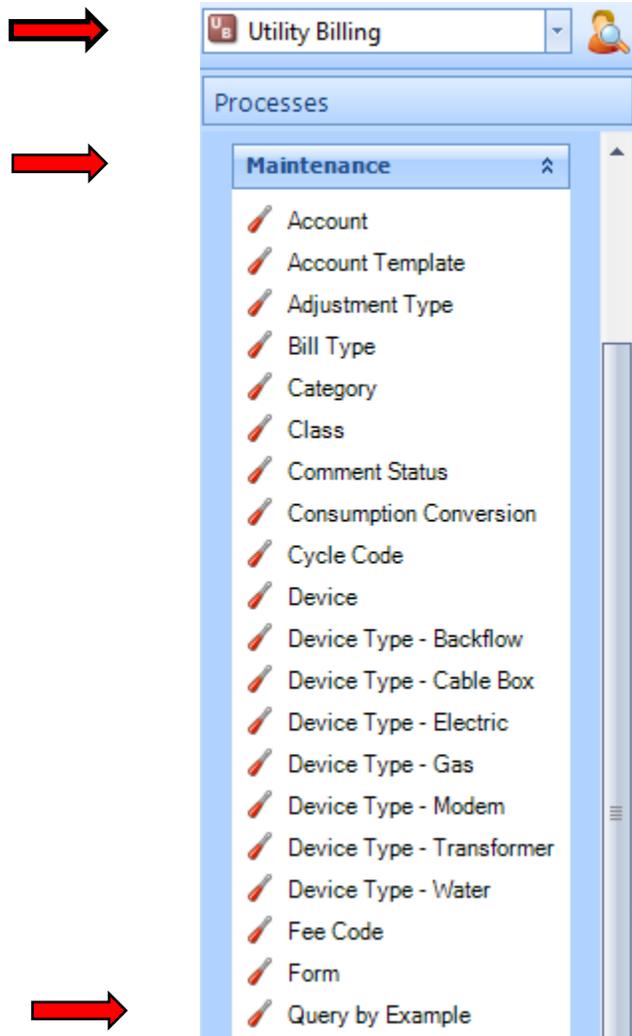
This list is a reference guide for vendors and services that we consider critical. It gives you their modified operations and how they would like you to work with them during this time. Please call Ruth 360-515-6113 if you have any questions. Please contact Teal if there are other changes that need to be made to this list.

Vendor No	Vendor Name	Service(s) Provided	Phone Number	What the PUD changed with this vendor	Vendors Special Operations Status
2MCO0001	2M Company Inc.		360-915-7748		Running a skeleton crew; Please don't come in if you're sick; wear rubber gloves you can;
ACME0001	Acme Service Group		360-943-1133		Still delivering fuel
	Americall		1-800-964-3556		normal operations
	Calvert Technical Services, Inc		509-842-8290		Normal Operations
CINT0001	Cintas Corporation			Suspended Services until further notice	Normal Operations
FERG3007	Ferguson Enterprises, Inc.		360-456-2960		Normal Weekday hours; closed on the weekends; No walk-ins; call ahead of time; showroom is closed;
HDFO0001	H.D. Fowler Co		360-459-7300		Still operating as usual; If you need place an order, give us a call and we will bring product out; No customers in the building.
HOTS0001	Hotsko and The Son		360-250-0516	Left message	
LEMA0002	LeMay Mobile Shredding				Shredding services suspended
LEMA0001	LeMay-Pacific Disposal		(360) 486-8605		Modified Operations;Bags Must be secured; no loose items; recycling at HQ taken to secured outdoor site
LESS0001	Les SchwabTire Centers of WA Inc		(360) 943-0870		Social Distancing
MAST0001	Master's Touch LLC		(800) 301-1347		Essential: Normal Operations
MASTP001	Master's Touch LLC - Postage				Essential: Normal Operations
MOUN0001	Mountain Mist		(800) 232-7332		Normal Operations
MULL0001	Mullinax Ford of Olympia LLC				
NCPO0001	NC Power Systems		425-251-5877		Normal Operations
OLYM0003	Olympic Telephone, Inc.		(360) 357-4179		
	Platt Electric		360-493-8480		Altered Operations; Normal business hours; Will calls are not allowed in the show rooms or warehouse; must conduct business outdoors. Business has moved outside.
PREF0001	Preferred Pump		(253) 548-1252		Same business hours; Will call; no one is allowed inside the building or warehouse; all products are outdoors
SOUN0002	Sound Guard Security Systems, Inc.		360-357-6014		Essential: Normal Operations
TACO0006	Tacoma Diesel & Equipment Inc.		253-922-8171		Doors are locked; not allowing walk-in; taking phonecalls; can order parts; can come to parking lot and will hand parts to you; please call in advance
TCCS0001	Thurston County Information Technology	IT Service	360-786-5497		Crew working from home, call volume is higher than normal; help tickets will be answered in the order they are received
UTIL0001	Utilities Underground Location Center		503-232-1987	Left message	
VERI0002	Verizon Wireless	Cell Phone	(800) 922-0204		
WHIS0001	Whisler Communications	Radio	(360) 352-8777		Normal Operations

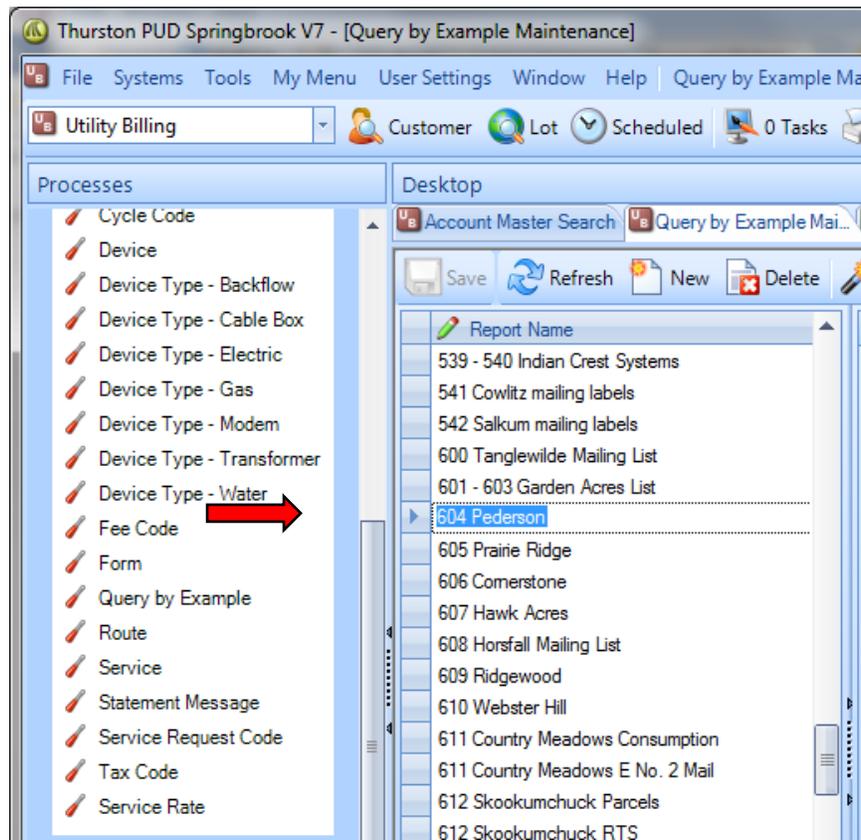
## A.4 Call-Em-All Procedure

### RUNNING A QUERY REPORT (AKA QBE)

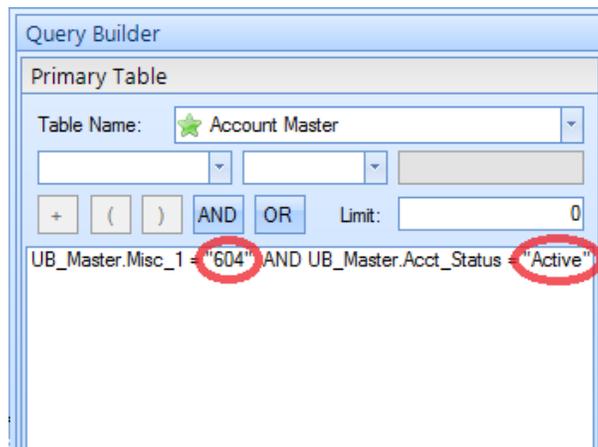
1. Under the **Utility Billing** menu of Springbrook, click **Maintenance**, click **Query by Example**.



2. Choose the appropriate system from the **Report Name** list.



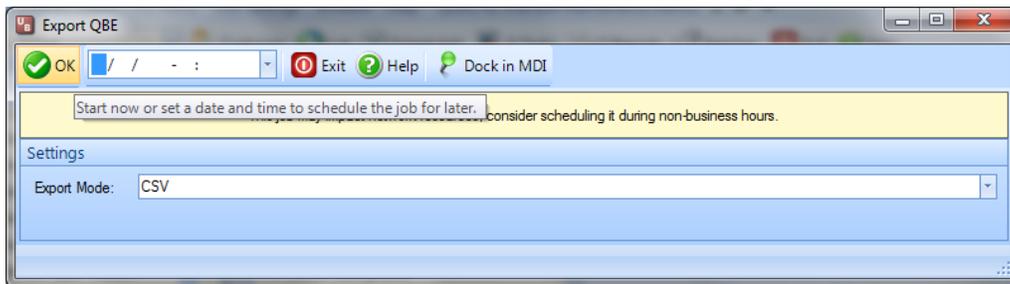
- Under the Primary Table, ensure that the correct **System Number** and **Active** are listed.



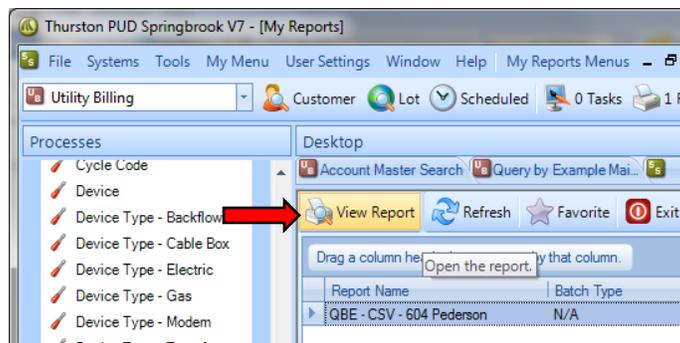
- Under **Available Fields** select
  - UB Account No
  - System Number
  - Last Name (Customer)
  - First Name (Customer)
  - Home Phone (Customer)
  - Bus Phone (Customer)
- Click **Save**.
- Scroll back down and select the correct System.
- Click **Test** to ensure the query is valid. Click **OK**.



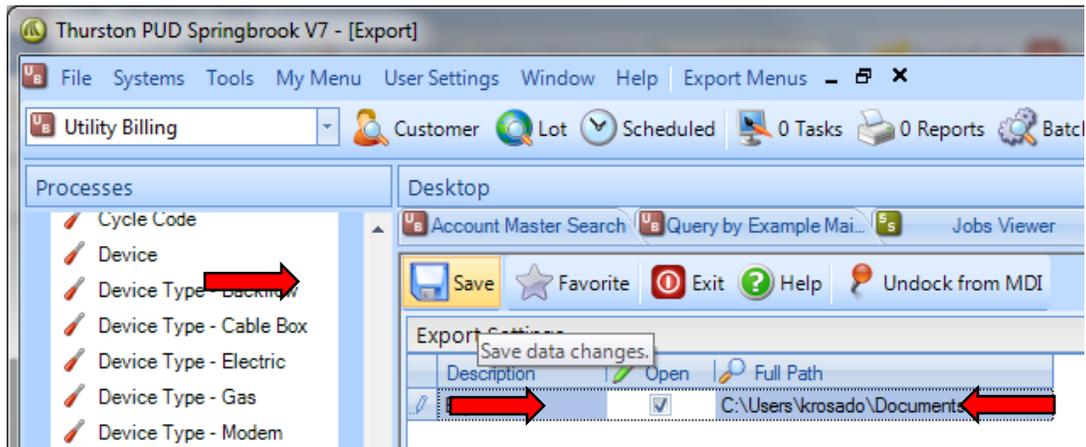
- Click **Export**. Click **OK**.



3. Click **View Report**.



- Click the **Open** box so there is a checkmark.
- Click the **Full Path** and save the file wherever it's easy for you to access.
- Click **Save**.



4. An excel document will appear on your screen.

- Adjust the column width so that you can see all the data.
- **Delete the Source account row.**
- **Delete the System Number column.**

A	B	C	D	E	F	G	H	I	J	K	L	
005146-000	BALLEJO	MELANIE	2404 92ND CT SE			OLYMPIA WA	98501			3602592904	2404 92ND CT SE	
005149-000	WILLIAMS	ROGER AND LORNA	6935 B 20TH AVE SE			OLYMPIA WA	98503			3604592603	3609431477	2410 92ND CT SE
005153-000	HARDING	KURTIS AND JULIA	2422 92ND CT SE			OLYMPIA WA	98501	kwharding@comcast.net		3609439187		2422 92ND CT SE
005157-000	MILLER	CHARLES AND JENNIFER	2421 92ND CT SE			OLYMPIA WA	98501			3603574437		2421 92ND CT SE
005159-000	WELSH	JOAN	2415 92ND CT SE			OLYMPIA WA	98501	johnnybeeler86@yahoo.com		2065521898	5099693686	2415 92ND CT SE
005161-000	SHIVELY	MARVIN AND MARY ANN	2403 92ND CT SE			OLYMPIA WA	98501			3609435245		2403 92ND CT SE
009934-000	DESCHUTES GLEN SOURCE (215)		2421 92nd CT SE			OLYMPIA WA						2421 92nd CT SE
010903-000	WARD JR.	LLOYD	2426 92ND CT SE			OLYMPIA WA	98501	buddies1111@centurylink.net		3606888846		2426 92ND CT SE
010335-000	BARTCH	DAWN	2409 92ND CT SE			OLYMPIA WA	98501					2409 92ND CT SE
015820-000	MIRON	ALEX	2416 92ND CT SE			OLYMPIA WA	98501			3603381520	3603041803	2416 92ND CT SE

5. Edit the excel spreadsheet as follows.

- Column A: **Primary Phone #**
- Column B: **First Name**
- Column C: **Last Name**

- Column D: **Account Number**
  - Column E: **Primary Phone #**
  - Column F: **Secondary Phone #**
6. Even if a customer doesn't have any phone numbers for their account, do not delete these entries. You'll update these accounts in Springbrook later.
  7. Print the list to file with the Call-Em-All information pile.

## AUTOMATED MESSAGE

1. Using the Call-Em-All sheet template, draft the message.
2. **Print** the message.
3. Have a supervisor proofread and approve the message.
4. Go to [www.call-em-all.com](http://www.call-em-all.com) to Sign-In to the PUD account. The username is . The password is .
5. From the Home tab, click on **Create a Broadcast**.
6. Step 1 – What type of broadcast would you like to create?
  - Message Type - **Voice Only**, default selection.
  - Name the broadcast accordingly.
  - Caller ID – default number should show **(360) 357-8783**.
  - Broadcast Type – **Announcement**, default selection. Click Next.

**Step 1:** What type of broadcast would you like to create?

**Message Type**

Voice Only

Text Only

Voice & Text

**Name this Broadcast**

**Caller ID**

**Broadcast Type**

Announcement [?]

Survey [?]

Transfer & Connect [?]

**i** Want to send text messages?  
Enable text messaging now!

**i** Want to allow your recipients to connect to you from your message?  
Enable Live Transfer!

Next

7. Step 2 - Click **Upload a File**.

 **Step 1:** Message Type: **Voice Only** edit  
 Broadcast Name: **Pederson Place Outage Info**  
 Caller ID: **(360) 357-8783**  
 Broadcast Type: **Announcement**

**Step 2: Who would you like to receive this message?**

Please click one of the buttons below to add contacts to this broadcast.

**Add From Existing** 

Click this button to add from your existing contacts.

You'll be able to add entire lists or pick and choose individuals to be added to this broadcast.

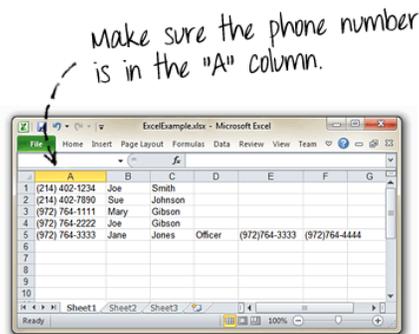
**Upload a File**

Click this button to add recipients to this broadcast by uploading a file.

**Add Individually**

Click this button if you would like to add a recipient to this broadcast by manually typing in the number.

- Click **Select File**



## Upload to Broadcast

You can upload both Excel and comma delimited files — Just make sure your data is in the following order:

- **[Column A] Phone Number (Required - must include area code)**
- [Column B] First Name (Optional)
- [Column C] Last Name (Optional)
- [Column D] Notes (Optional)
- [Column E] Phone 2 (Optional)
- [Column F] Phone 3 (Optional)

### Sample Files

- Microsoft Excel ([ExcelExample.xls](#))
- Microsoft Excel 2007 ([ExcelExample.xlsx](#))
- Comma Separated Values ([CSVExample.csv](#))

### Some tips for success

- Phone numbers must include the area code, but can be in any format.  
Ex: (214) 555-1234, 2145551234, 214-555-1234, etc
- Remove column headers on your file
- Try saving your excel file as a csv



Select File

- Select the Excel Spreadsheet that you created earlier.
- After the file is selected, the upload results will appear. Investigate any bad records (mostly customers without any phone numbers on file).
- Select **Import to Broadcast** when finished reviewing.

## File Upload Results

## Almost done...

<b>Uploaded File:</b>	604PedersonPlace01042016.xlsx
<b>Good Records</b> [?]	24 <a href="#">View</a>
<b>Bad Records</b> [?]	8 <a href="#">View</a>
<b>Duplicates</b> [?]	0
<b>Total</b>	<b>32</b>

Click the button below to import all of the good records. We'll ignore any bad or duplicate records.



- Review all calls to ensure the format is correct, then click **Next**.

✔ **Step 1:** Message Type: Voice Only [edit](#)  
 Broadcast Name: Pederson Place Outage Info  
 Caller ID: (360) 357-8783  
 Broadcast Type: Announcement

**Step 2: Who would you like to receive this message?**

<input type="checkbox"/> select to remove contacts	Name	Phone	Notes	X
<input type="checkbox"/>	BAUER, 014608-000	(253) 514-9745	JAMES AND CYNTHIA	<input type="button" value="X"/>
<input type="checkbox"/>	BAUER, 014608-000	(509) 675-6362	JAMES AND CYNTHIA	<input type="button" value="X"/>
<input type="checkbox"/>	BINKLEY, 015046-000	(360) 807-3359	CODY AND RITA	<input type="button" value="X"/>
<input type="checkbox"/>	BINKLEY, 015046-000	(360) 324-9247	CODY AND RITA	<input type="button" value="X"/>
<input type="checkbox"/>	CARNEY, 012081-000	(360) 705-1366	DONALD AND KATHLEEN	<input type="button" value="X"/>

per page

✔ This broadcast contains **29 calls**.  
**Click the Next button** when you're done adding contacts.



8. Calls can be scheduled for different times - be sure to select either **Yes** to start immediately or **No** to schedule a future time to broadcast. **Most of the time, you will start immediately.**

9. Click **Next**.

**Step 3:** When would you like your broadcast to start?

Start Immediately?  YES

Your calls will not go out until you set up your message.

You'll be able to record, upload, or select your message in the next steps and review everything before you submit your broadcast.

Next

10. Step 4 - Select Record a New Message. Click **Next**.

**Step 4: What is your voice message?**

Choose an option below

- Record a New Message** ▶
- Upload an Audio File ▶
- Select from Audio Library ▶

Click **Next** to retrieve your recording instructions.

Your recording instructions will be displayed after you review and submit your broadcast in the next step.



11. Step 5 - Click **Get Recording Instructions**.

**Step 5: Review and Get Recording Instructions**

If the information above is correct, click the **Get Recording Instructions** button below.

 You will be able to record up to a **120** second message for this broadcast. Depending on your actual message length, this broadcast will use between **29** and **116** credits.



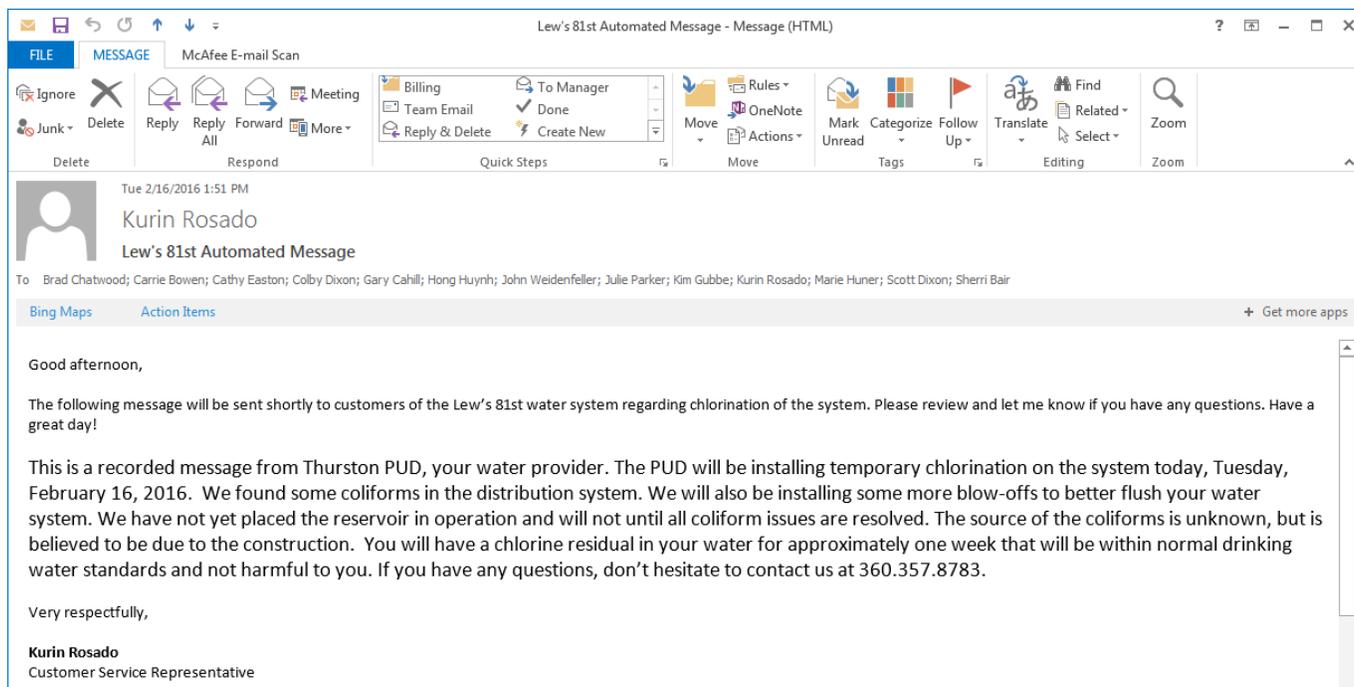
12. Follow the instructions on the Recording Instructions screen.

1. Call **866.623.7244** by Thursday, February 04, 2016.
2. Enter **996763#** as your Message Recording ID.
3. Record up to a **120 second** message (why?) then press **#**.
4. Press **#** when you are finished recording, then press **1** to save it.
5. Go to **your home page** to check the status of your broadcast.

[Print](#) these instructions.

Need help? Contact [accountsupport@call-em-all.com](mailto:accountsupport@call-em-all.com).

13. Copy the recording information and e-mail to all PUD staff.



14. While the calls are being made, the broadcast will be listed under **Active Broadcasts**. Once completed, the broadcast will be listed under **Completed Broadcasts** - review the broadcast by selecting it.

The screenshot shows a web interface with two main sections. On the left, there is a "Pay-As-You-Go Credits" box with the following information:

- Balance [?]: 2,949.0
- Pending [?]: 0.0
- Available: 2,949.0
- Button: Buy More

Below this is a "Want to send texts?" section with a mobile phone icon and the text "Enable text messaging for free."

On the right, there is a navigation menu with "Active Broadcasts" and "Completed Broadcasts" tabs. A red arrow points from the "Pay-As-You-Go Credits" box to the "Active Broadcasts" tab, and another red arrow points from the "Completed Broadcasts" tab to the "Completed Voice Broadcasts" table below.

The "Completed Voice Broadcasts" table has a search bar and a "Sort By" dropdown. The table contains the following data:

Broadcast Info	Completed Calls	Live Person	Voice Mail	Busy / NA	Invalid Number	Not Completed
<b>Pederson Place Outage Info</b> Complete 1/4/2016 3:02 pm	29 of 29	21	7	0	1	0
<b>LEWS 81ST 12-28-2015</b> Complete 12/28/2015 4:26 pm	49 of 49	24	23	1	1	0

- While reviewing which calls went to a live person and which calls went to voicemail, pay particular attention to the calls that are returned as busy, invalid, or not completed.

- From the **All Calls** tab, select **Save Results to File** so that a master result list can be printed. As shown below, the window at the bottom of the webpage will prompt you to open the file. Click **Open**, and **print** the excel report to file with the other paperwork.

The screenshot shows the Call-Em-All web application interface. At the top, there are navigation tabs for 'All Calls', 'Live Person', 'Voice Mail', 'Busy/NA', 'Invalid Number', and 'Not Completed'. The 'All Calls' tab is selected, showing a total of 33 calls. Below the tabs, there are buttons for 'Create New Broadcast from Results', 'Save Results to File', and 'Contacts'. A table of call results is displayed below, with columns for Phone Number, Name, Call Status, Call Result, # of Attempts, and Last / Next Call Time. A file dialog box is open at the bottom, asking 'Do you want to open or save 5171800.csv from app.call-em-all.com?'. The 'Open' button is highlighted with a red arrow.

Phone Number	Name	Call Status	Call Result	# of Attempts	Last / Next Call Time
(360) 943-1896	JAHNER, BRANDON AND KATIE	Completed	No Answer	3	3/4/2016 2:40 pm
(360) 754-3394	SHIPOWICK, STEPHEN	Completed	Live Person	1	3/4/2016 2:20 pm
(360) 628-8338	ANDREW CHERULLO, WENDY OWENS AND	Completed	Live Person	1	3/4/2016 2:20 pm
(360) 705-2902	UPSON, DOUGLAS AND NICOLA	Completed	Live Person	1	3/4/2016 2:20 pm
(360) 705-4800	JONEN, RAY AND FLORENCE	Completed	Live Person	1	3/4/2016 2:20 pm
(360) 670-0487	SHERPHERD GAW, DAVID	Completed	Live Person	1	3/4/2016 2:20 pm

- Use Springbrook to access any accounts that didn't have phone numbers. Add an Alert note to ask these customers for a valid phone number when they contact the office.
- If there's a customer that has the DO NOT CALL designation, you may want to try calling this customer again. Document this on their account in Springbrook by recording a NOTE comment.
- If the customer's call is returned as INVALID, BUSY, or NO ANSWER, note this on their account under an ALERT comment (e.g. CALL-EM-ALL FOR 03/08/2016 OUTAGE RETURNED AS INVALID. PLEASE ASK THIS CUSTOMER FOR A VALID NUMBER WHEN THEY CALL IN).

15. Gather the call-em-all paperwork (call-em-all sheet, original excel customer list, and results list) and file in the CSR office.

16. Note the system, date, and time of any outages on the white board in the hallway.

## A.5 Text By Email

Use @vtext.com to send text through email

Here's a way to send a text message from a computer to a Verizon Wireless customer:

1. Compose a new email and use the recipient's mobile phone number as the email address, with the addition of "@vtext.com" at the end.
2. For example, if the phone number is 555-123-4567, type "[5551234567@vtext.com](mailto:5551234567@vtext.com)."
3. Make sure you keep your message under 140 characters. (Remove your email signature before sending, if you use one.)
4. Have employees identify themselves when they respond to the text.
5. Once you're finished, hit send.

Replies are sent directly to your email. Check your spam or junk mail. Response will have a return address of the phone number and may be from @vzwpix.com address.

### List of Recipients

Anthony Dahmen	<a href="mailto:3608706597@vtext.com">3608706597@vtext.com</a>
Brooke West	<a href="mailto:3607908098@vtext.com">3607908098@vtext.com</a>
Dan Lovell	<a href="mailto:3602399703@vtext.com">3602399703@vtext.com</a>
Derek Genre	<a href="mailto:3604637225@vtext.com">3604637225@vtext.com</a>
Jake Boogerd	<a href="mailto:3609707732@vtext.com">3609707732@vtext.com</a>
Jason Choate	<a href="mailto:3602397296@vtext.com">3602397296@vtext.com</a>
Joe Greene	<a href="mailto:3608706853@vtext.com">3608706853@vtext.com</a>
Kirk Gietz	<a href="mailto:3602397172@vtext.com">3602397172@vtext.com</a>
Michael Lane	<a href="mailto:3608709125@vtext.com">3608709125@vtext.com</a>
Rich Holmes	<a href="mailto:3602392696@vtext.com">3602392696@vtext.com</a>
Rick Sanchez	<a href="mailto:3602391710@vtext.com">3602391710@vtext.com</a>
Ruth Clemens	<a href="mailto:3605156118@vtext.com">3605156118@vtext.com</a>
John Weidenfeller	<a href="mailto:3607911739@vtext.com">3607911739@vtext.com</a>
Julie Parker	<a href="mailto:3607911397@vtext.com">3607911397@vtext.com</a>
Kim Gubbe	<a href="mailto:3606880827@vtext.com">3606880827@vtext.com</a>
Jim Campbell	<a href="mailto:3607902662@vtext.com">3607902662@vtext.com</a>

## A.6 Emergency Small Works Roster

Type of Work*	Vendor Name	Contact	Phone
1	PNW Pumps	Mike Moore	(360) 628-8342
1	Skyline Pumps	Dave Lantau	(360) 262-9580
1	Moerke	Sean Brattain	(360) 748-3805
2	A&D Enterprises	Dan Bartholomew	(360) 878-0199
2	KCL	Cory Lenzi	(360) 489-7334
2	RS Underground	Ron Sprague	(253) 208-4843
2	Rigid Construction	George Barnes	(360) 628-1023
2	Waunch	Nathan Waunch	(360) 480-2359
2	Black Hills Excavating	Aaron Hufana	(360) 701-0168
3	Betschart Electrical	Michael Ertman	(360) 943-4545
3	Capital Electric	John O'Byrne	(360) 357-3237
3	Lassen Electric	Donna West	(360) 352-8512
3	BM Electric	Frank Vance	(360) 455-1025
3	Reliable Electric	Dan Meconi	(360) 943-1066
3	Valley Electric	Eric Stoeser	(425) 407-0832
4	Black Hills Tree Service	Paul Johnson	(360) 866-8598
5	Southgate Fence	Brenda Nachatilo	(360) 352-3934
5	Summit Fence	John Coxwell	(360) 455-1250

### \* Type of Work

1	Well pump and booster replacement, pumphouse plumbing and electrical, VFDs, and treatment
2	Distribution and service line leaks and repairs
3	Electrical
4	Tree service
5	Fencing

## A.7 Media Notification List

Name & Location	Fax #	Email	Phone Number
Business Examiner, Olympia WA	(253) 404-0892	<a href="mailto:mboyd@businesssexaminer.com">mboyd@businesssexaminer.com</a>	800-540-8322
Centralia Chronicle, Centralia WA		<a href="mailto:mwagar@chronline.com">mwagar@chronline.com</a>	(360) 736-3311
Daily World, Aberdeen WA	(360) 533-6039	<a href="mailto:dbarker@thedailyworld.com">dbarker@thedailyworld.com</a>	(360) 532-4000
Eatonville Dispatch, Eatonville WA	(360) 832-4972	<a href="mailto:Editor@dispatchnews.com">Editor@dispatchnews.com</a>	(360) 832-4411
KGY RADIO		<a href="mailto:steve.george@kgyradio.com">steve.george@kgyradio.com</a>	(360) 943-1240
Nisqually Valley News	(360) 458-5741	<a href="mailto:yelmnews@yelmonline.com">yelmnews@yelmonline.com</a>	(360) 458-2681
Olympian, Olympia WA	(360) 357-0202	<a href="mailto:news@theolympian.com">news@theolympian.com</a>	(360) 754-5400
Puget Sound Business Journal	(206) 447-8510	<a href="mailto:seattle@bizjournals.com">seattle@bizjournals.com</a>	(206) 876-5500
Puyallup Herald, Puyallup WA	(253) 840-8249	<a href="mailto:brian.mclean@puyallupherald.com">brian.mclean@puyallupherald.com</a>	(253) 841-2481
Rochester Sun News, Rochester WA	(360) 748-3336		(360) 264-2500
Sumner Reporter	(206) 622-8416	<a href="mailto:maudes@djc.com">maudes@djc.com</a>	(206) 622-8272
Tacoma News Tribune		<a href="mailto:newstips@thenewstribune.com">newstips@thenewstribune.com</a>	(253) 597-8742
Tenino Independent, Tenino WA	(360) 748-3336		(360) 264-2500
Vidette, Montesano, WA	(360) 249-5636	<a href="mailto:editor@thevidette.com">editor@thevidette.com</a>	(360) 249-3311

## A.8 Communications Plan

### Communications Plan: [Enter Topic Title Here]

June 12, 2018

#### ISSUE

What is the issue? This is a script paper that is distributed to staff to relay to customers)  
Only use information that you want customers and members of the media to have.

#### STRATEGY

What are the corrective steps that the PUD is taking? How are we moving forward?

- Step 1
- Step 2
- Additional steps

#### SPOKESPEOPLE

- List the spokesperson(s)

#### KEY MESSAGES

1. What are the key messages? Keep in mind there can be several key messages that are communicated to stake holders.

#### QUESTIONS AND ANSWERS

For this section list the most likely or most popular questions with answer that you believe customers or members of the media will have. Make sure to run both questions and answers by PUD leadership and subject matter experts (not necessarily leadership) to ensure accuracy.

**Q: Questions**

**A: Answer**

#### ATTACHMENTS

Attach reference documents that staff should have on them in order to quickly address customers' needs or questions.

Attachment 1:

Attachment 2:

## Press Release

**EXAMPLE ONLY \*\*EXAMPLE ONLY \*\* EXAMPLE ONLY  
\*\* EXAMPLE ONLY**

### **Drinking Water Advisory**

**FOR IMMEDIATE RELEASE**

**Media Contact: Ruth Clemens, Administrative Services Manager, 360-357-8783 ext. 106**

#### THURSTON PUD ISSUES BOIL WATER ADVISORY

OLYMPIA, Wash., [Enter Date] – Officials from Thurston Public Utility District (PUD) have issued a **Boil Water Advisory** for [x] homes on the [Enter name] water system located in rural Thurston County until further notice. Customers on this water system should not drink the water. Customers on this system have been notified. The Washington State Department of Health (DOH) has been notified and Thurston PUD is working closely with the Office of Drinking Water to find the source of contamination and fix the problem, which will include disinfecting the system. The boil water advisory will remain in effect until further notice.

“This kind of emergency is our greatest priority,” said General Manager John Weidenfeller. “We are working very hard and closely with the Department of Health to eliminate the bacteria. Safe and reliable water is critical to us.”

A “BOIL WATER NOTICE” means that customers are advised to not use water from their tap for drinking or cooking purposes unless it is brought to a rolling boil for one minute. This is for water that is used for teeth brushing, dishwashing and ice making. Water may be used for showering, bathing, washing hands, flushing toilets and doing laundry. However, use caution when bathing infants, young children, vulnerable peoples or people with compromised immune systems to ensure no water is ingested. A sponge bath reduces the chance of swallowing water.

PUD officials are working closely with local and state public health agencies to have the advisory lifted and return to normal operations. Thurston PUD will conduct two more rounds of testing as required by state law and after chlorinating and disinfecting the water system. The advisory will remain in effect until further notice.

Anyone with concerns about this event is encouraged to contact the PUD at (866) 357-8783 or visit [www.ThurstonPUD.org](http://www.ThurstonPUD.org) for more information.

###

## APPENDIX B: Rip and Run Forms

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## B1. Bomb Threat

Location: \_\_\_\_\_

Date: \_\_\_/\_\_\_/\_\_\_ Time: \_\_\_:\_\_\_ am/pm

### Assessment:

1. Assume the threat is real \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. What is the threat?
3. Where is the threat?
4. What do you want?

### Immediate Actions:

5. Keep calm. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
6. Repeat the threat (Hopefully someone will overhear you and call 911 & notify a manager)  \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
7. Write down details ASAP \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
8. Pay attention to accent or speech characteristics. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
9. What is the sex and approximate age of the caller?
10. What is the emotional state of the caller? (Joyful, angry, irrational, etc.)
11. Listen for background noises (machinery, baby crying, people laughing, traffic)
12. Ask for the caller's name.

### Notify:

1. Call 911 ASAP \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. The people that may be directly affected by the bomb \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Notify management team \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Follow Up:

4. Evaluate damage and losses \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
5. Offer traumatic event counseling \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
6. Notify insurance agent \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
7. Are there ways to make sites more secure \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
8. Evaluate what worked well and what didn't \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
9. Update action plan \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

## Bomb Threat Checklist

1. What is the threat? \_\_\_\_\_
2. Where is the threat? \_\_\_\_\_
3. Why are you doing this? \_\_\_\_\_
4. What do you want? \_\_\_\_\_
5. Accent or speech characteristics \_\_\_\_\_
6. Male or female? \_\_\_\_\_
7. Approximate age \_\_\_\_\_
8. Emotional state of caller \_\_\_\_\_
9. Background noises \_\_\_\_\_
10. Ask for caller's name \_\_\_\_\_

## B2. Chemical Spill – Offsite

(could be outside party or TPUD spill)

Location: \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_ Time: \_\_\_:\_\_\_ am/pm

### Assessment:

1. Is this outside party or TPUD spill? \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Secure site and insure any necessary personal protection equipment are used before proceeding further as required \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Make a visual assessment of spill \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Determine nature and quantity of chemical/s spilled \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. If outside party spill, determine party responsible for clean-up \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Immediate Actions:

5. Take source off-line if necessary (potential water contamination) \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
6. If required, isolate the suspected spill source \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
7. Initiate containment of spill \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
8. Follow guidance from the DOE spill response team \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
9. Ensure site isolated from public access \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
10. Start alternate source if source placed off-line \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
11. As required, work with outside DOE approved clean-up contractor, or begin TPUD clean-up if outside assistance not required \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
12. If TPUD spill, insure contaminated material disposed of properly \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Notifications:

13. Notify law enforcement/fire department at: **911** \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
14. Notify management team member \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
15. Notify DOE and County Health Department spill response personnel \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
16. Public information notices if public effected \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
17. Notify DOH if potential water quality or loss of site possibility \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
18. Maintain DOE spill response personnel contact on clean-up \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Follow-up Actions:

19. Ensure that TPUD receives determination of chemical/s spilled and quantities \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
20. Ensure well water quality is satisfactory before placing back on-line is previously isolated \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
21. If TPUD spill, determine cause of spill and address for future \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
22. If required complete DOE reporting \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
23. If potential for well contamination coordinate with DOH for long term sampling / monitoring with use of wellhead protection model information \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
24. Consider need for alternative source/s if source at long term risk \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
25. Evaluate what worked well and what didn't \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
26. Update action plan \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### B3. Chemical Spill - Onsite

(could be outside party or TPUD spill)

Location: \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_ Time: \_\_\_:\_\_\_ am/pm

#### Assessment:

1. Secure site and ensure any necessary personal protection equipment are used before proceeding further \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Make a visual assessment of spill \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Determine nature and quantity of chemical/s spilled \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. Follow all appropriate safety precautions (turn off electricity, ventilate chemical off-gassing, assess possible fire or possible explosion hazard, etc.) \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

#### Immediate Actions:

1. Take source off-line if necessary (potential water contamination) \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Isolate the suspected spill source \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Initiate containment of spill \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. Determine if an outside agency needs to be involved \_\_\_:\_\_\_ am/pm, \_\_\_\_\_  
A. If needed - follow guidance from the DOE spill response team \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
5. If extends off site - Ensure site isolated from public access \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
6. Start alternate source if source placed off-line \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
7. As required work with outside DOE approved clean-up contractor, or begin TPUD clean-up if outside assistance not required – follow appropriate procedures  
Ensure any and all necessary personal protection equipment is used \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
8. Ensure contaminated material is disposed of properly \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
9. Ensure contaminated clothing is disposed of properly \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
10. Ensure contaminated equipment is cleaned/treated or disposed of properly \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

#### Notifications:

11. Notify management team member \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
12. Notify DOE spill response personnel (if needed) \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
13. Public information notices if public effected \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
14. Notify DOH if potential water quality or extended loss of site possibility \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
15. Maintain contact with DOE spill response/clean-up personnel \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

#### Follow-up Actions:

16. Determine cause of spill and address for future \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
17. Complete required DOE reporting (if needed) \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
18. Participate in post situation assessment meeting with staff and management. Evaluate what worked well and what didn't \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
19. Update action plan \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
20. Re-order safety clothing and equipment that has been thrown away \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

## B4. Coliform Sample – Unsatisfactory

Location: \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_ Time: \_\_\_:\_\_\_ am/pm

### General and Assessment:

#### Step 1

1. Routine Sampling with presence of total coliform, E.coli absent.

Group A or B - Date routine was taken \_\_\_\_\_ DOH Lab-Sample# \_\_\_\_\_

Date/time District received confirmation: \_\_\_\_\_

#### Step 2

1. Call or email lead regulatory agency

Washington State Department of Health, Office of Drinking Water	1-877-481-490 (Emergency 24-hour)	On-call DOH staff
DOH, Office of Drinking Water, Southwest Region	Coliform Program: 360-236-3045	<a href="mailto:SWRO.Coli@doh.wa.gov">SWRO.Coli@doh.wa.gov</a> Charese Gainor Coliform Program Manager <a href="mailto:Charese.Gainor@doh.wa.gov">Charese.Gainor@doh.wa.gov</a>
DOH, Office of Drinking Water, Northwest Region	Coliform Program: 253-395-6775	Ingrid Salmon <a href="mailto:Ingrid.Salmon@DOH.WA.GOV">Ingrid.Salmon@DOH.WA.GOV</a>
Thurston County, Environmental Health (Group B)	360-867-2630	Stephanie Kenny <a href="mailto:kennys@co.thurston.wa.us">kennys@co.thurston.wa.us</a>
Lewis County Environmental Health, Drinking Water Program (Group B)	360-740-2718	Sue Kenedy <a href="mailto:Sue.Kennedy@lewiscountywa.gov">Sue.Kennedy@lewiscountywa.gov</a>
Tacoma-Pierce County Health Department, Drinking Water (Group B)	800-525-0127 253-798-4764	Kelly Racke <a href="mailto:KRacke@tpchd.org">KRacke@tpchd.org</a>
Grays Harbor County Environmental Health, Drinking Water/Wells (Group B)	360-249-4222	Scott Evans <a href="mailto:sevans@co.grays-harbor.wa.us">sevans@co.grays-harbor.wa.us</a>
Kitsap County Environmental Health, Drinking Water (Group B)	360-728-2222	Kimberly Jones <a href="mailto:Kimberly.Jones@kitsappublichealth.org">Kimberly.Jones@kitsappublichealth.org</a>

2. Collect repeat samples according to the Coliform Monitoring Plan (CMP).

- a. Group A's – Within 24 hours of notice from lab following current CMP.

- b. Group B's – Within 48 hours of notice from lab collect two (2) repeat samples, one from the positive site and one from the source.

3. If routine sample is present with E.coli, the District may move straight to Acute Violation with lead agency approval and not take repeat samples.

#### Follow Up

1. If none of the repeat samples are positive for total or E.coli coliform bacteria, no violation results.

2. If any repeat samples are positive for total coliform only, no E.coli, this results in a non-acute violation (two positives for total coliform), \_\_\_:\_\_\_ am/pm, date \_\_\_\_\_.

- a. Call or email leading agency.

- b. The Director of Field Operations, and/or assign a field staff member, to conduct a Level 1 Assessment on both Group A and B water systems to determine next steps.

- c. Complete tasks found during the Level 1 Assessment.

- d. For Group A's, Level 1 Assessment will be submitted to lead agency within 30 day of notification letter.

- e. For Group B's, Non-Acute Notice to customers and lead agency are required within 30 day of notice from lab of failure.

3. If combination of initial and any repeat samples are positive for total coliform bacteria, E-coli, this results in an acute violation, an immediate "Precautionary Boil Notice" is issued to customers, **see instructions below.**

4. Samples can be invalidated, by DOH, if justified. \_\_\_:\_\_\_ am/pm, date \_\_\_\_\_

**Acute Violation:**

**Immediate Actions:**

1. Request to issue a Boil Water Advisory to all customers from lead agency. \_\_\_:\_\_\_ am/pm, date \_\_\_\_\_.
  - a. Notification will be Call-Em-Alls and/or door to door with door hangers.
  - b. Notification forms can be found K:\Forms\Mandatory Language Forms to include door hangers
2. Add chlorine to the water system and maintain a 1.0 free chlorine residual throughout distribution for at least 24 hours.
3. Complete a Level Two Assessment with lead agency representative.
4. Make any repairs to any issue found during the Level Two Assessment.
5. Remove chlorination.
6. Two rounds of repeats must be taken, after chlorine residual is gone, 24 hours apart from each other.  
\_\_\_:\_\_\_ am/pm, date \_\_\_\_\_ \_\_\_:\_\_\_ am/pm, date \_\_\_\_\_
7. Send lead agency lab results of two good rounds of samples.
8. Lift Boil Water Advisory once you have received written permission from DOH
9. Complete public notice certification and submit within 10 days to DOH or County Environmental Health Dept.  
DOH Form #331-264 (Updated 03/16) \_\_\_:\_\_\_ am/pm, date \_\_\_\_\_

**If New Construction:**

1. Notify the contractor to repeat the flush, cook, flush procedure \_\_\_:\_\_\_ am/pm, date \_\_\_\_\_
2. Ensure that it is isolated from rest of the system \_\_\_:\_\_\_ am/pm, date \_\_\_\_\_

**Follow-up Actions:**

1. Evaluate what worked well and what didn't \_\_\_:\_\_\_ am/pm, date \_\_\_\_\_
2. Update action plan \_\_\_:\_\_\_ am/pm, date \_\_\_\_\_

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## Customer Notice Acute Violation

### DRINKING WATER WARNING E. coli MCL Violation

The \_\_\_\_\_ Water System, ID \_\_\_\_\_, located in \_\_\_\_\_ County is contaminated with E. coli bacteria.

E. coli bacteria were detected in the water supply on \_\_\_\_\_. These bacteria can make you sick and are a particular concern for people with compromised immune systems. Boiled or purchased bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and food preparation until further notice. Boiling kills bacteria and other organisms in the water.

What should you do? **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a rolling boil, for 1 minute, and let it cool before using. Boiling kills bacteria and other organisms in the water.

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.

The symptoms above are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice. People at increased risk should seek advice about drinking water from their health care provider.

What happened? What is the suspected or known source of contamination?

The following is being done to correct the problem:

We will consult with the **State Department of Health or County Health Dept.** about this incident. We will provide you notification when you no longer need to boil the water. We anticipate resolving the problem by \_\_\_\_\_.

For more information please contact: Kim Gubbe (360)357-8783  
(owner/operator) (phone #)  
1230 Ruddell Road SE, Lacey, WA 98503 pudcustomerservice @thurstonpud.org  
(address) (email)

Please share this notice with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is sent to you by \_\_\_\_\_ Water System on \_\_\_\_/\_\_\_\_/\_\_\_\_

## Group B Customer Notice Acute Violation

### Water Quality Violation Notice Fecal and/or E.coli Bacteria

The \_\_\_\_\_ water system, Id # \_\_\_\_\_ in \_\_\_\_\_ County is required to test for coliform bacteria once a year. A sample collected on \_\_\_\_\_ was found to have the presence of Fecal/E.coli bacteria in the water. As a water system manager, I am required to notify you of the problem, and what we are doing to correct the problem.

The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that the presence of fecal coliforms or E.coli is a serious health concern. Fecal coliforms and E.coli are generally not harmful themselves, but their presence in drinking water is serious because they are usually associated with sewage or animal and can be disease causing. The disease symptoms may include diarrhea, cramps, nausea, and possibly jaundice, and associated headaches and fatigue. These symptoms, however, are not just associated with disease causing organisms in drinking water, but also may be caused by a number of factors other than your drinking water. EPA has set an enforceable drinking water standard for fecal coliforms and E.coli to reduce the risk of these adverse health effects. Under this standard all drinking water samples must be free of these bacteria.

**The Health Department recommends that the users don't drink the water.** It is recommended that you boil the water for 2 – 5 minutes before using it for drinking purposes or use bottle water. If you are experiencing any symptoms you should seek advice from your health care provider.

At this time:

- The problem is resolved. An additional sample was collected and found to be free of coliform bacteria.
- A repeat sample will be taken within \_\_\_\_\_ days.
- System will be temporarily disinfected and flushed. Users will be notified prior to the disinfection.
- A Water Professional will be hired to evaluate the system.
- Other: \_\_\_\_\_

**I will notify you once this issue is resolved.**

Please share this notice with all people who drink this water.

This notice is sent to you by: Kim Gubbe  
(Water System Manager)

Date: \_\_\_\_\_

If you have questions you can contact me at: (360)357-8783 or the Local County Health Department at  
\_\_\_\_\_

## Sample Boil Water Doorhanger

### **WARNING: Do not drink tap water without boiling it first!**

E. Coli bacteria were detected in the water supply on:(date) DATE OF TEST RESULT.

#### **Boiling kills bacteria and other organisms in the water:**

- **Bring water to a rolling boil for one minute. Let water cool before using**

**To avoid possible illness:** use boiled or purchased bottled water for drinking, making ice, brushing teeth, washing dishes, and food preparation until further notice.

**Contact your doctor, if you experience one or more of these symptoms:** nausea, cramps, diarrhea, jaundice, headache and/or fatigue. People with chronic illnesses, infants and the elderly may be at higher risk and should seek medical advice.

**Water System:**SYSTEM NAME-# I.D.: PWSID

**Contact:** Kim Gubbe Telephone:360-357-8783 ext. 125

**Date notice distributed:** DATE NOTICE DELIVERED

Front of door hanger

#### **What is E. coli?**

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these waters can cause short-term effects, such as diarrhea, cramps, nausea, headaches or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

#### **How long will this warning be in effect?**

We will consult with the Washington State Department of Health about this incident. We will notify you when you no longer need to boil the water.

Back of door hanger

## Sample Boil Water Advisory and Lifted Call-Em-Alls

### Call Em All - Boil Water Advisory

Drinking Water Warning for the \_\_\_\_\_ Water System

E.coli bacteria was detected in the water supply on **DATE**. Thurston PUD is issuing a Boil Water Notice. **DO NOT DRINK THE WATER WITHOUT BOILING FIRST.**

Currently the PUD staff is chlorinating your water system and delivering the Public Notice door to door.

We are working with Department of Health and hope to have the Boil Water Advisory lifted by **DAY and DATE**.

If you have any questions you can reach us at 360-357-8783

### Call Em All - Boil Water Advisory Lifted

This is an update for **DAY and DATE** on the Boil Water Advisory at the \_\_\_\_\_ Water System.

The Washington State Department of Health has given the PUD approval to remove the boil water advisory. This means you no longer need to boil your drinking water.

Again, the State Department of Health has approved the PUD to remove the boil water advisory. You are no longer required to boil your drinking water.

Thank you for your patience.

## Sample Boil Water Press Release

### PRESS RELEASE

### THURSTON PUD

[Date, Time]

### Precautionary Boil Water Notice

Thurston PUD, effective immediately is issuing a precautionary boil water notice to all customers of **WATER** **SYSTE NAME** water system. If you are unsure whether you are served by Thurston PUD, please check one of your water PUD's bill receipts to confirm that you are served by Thurston PUD. This boil water notice will remain in effect until repeat samples and confirmation water quality samples confirm that the water is safe to drink.

Routine weekly bacteriological samples drawn, **DATE**, have shown the presence of E. coli bacteria in two samples and total coliform bacteria in a third water sample. At this time required repeat confirmation samples are being taken from the positive test sites and sites up and down stream of the positive test sites. Additional samples are being taken from all of the water systems operating wells and any storage tanks. The results of this testing will be available late **DATE** at which point we will provide an updated news release.

Thurston PUD is working with the state Department of Health in its investigation of the potential source of this contamination. However, it is too early to identify the source or cause of this contamination. The results of the additional sampling will aid in the identification process.

What should you do? DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST. Bring all water to a rolling boil, for 1 minute, and let it cool before using. Boiling kills bacteria and other organisms in the water. The water may be used of other purposes. Alternatively, bottled water may be used.

#### **PUBLIC HEALTH INFORMATION regarding this type of bacteriological contamination is as follows:**

Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.

<i>Contacts:</i>	Thurston PUD	360-357-8783, Toll Free 866-357-8783
	Kim Gubbe or John Weidenfeller, Thurston PUD	360-357-8783
	DOH Northwest Office of Drinking Water Regional Office	253-395-6760
	DOH Southwest Office of Drinking Water Regional Office	360-236-3030

## Sample “All Clear” Notice for Press

Sample all clear notice for press and customers:

# **PRESS RELEASE for IMMEDIATE RELEASE THURSTON PUD**

**DATE, TIME**

## **Precautionary Boil Water Notice Lifted**

**The thirty water quality samples drawn DATE have all shown no contamination in the water and confirm that the water is safe to drink. Therefore, the State Department of Health has authorized us to lift Wednesday’s boil water notice.**

The precautionary boil water advisory was issued **BOIL NOTICE ISSUE DATE** approximately two hours after the PUD was notified that three of five routine water samples showed evidence of potentially harmful bacteria. Since that time, the PUD has taken more than four dozen water samples from throughout the water system, including the ten schools served by the water PUD. All follow-up samples have shown the absence of any coliform bacteria.

Thurston PUD has addressed this issue as a very serious matter and has proceeded cautiously to minimize risk and maximize public safety. We are continuing the investigation into the source of the bacteria in the routine samples taken **SAMPLE TAKEN DATE**. At this time, the source of the contamination is uncertain, although we are focusing on potential problems with the sampling stations and equipment. The State Department of Health continues to support us in this investigation. There is no need to flush your plumbing, water heater, or change your water filters as a result of this incident.

Throughout this event, we have coordinated our efforts with State Department of Health personnel. The PUD appreciates their efforts to assist as this process moved forward.

Thurston PUD will continue its long history of routine sampling and should the need ever arise again will notify the public we serve. We have learned much through this process.

Most importantly, we appreciate the understanding and patience of the public. The PUD employees truly are concerned about your welfare. We would also like to express our thanks for the assistance of \_\_\_\_\_ for their assistance.

<i>Contacts:</i>	Thurston Public Utility District	866-357-8783
	John Weidenfeller, General Manager, Thurston PUD	360-357-8783
	Kim Gubbe, Director Planning & Compliance, Thurston PUD	360-357-8783

## Customer Notice Non- Acute Violation (Group B's only)

### Important Notice About Your Water System Coliform Maximum Contaminant Level (MCL) Exceeded: Non-Acute MCL

The \_\_\_\_\_ Group B public water system, PWSID \_\_\_\_\_, in COUNTY NAME County routinely monitors for the presence of Total Coliform bacteria and on \_\_\_\_\_ this type of bacteria was detected. Although this incident was not an emergency, as our customer, you have a right to know what happened and what we did or are doing to correct the situation.

*Coliform are bacteria which are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliform bacteria were found in the samples and this is considered a warning of potential problems.* The samples that showed the presence of Coliform bacteria was further tested to see if other bacteria of greater concern, such as Fecal Coliform or *E. Coli* were present. **None of these bacteria were found.**

You do not need to boil your water. People with severely compromised immune systems, infants, and some elderly may at be an increased risk and may want to contact their health care provider for additional guidance.

What happened? What is the suspected or known source of contamination?

#### At this time:

- The problem is resolved. Additional samples were found free of Coliform and Fecal/E. Coli bacteria.
- We anticipate resolving the problem by \_\_\_\_ / \_\_\_\_ / \_\_\_\_.
- Other: \_\_\_\_\_

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For more information, contact Kim Gubbe at (360) 357-8783, ext. 125  
(Owner or operator) (Phone number)  
Or 1230 RUDELLE ROAD SE, LACEY, WA 98503  
(Address)

Please share this notice with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice was sent to you by THURSTON PUD on \_\_\_\_\_  
(Date)

Questions? General information about this incident is also available from the COUNTY Public Health Environmental Health Division at (XXX) XXX-XXXX.

## Customer Notice Non- Acute Violation (Pierce County Group B's only)

### Water Quality Violation Notice

The \_\_\_\_\_ water system, Id # \_\_\_\_\_ in Pierce County is required to test for coliform bacteria once a year. A sample collected on \_\_\_\_\_ was found to have the presence of coliform bacteria in the water. Although this incident is not an emergency, as a user, you have a right to know what happened and what we are doing to correct the problem.

*Coliforms are bacteria, which are naturally present in the environment and are used as indicators that other, potentially harmful, bacteria may be present. Since coliforms were found in the water sample, this was a warning of potential problems. The sample was further tested to see if other bacteria of greater concern, such as fecal coliform or E.coli were present. **None of these bacteria were found.***

You do not need to boil your water. People with severely compromised immune systems, infants, and some elderly may be at an increased risk. These people should seek advice from their health care provider.

At this time:

- The problem is resolved. An additional sample was collected and found to be free of coliform bacteria.
- A repeat sample will be taken within 5 days.
- System will be temporarily disinfected and flushed. Users will be notified prior to the disinfection.
- A Water Professional will be hired to evaluate the system.
- Other: \_\_\_\_\_

**I will notify you once this issue is resolved.**

Please share this notice with all people who drink this water.

This notice is sent to you by: Kim Gubbe Date: \_\_\_\_\_  
(Water System Manager)

If you have questions you can contact me at: (360) 357-8783 or the Tacoma-Pierce County Health Department at 253-798-4764.

## B5. Contamination Threat

Location: \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_ Time: \_\_\_:\_\_\_ am/pm

### Assessment:

1. Assume the threat is real \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. What is the threat?
3. Where is the threat?
4. Why are you doing this?
5. What do you want?

### Immediate Actions:

1. Keep calm. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Repeat the threat (Hopefully someone will overhear you and call 911 & notify a manager) □, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Try to find out the location of the possible contamination \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. Try to find out the nature of the contamination. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
5. Write down details ASAP \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
6. Pay attention to accent or speech characteristics. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
7. What is the sex and approximate age of the caller?
8. What is the emotional state of the caller? (Joyful, angry, irrational, etc.)
9. Listen for background noises (machinery, baby crying, people laughing, traffic)
10. Keep the caller talking as long as possible.
11. Ask for the caller's name.

### Notify:

1. Call 911 ASAP \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Notify management team \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Immediate actions:

2. Isolate the contamination area \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Determine if further isolation is needed \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. Identify source of contamination if possible \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
5. Try not to disturb crime scene.
6. Sampling as required to further determine scope of area affected \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
7. Main disinfection, flushing as required \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
8. Sampling until water confirmed safe by DOH and PUD \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
9. Check other sites and other utilities \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
10. Isolate interties \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
11. Co-ordinate w/ Kim Gubbe for modeling \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Follow Up:

1. Evaluate damage and losses \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  2. Offer traumatic event counseling \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  3. Notify insurance agent \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  4. Are there ways to make sites more secure \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  5. Evaluate what worked well and what didn't \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  6. Update action plan \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
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## Contamination Threat Checklist

11. What is the threat? \_\_\_\_\_
12. Where is the threat? \_\_\_\_\_
13. Why are you doing this? \_\_\_\_\_
14. What do you want? \_\_\_\_\_
15. Accent or speech characteristics \_\_\_\_\_
16. Male or female? \_\_\_\_\_
17. Approximate age \_\_\_\_\_
18. Emotional state of caller \_\_\_\_\_
19. Background noises \_\_\_\_\_
20. Ask for caller's name \_\_\_\_\_

## B6. Cross-Connection Event

Location: \_\_\_\_\_

Date: \_\_\_/\_\_\_/\_\_\_ Time: \_\_\_:\_\_\_ am/pm

### Assessment:

1. Log call or complaint \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Site visit to identify possible issue and scope \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Nature of problem: \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - A. Water Quality? Taste, odor, color, feel, particulates.
  - B. Gas encapsulation?
  - C. Low pressure or flow? (service or main leak – back siphonage?)
  - D. Fire or fire hydrant use in recent past? (back siphonage?)
4. Scope of problem: \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - A. Single tap?
  - B. Single connection?
  - C. Multiple connections?
  - D. Localized area?
5. Possibility of area isolation with in-flow only (elimination of looping or spreading of incident).  
\_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Immediate Actions:

6. Isolation of connection or localized area if possible \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
7. Begin completing a Backflow Incident Report Form. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
8. Contact a staff CCS to assist with the assessment \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
9. Identify source of contamination if possible \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
10. **If appropriate, begin water quality testing** \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
11. Identify source of contamination if possible \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
12. Sampling as required to further determine scope of area affected \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
13. Main disinfection, flushing as required \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
14. Sampling until water confirmed safe by DOH and PUD \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Notifications:

15. Notice provided to DOH and Local HD - possible request for assistance and guidance  \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
16. Notice to law enforcement if warranted \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
17. General customer and public or localized area notice consideration, developed and delivered based on possible nature of problem \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
18. Notice to Water Management Labs of problem and request for assistance if needed  \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
19. Update on status to customers, public, and agencies if required \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Follow-Up Actions:

20. Return to normal operations \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
21. Complete the Backflow Incident Report Form and submit to DOH. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
22. After action meeting with PUD staff and outside agencies as required \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
23. Evaluate what worked well and what didn't \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
24. Update action plan \_\_\_:\_\_\_ am/pm, \_\_\_\_\_



## Cross-Connection Control Program

### Backflow Incident Report Form

*Note: use this form to comply with WAC 246-290-490(8)(g).*

#### Part 1: Public Water System (PWS) Information

PWS ID:	PWS Name:	County:
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#### Part 2: Backflow Incident Information

##### A. Incident Identification

Incident date:	Time of incident:	Incident ID (DOH use):
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##### B. Information on Premises where Backflow Originated

Name of premises:	
Premises physical address:	
City: _____, WA	Zip: _____
Premises type: non-residential <input type="checkbox"/> residential <input type="checkbox"/>	
Premises category/description (Table 9 category*, if applicable):	
Most recent hazard evaluation prior to incident (mm/dd/yyyy): _____ None <input type="checkbox"/>	
PWS's assessed hazard level:	Premises isolation required by PWS? Yes <input type="checkbox"/> No <input type="checkbox"/>
Type of backflow preventer required by PWS:	PWS relies on <i>in-premises protection</i> ? Yes <input type="checkbox"/> No <input type="checkbox"/>
Other hazard evaluation information:	

\*See WAC 246-290-490(4)(b)(i).

##### C. Method of Discovery of Backflow

<b>How the backflow was discovered (check all that apply):</b>	Direct observation .....	<input type="checkbox"/>	Water quality complaint .....	<input type="checkbox"/>
	Meter running backwards .....	<input type="checkbox"/>	Illness/injury complaint .....	<input type="checkbox"/>
	Water use decrease .....	<input type="checkbox"/>	Result of Investigation .....	<input type="checkbox"/>
	Disinfectant residual monitoring ...	<input type="checkbox"/>	Other (Describe):	<input type="checkbox"/>
	Water quality monitoring .....	<input type="checkbox"/>		
<b>Incident reported to the public water system by:</b>	PWS Personnel <input type="checkbox"/> Premises Owner/Occupant <input type="checkbox"/> Other PWS Customer <input type="checkbox"/> Backflow Assembly Tester <input type="checkbox"/> Other (Specify):			

##### D. Contaminant Information

<b>Contaminant type (check all that apply):</b>	Microbiological <input type="checkbox"/> Chemical <input type="checkbox"/> Physical <input type="checkbox"/>
<b>Describe contaminant (for example, the organism name, chemical, etc.).</b> Please attach lab analysis or MSDS, if available.	

##### E. Extent and Effects of Contamination

Estimated extent of contamination:	Contained within premises <input type="checkbox"/> Entered PWS distribution system <input type="checkbox"/>
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Estimated number of connections affected:	Residential	Non-residential
Estimated population affected or at risk:	Residential	Non-residential
Number water quality complaints:	Describe water quality complaints:	
Number illnesses reported:	Describe illnesses/irritation (specific illnesses, if known):	
Number physical injuries(e.g. burns) or irritation(e.g. rashes) cases reported:		

**Part 3: Cross-Connection Control Information at Backflow Site**

**A. Source of Contaminant**

<b>Source of contaminant or fixture type (check all that apply):</b>	Air conditioner/heat exchanger .....	<input type="checkbox"/>	Industrial/commercial process	
	Auxiliary water supply .....	<input type="checkbox"/>	water/fluid.....	<input type="checkbox"/>
	Beverage machine .....	<input type="checkbox"/>	Medical/dental fixture .....	<input type="checkbox"/>
	Boiler, hot water system .....	<input type="checkbox"/>	Reclaimed water system.....	<input type="checkbox"/>
	Chemical injector/aspirator .....	<input type="checkbox"/>	Swimming pools, spa .....	<input type="checkbox"/>
	Fire protection system .....	<input type="checkbox"/>	Wastewater (sewage) system .....	<input type="checkbox"/>
	Irrigation system (PWS supplied) .....	<input type="checkbox"/>	Other (specify): .....	<input type="checkbox"/>
			.....	

**B. Distribution System Pressure Conditions in the Vicinity of the Backflow Incident**

<b>Type of backflow:</b>	Back siphonage <input type="checkbox"/>	<b>Typical distribution system pressure in vicinity of incident</b> (if range, enter lower end of range):	psi	
	Backpressure <input type="checkbox"/>			
<b>Main/pressure status at time of incident (check all that apply):</b>	Normal .....	<input type="checkbox"/>	Source/plant outage .....	<input type="checkbox"/>
	Main break .....	<input type="checkbox"/>	Scheduled water shutoff by PWS .....	<input type="checkbox"/>
	Firefighting .....	<input type="checkbox"/>	Unscheduled/emergency shutoff .....	<input type="checkbox"/>
	Other high usage .....	<input type="checkbox"/>	Unknown .....	<input type="checkbox"/>
	Power outage .....	<input type="checkbox"/>	Other (specify)	<input type="checkbox"/>

**Describe causes and circumstances leading to backflow:**

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**C. Backflow Preventer Information/Installation/Approval Status at Site of Backflow**

Complete the tables in C and D for the *premise's isolation* preventer for either of the following situations:

- If a premise isolation backflow preventer is installed **and** the contaminant entered the PWS distribution system.
- If the premise isolation assembly is the only backflow preventer at the site.

In all other cases, complete tables in C and D for the *in-premise* backflow preventer installed at the fixture. If more than one backflow preventer was involved in the backflow incident, copy tables C and D and complete them for the additional preventer(s).

**If no backflow preventer was installed at the time the incident occurred, check this box  and go directly to Part 4. Don't fill out the tables below (in C and D).**

<b>Backflow preventer</b>	Type installed:	Installed for:
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<b>information:</b>	Make: _____ Model: _____ Size: _____ Serial number: _____ Date installed: _____
<b>Installation status (check all that apply):</b>	Properly installed/plumbed <input type="checkbox"/> Improperly protected bypass present <input type="checkbox"/> Improperly installed/plumbed <input type="checkbox"/> If so, explain: _____
<b>Commensurate with assessed degree of hazard?</b>	Yes <input type="checkbox"/> No <input type="checkbox"/> If not, explain: _____
<b>DOH/USC-approved at time of backflow incident?</b>	Yes <input type="checkbox"/> No <input type="checkbox"/> If not, approved when installed? Yes <input type="checkbox"/> No <input type="checkbox"/>

**D. Backflow Preventer Inspection/Testing Information at Site of Backflow**

<b>Most recent inspection/test information <i>prior</i> to backflow incident. Attach test report(s), if available.</b>	No test report on record ..... <input type="checkbox"/>
	Date tested/inspected: Passed test/inspection <i>without</i> repairs ..... <input type="checkbox"/> Failed initial test/inspection, passed <i>after</i> repair ..... <input type="checkbox"/> Failed test/inspection, no repairs made ..... <input type="checkbox"/>
	<b>Inspection/test information <i>after</i> backflow incident [per WAC 246-290-490(7)(b)]. Attach test report.</b>
	Not tested/inspected ..... <input type="checkbox"/> Date tested/inspected: Passed test/inspection <i>without</i> repairs ..... <input type="checkbox"/> Failed initial test/inspection, passed <i>after</i> repair..... <input type="checkbox"/> Failed test/inspection, no repairs made..... <input type="checkbox"/>
<b>Preventer failure information , if applicable (check all that apply):</b>	Fouled check ..... <input type="checkbox"/> Damaged seat .... <input type="checkbox"/> Debris ..... <input type="checkbox"/> Other: <input type="checkbox"/> Weather-related damage ..... <input type="checkbox"/>
<b>If preventer failed inspection/test, did failure allow backflow?</b>	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, explain: _____

**Part 4: Corrective Action/Notifications**

<b>Action <i>taken</i> by PWS to restore water quality (check all that apply):</b>	None ..... <input type="checkbox"/> Flushed/cleaned mains ..... <input type="checkbox"/> Flushed/cleaned plumbing... <input type="checkbox"/> Disinfected mains ..... <input type="checkbox"/> Disinfected plumbing ..... <input type="checkbox"/>	Other treatment (describe): <input type="checkbox"/> Replaced mains ..... <input type="checkbox"/> Replaced plumbing ..... <input type="checkbox"/> Other: <input type="checkbox"/>
<b>Action <i>ordered</i> by PWS to correct cross-connection (check all that apply):</b>	None ..... <input type="checkbox"/> Eliminate cross-connection... <input type="checkbox"/> Remove by-pass ..... <input type="checkbox"/> Install <b>new</b> preventer ... <input type="checkbox"/> For <i>premises isolation</i> ..... <input type="checkbox"/> For <i>fixture protection</i> ..... <input type="checkbox"/>	Change <b>existing</b> preventer <input type="checkbox"/> Repair/replumb ..... <input type="checkbox"/> Reinstall correctly ..... <input type="checkbox"/> Replace with same type <input type="checkbox"/> Upgrade type ..... <input type="checkbox"/> Other: <input type="checkbox"/>
<b>Action ordered accomplished?</b>	Yes <input type="checkbox"/> Date: _____ No <input type="checkbox"/> If no, explain: _____	
<b>Agency notifications per WAC 246-290-490(8)(f) (check all that apply):</b>	DOH <input type="checkbox"/> Local Health Agency <input type="checkbox"/> Local Adm. Authority <input type="checkbox"/> Issued by end of next business day:	
<b>Notifications of consumers in area of incident (check all that apply):</b>	Population at risk <input type="checkbox"/> Public notification (PN per DOH regs.) <input type="checkbox"/> Boil Water Advisory <input type="checkbox"/> Other (describe): _____	
<b>Other enforcement/corrective actions (describe):</b>	_____	

**Part 5: Cost of Backflow Incident (optional)**

Item	PWS Personnel Hours Expended	Cost to PWS (\$)	Cost to Premises Owner (\$)
Investigation			

Restoration of water quality			
Correction of cross-connection situation			
Litigation and/or settlement			
Other not included in above			

**Part 6: Further Information/Documentation**

Additional information about this incident such as pictures, sketches, newspaper/journal articles, water quality analyses, epidemiological reports, etc. would be helpful. Information may be in electronic form or hard copy.


**Part 7: Form Completion Information**

*Note: Form should be completed by a person currently certified as a Cross-Connection Control Specialist.*

I certify that the information provided in this Backflow Incident Report is complete and accurate to the best of my knowledge.		
CCC Program Mgr. Name (print):		Title:
Signature:	CCS Cert. Number:	Date:
Phone:	E-mail:	
I have reviewed this report and certify that the information is complete and accurate to the best of my knowledge.		
PWS Mgr./Representative Name (Print):		Title:
Signature:	Op. Cert. Number:	Date:

***Please send completed backflow incident form:***

***By mail to:***

Washington State Department of Health  
Office of Drinking Water – CCC Program Manager  
P O Box 47822  
Olympia, WA 98504-7822

***By email to:*** [terri.notestine@doh.wa.gov](mailto:terri.notestine@doh.wa.gov) or [cccprogram@doh.wa.gov](mailto:cccprogram@doh.wa.gov)

**Please send questions, comments, or suggestions about this form to us at the address above or e-mail them to [cccprogram@doh.wa.gov](mailto:cccprogram@doh.wa.gov)**

If you need this publication in an alternate format, call (800) 525-0127. For TTY/TDD, call (800) 833-6388.

## B7. Drought

Time Period: \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_

### Assessment:

1. Monitor historical and period development of situation \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Monitor and record well levels on an increased basis \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Determine availability of and quantity potential of alternative outside supplies  \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. Develop plan for rotation of well use to maximize production potential \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
5. Determine scope of potential reduction of sources and supply capabilities \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Immediate Actions:

6. Prepare specific water curtailment levels and criteria for implementation \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
7. Provide board of directors with status and curtailment levels for approval \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
8. Coordinate curtailment and alternative source use with DOH, DEM, and TPCHD.  \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
9. Develop enforcement measures and means of enforcement \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
10. Prepare and begin enforcement actions utilizing PUD Staff \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
11. Coordinate for implementation of alternative sources if available \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
12. Begin rotation of sources to maximize potential production \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
13. Eliminate all non-essential PUD water use – flushing etc. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
14. Use of alternative sources as required if available \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Notifications:

15. Notification to customers of possibility of curtailment implementation \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
16. Notice to customers of curtailment required and enforcement actions \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
17. Notice to DOH of curtailment intent and coordination \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
18. Requests for use and coordination of use of alternative supplies \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
19. Notice to appropriate fire district and County Sheriff of curtailment actions \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
20. Updates to public and agencies of status changes \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
21. Media and DEM for notice of critical levels \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
22. Notification to public and outside agencies of return to normal operations \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Follow-up Actions:

23. Termination of use of alternative supplies \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
24. Return to normal operation using internal supplies \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
25. Consider possibility of lowering or changing pump systems to increase drought yield for existing wells. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
26. Development of alternative and emergency supplies within PUD system
  - A. Additional wells within PUD system \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - B. Additional permanent fixed emergency interties \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
27. Evaluate what worked well and what didn't \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
28. Update action plan \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

## B8. Earthquake

**Location:** \_\_\_\_\_ **Date:** \_\_\_/\_\_\_/\_\_\_ **Time:** \_\_\_:\_\_\_ am/pm

### Assessment:

1. Establish communications – truck to truck radio \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Employee respond for site inspection, wells and tanks as pre-directed
  - A. Access? \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - B. Operating? \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - C. Structural integrity (bldg., treatment systems, piping, well/pump)? \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - D. Site isolation required? \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - E. Obvious leaks? \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - F. Power status? \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - G. Report status to PUD EOC for each site as inspected \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Determination of system's operable wells and tanks, sites with damage. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. Inspection of distribution system integrity. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Immediate Actions:

5. Establish emergency operations center (EOC) for PUD and implement ICS \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
6. Establish communications with employees – truck to base radio \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
7. Consolidate employees and families – safety and shelter \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
8. Establish contact with County EOC and other utilities \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
9. Sectionalize distribution system if required based on system integrity \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
10. Isolate known leaks \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
11. Obtain additional supplies of repair materials. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
12. Establish customer water fill stations at storage tanks \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
13. Prioritize repairs needed – primary distribution grid, secondary, domestic mains \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
14. Begin repairs on a prioritized basis \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
15. Testing, pressure and bacteriological, after repairs – restoration of services \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Notifications:

16. Report status of system to County EOC, Local Fire Department, & DOH \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
17. Issue curtailment notices and/or boil water notices to public as warranted.
  - A. Reverse 911, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - B. Media \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
18. Contact propane, materials, chemical, fuel, and tire suppliers to insure supplies available \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
19. Updates and all clear to public (may be sub portions of system), EOC, FD, and DOH \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Follow-up Actions:

20. On-going leak detection for repair of “unseen” leaks \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
21. Evaluate what worked well and what didn't \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
22. Update action plan \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

## B9. Facility Loss/Fire

Location: \_\_\_\_\_

Date: \_\_\_/\_\_\_/\_\_\_ Time: \_\_\_:\_\_\_

### Immediate Actions:

1. Call received by On-Call or Office Staff , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Call 911 to report fire , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Notify management Team member , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. Request assistance of other PUD personnel , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
5. Establish contact with appropriate fire department, and County Sheriff Dept. , , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
6. Respond to site , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
7. Isolate site from distribution system , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
8. Isolate access if public hazard , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
9. Insure work site safety and traffic control , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
10. Report status of system to County Emergency Operations Center (EOC), Fire Department and State Dept. of Health (DOH) , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Assessment:

11. Establish extent of damage
  - A. Access? , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - B. Operating? , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - C. Structural integrity (building, treatment systems, piping, well/pump)? , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - D. Site isolation required? , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - E. Obvious leaks? , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - F. Power status? , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - G. Report status to PUD EOC for each site as inspected , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
12. Inspection of on-site distribution system integrity , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
13. Record initial conditions with photos and notes , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
14. Contact the Washington Cities Insurance Authority , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Notifications (if required or needed):

15. Issue curtailment notices and/or boil water notices to public as warranted.
  - A. Reverse 911, , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - B. Media , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
16. Updates and all clear to public (may be sub portions of system), EOC, FD, and State Dept. of Health , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Follow-up Actions:

17. Prioritize repairs needed– upon approval of insurance & fire cause investigation , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
18. Begin repairs on a prioritized basis , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
19. Flush repaired main or service , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
20. Testing, pressure and bacteriological, after repairs – restoration of services , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
21. Evaluate what worked well and what didn't , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
22. Update action plan , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

## B10. Illness / Quarantine

Illness Type: \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_

### Preliminary Preparatory Actions:

1. Monitor development as provided by outside sources including Center Disease Control (CDC), State Dept. of Health (DOH), and Local County Health Dept. (TPCHD), [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Initiate contacts and maintain updates with County Emergency Management (CDEM) & Emergency Operations Center (EOC), DOH and County HD [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Evaluate potential duration of emergency. [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. Secure and have available supplies of Personal Protective Equipment (PPE)
5. Secure and stockpile essential materials, chemicals, and supplies [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
6. Implement Personal Protective Measures [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Initial Implementation:

7. Notification to employees on:
  - A. Minimizing direct outside contact at work and home [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - B. Required sanitation at workplace [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - C. Instructions to remain at home if family member ill [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - D. Employee and/or employee family quarantine [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
8. Implement personal protective measures (PPE) and employee sanitation requirements [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
9. Contact suppliers on possible limitations of supplies or supply availability. [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
10. Emphasize use of electronic communications and transmission of documents. [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
11. Cancel direct contact meetings and schedule as conference calls [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
12. Reduce to minimum direct public contact / no office admission [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
13. Public notice of reduced direct contact with PUD [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
14. Initiate Water Cooperative Emergency contact system activation [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
15. Reduce outside work with risk of exposure to minimum [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### On-Going Actions:

16. Review employee and employee family status with reporting of changes. [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
17. Consider and if warranted - quarantine of employees and employee families [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
18. Provide or pass on guidance to public on reduced public contact for all [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Follow-up Actions:

19. Reopen office to public [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
20. Provide public with notice of normal status of PUD operations. [ ] \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

## B11. Intrusion (Likely/Confirmed)

Location: \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_ Time: \_\_\_:\_\_\_ am/pm

### Assessment:

1. Nature of problem: \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - a. Water Quality? Taste, odor, color, feel, particulates.
  - b. Hatch open evidence of contamination?
  - c. Identify contamination if possible.

### Immediate actions:

1. Isolate the tank (laminated site Map) \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Determine if further isolation is needed \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Identify source of contamination if possible \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. Try not to disturb crime scene.
5. Sampling as required to further determine scope of area affected \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
6. Main disinfection, flushing as required \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
7. Sampling until water confirmed safe by DOH and PUD \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
8. Check other sites and other utilities \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
9. Isolate interties \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
10. Co-ordinate w/ Kim Gubbe, for modeling \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Notify:

1. Call management team member & notify local authorities\DOH \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Notice provided to DOH and Local Health Department (HD) - possible request for assistance and guidance \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Notice to law enforcement if warranted \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. General customer and public or localized area notice consideration, developed and delivered based on possible nature of problem \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
5. Notice to Water Management Labs of problem and request for assistance if needed \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
6. \_\_\_\_\_ Update on status to customers, public, and agencies if required \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Follow Up:

1. Evaluate damage and losses \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Find ways to make sites more secure \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Evaluate what worked well and what didn't \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. Update action plan \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

## B12. Intrusion (Possible)

Location: \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_ Time: \_\_\_:\_\_\_

### Employee triggered alarm - Office:

#### Assessment:

1. Employee Triggered the alarm \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

#### Immediate actions:

1. Call alarm center \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Give your password to stop Sheriff Call out \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - a. Note: Program in alarm center number into your cell phone \_\_\_:\_\_\_ am/pm,

#### Notify:

1. Call management team member and notify \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Employee triggered alarm - Well/Tank/Booster Sites:

#### Assessment:

1. Do we know what triggered the alarm? \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

#### Immediate actions:

1. Call management team member and notify \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Operations Manager will then inactivate the well alarm on SCADA system \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Clear local alarm and reset when leaving well \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

#### Notify:

1. Re-Call management team - notify of local alarm cleared and reset \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Unknown Cause Triggers Alarm - Office or Well Sites:

#### Assessment:

1. Call received by management team member or on call service \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Drive-by only of site by TPUD personnel, **DO NOT CONFRONT PERSON/S**
3. Call 911 immediately if any suspicious activity or situation is detected or perceived or if you are not 100% comfortable entering the site \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. Is site isolation from distribution system needed \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
5. Return to safe area to meet County Deputy \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

#### Immediate actions:

6. On-Call staff contacts management team regarding any known TPUD work at site or access given to sub-contractors \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
7. Check building interior if completely sure that there is no actual intrusion (this is only done after communication with management staff) \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
8. If Sheriff's Department has been notified:
  - A. Meet Sheriff's deputy on-site (front lot) to answer questions, provide gate access to deputy, provide keys for building access to deputy \_\_\_:\_\_\_ am/pm, \_
  - B. Upon all clear from deputy
    - Enter building and disable existing alarm \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
    - Correct fault (if possible) and re-set alarm \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
9. Walk-around building, check fence line \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

#### Notify:

1. Keep in contact with coordinating Mgmt. staff member regularly \_\_\_:\_\_\_ am/pm, \_

#### Follow Up:

1. Evaluate damage and losses \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Find ways to make sites more secure \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Evaluate what worked well and what didn't \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. Update action plan \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

## B13. Low Water Pressure

**Location:** \_\_\_\_\_ **Date:** \_\_\_/\_\_\_/\_\_\_ **Time:** \_\_\_:\_\_\_ am/pm

### Assessment:

1. Call received by On-Call or Office Staff, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Call notifier to get additional information, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Immediate Actions:

3. Respond to low pressure site, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. Check original site to assess, should be between 30 and 60 psi, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
5. If Low, check other nearby customers, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

#### If Single Connection:

6. Check possibility of jumping service until repaired, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
7. Notify both parties of jumper process and get approval, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

#### If Larger Area:

8. Notify supervisor, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
9. Check for possible main break, fire flow, etc. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
10. If identified as need for system repair, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
11. Move to **“WATER LEAK, MAIN BREAK”** \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Notify:

12. Notify supervisor of actions taken, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Follow Up:

13. Begin work order process for repair, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
14. Document all work and conversations, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

## B14. Threat – Personal Harm

Location: \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_ Time: \_\_\_:\_\_\_ am/pm

### Assessment:

1. Assume the threat is real \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. What is the threat?
3. Where is the threat?
4. Why are you doing this?
5. What do you want?

### Immediate Actions:

6. Keep calm. Do not do anything to escalate the situation \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
7. Try to leave as soon as possible
8. Write down details ASAP \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
9. Pay attention to what the person looks like. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Notify:

10. Call 911 ASAP \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
11. Notify management team \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Follow Up:

12. Evaluate damage and losses \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
13. Offer traumatic event counseling \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
14. Notify insurance agent \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
15. Are there ways to make sites more secure \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
16. Evaluate what worked well and what didn't \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
17. Update action plan \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

## B15. Power Outage – Severe Weather

Location: \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_ Time: \_\_\_:\_\_\_ am/pm

### Assessment

1. Call received from \_\_\_\_\_?, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Call management team. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Try to evaluate scope of power outage, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. Check emergency generators, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
5. Contact Power Company for more information on scope and duration of outage. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
6. Check sites and booster station Fuel and operation \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Immediate Actions:

7. If major, request assistance, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
8. If the generators are not operating, follow the operation manual for the generator \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
9. Check telemetry operation \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
10. Make sure you have access to:
  - a. Saws and fuel \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - b. Normal road signs \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - c. Tires – **Les Schwab** \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - d. Fuel Normal? \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
    - i. Check for other sources \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
11. Misc.
  - a. Wires down. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - b. Manual transfer connection of each generator \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - c. Call Appropriate Electric Company \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
12. Freezing
  - a. Portable heat, if pipes are frozen \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Notifications

13. Fire Dept. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
14. On-call Service \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
15. Interties if Applicable, Olympia or Spanaway Water \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
16. Interties to others \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
17. No Land or Cell Phones,
  - a. Truck radios (test monthly) \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - b. Training office \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - c. Phone contact –Qwest – Olympic, Verizon \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
18. If media or DOH contact/public information – contact management team to address,
  - a. Call list – KIRO etc. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - b. GM-Press Release \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - c. If pressure is lost, prepare to collect coliform sampling per CMP \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Follow-up Actions:

19. Make sure everything is in order, put away & refueled \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
20. Evaluate what worked well and what didn't \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
21. Update action plan \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

## B16. Robbery

**DO NOT RESIST OR CONFRONT THE INDIVIDUAL/S**

**Location:** \_\_\_\_\_ **Date:** \_\_\_/\_\_\_/\_\_\_ **Time:** \_\_\_:\_\_\_ am/pm

### Assessment:

1. Is first aid required? \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Is medical assistance required? \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Immediate Actions:

3. Activate the panic button if possible \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. Provide first-aid and seek medical assistance if necessary. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
5. Write down details ASAP \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
6. Pay attention to physical and language appearance \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - A. Height
  - B. Weight
  - C. Age
  - D. Race
  - E. Color and length of hair, facial hair
  - F. Eye Color
  - G. Clothes
  - H. Distinguishing marks such as tattoos or scars
  - I. Accent or speech characteristics
7. Get description of vehicle and License number if possible \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
8. Post notice of closure and lock Down office \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Notify:

9. Call 911 ASAP \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
10. Notify management team \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
11. Notify a board beginning with President, Vice Pres. Etc. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
12. Notify Insurance Agency \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
13. Notify Cooperative Fusion center liaison \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Follow Up:

14. Evaluate damage and losses \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
15. Offer traumatic event counseling \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
16. Notify insurance agent \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
17. Are there ways to make the office more secure \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
18. Evaluate what worked well and what didn't \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
19. Update action plan \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

## B17. Telemetry Failure

Location: \_\_\_\_\_

Date: \_\_\_/\_\_\_/\_\_\_ Time: \_\_\_:\_\_\_ am/pm

### Assessment:

1. Call received from \_\_\_\_\_, (or) \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Call received by On-Call or Office Staff \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Try to evaluate scope and cause of telemetry failure: \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - A. Failure?
  - B. Power related issue (if yes see 'Power Outage' checklist)
  - C. Telephone line related issue
  - D. Unknown cause
4. Determine the effect of the telemetry failure on the water system \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - A. Do we currently need the affected well sites operating to maintain tank levels within the system? \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - B. Will the system demand allow repair actions the affected sites to wait until normal work hours? \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - C. Can the well be safely run in manual mode (In hand?) \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Immediate Actions:

5. If major, request assistance \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
6. Determine the operating status of each well site \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
7. Determine the water level of each storage tank \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
8. Work with management team to determine which sites need to be switched to local control (many will do so automatically) \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Notifications:

9. Call management team \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
10. Contact **Shannon Calvert (Citect)** to give notice that the system has experienced a  failure \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
11. Contact **Comcast** to give notice that the phone system has experienced a failure \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
12. Contact with DOH County Regional Engineer if the water quality or pressure have reached emergency levels \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Follow-up Actions:

13. Make sure sites are secured \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
14. Evaluate what worked well and what didn't \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
15. Update action plan \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

## B18 Treatment System Failure

Location: \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_ Time: \_\_\_:\_\_\_ am/pm

### Assessment:

1. Determine type of treatment system failure \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Determine if actual failure of false read from analyzer \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Is the chlorine feed system operational? \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. Nature of system failure: \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - A. Chlorine feed? Yes/No (Chlorine feed pump failure? Yes/No )
  - B. Chlorine generation? Yes/No (stored chlorine solution available? Yes/No )
  - C. pH adjustment? Yes/No (NaOH pump failure? Yes/No )
  - D. ATEC Manganese filter system? Yes/No

### Immediate Actions:

5. Shut down of well if chlorination feed system failure \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
6. Shut down of well if ATEC system failure \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
7. If chlorine system has failed, can an alternate supply of chlorine or supply pump be put into operation? \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
8. Can the untreated water be flushed or blended to reduce the impact to the customers? \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
9. If not, transfer to possible contamination event emergency action plan. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
10. Collect Coliform samples in potentially contaminated areas, sample for pH and chlorine as indicated \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
11. Main disinfection, flushing as required \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Notifications:

12. Call management team \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
13. Notice provided to DOH and local health department - possible request for assistance and guidance \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
14. General customer and public or localized area notice consideration, developed and delivered based on possible nature of problem \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
15. Update on status to customers, public, and agencies if required \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Follow-Up Actions:

16. Return to normal operations \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
17. After action meeting with PUD staff and outside agencies as required \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
18. Evaluate what worked well and what didn't \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
19. Update action plan \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

## B19. Unknown Water Problem

**Location:** \_\_\_\_\_ **Date:** \_\_\_/\_\_\_/\_\_\_ **Time:** \_\_\_:\_\_\_ am/pm

### Assessment:

1. Log call or complaint \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Site visit to identify possible issue and scope \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Nature of problem: \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - a. Water Quality? Taste, odor, color, feel, particulates.
  - b. Gas encapsulation? (well over-pumping?)
  - c. Low pressure? (service or main leak?)
  - d. Low flow? (service or main leak?)
4. Scope of problem: \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - a. Single tap?
  - b. Single connection?
  - c. Multiple connections?
  - d. Localized area?
5. Possibility of area isolation with in-flow only (elimination of looping or spreading of incident. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Immediate Actions:

6. Isolation of connection or localized area is possible \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
7. Transfer to contamination or possible cross-connection event emergency action plan. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
8. Begin water quality testing if quality issue \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
9. Inspection of wells and tanks as possible source \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
10. Isolation of wells or tanks if necessary with activation of other sources \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
11. Sampling as required to further deter scope of area affected if required \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
12. Main disinfection, flushing as required \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
13. Sampling until water confirmed safe by DOH and PUD \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Notifications:

14. Notice provided to DOH and TPCHD - possible request for assistance and guidance \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
15. General customer and public or localized area notice consideration, developed and delivered based on possible nature of problem \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
16. Notice to Water Management Labs of problem and request for assistance if needed \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
17. Notice and request to EPA region 10 for water quality analysis if needed. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
18. Notice to law enforcement if warranted \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
19. Update on status to customers, public, and agencies if required \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Follow-Up Actions:

20. Return to normal operations \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
21. After action meeting with PUD staff and outside agencies as required \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
22. Evaluate what worked well and what didn't \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
23. Update action plan \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

## B20. Vandalism

**Location:** \_\_\_\_\_ **Date:** \_\_\_/\_\_\_/\_\_\_ **Time:** \_\_\_:\_\_\_ am/pm

### Assessment:

1. Call received by management team member or on call service \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Drive-by only of site by TPUD personnel. Call 911 immediately if any suspicious activity or situation is detected or perceived or if you are not 100% comfortable entering the site \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Immediate Actions:

1. Return to a safe area to meet County Sheriff's deputy \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Is site isolation from the distribution system needed (possible contamination?) \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. On-Call staff contacts management team immediately \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. Check site interior if completely sure that there is no actual intrusion (this is only done after communication with management staff) \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
5. If Sheriff's Department has been notified:
  - a. Meet Sheriff's deputy on-site to answer any questions, provide gate access to deputy, provide keys for building access to deputy \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - b. Upon all clear from deputy
    - i. Enter building and disable existing alarm \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
    - ii. Correct fault (if possible) and re-set alarm \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
6. Walk-around building, check fence line \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
7. Log any and all possible access points (fence cut, climbed, dug under, etc.) \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Notify:

1. Keep in contact with coordinating management staff member throughout the process,  , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Follow Up:

1. Evaluate damage and losses \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Find ways to make sites more secure \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Evaluate what worked well and what didn't \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. Update action plan \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

## B21. Water Leak / Break

**Location:** \_\_\_\_\_ **Date:** \_\_\_/\_\_\_/\_\_\_ **Time:** \_\_\_:\_\_\_ am/pm

### Assessment

1. Call received by On-Call or Office Staff, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
2. Call notifier to get additional information, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
3. Respond to leak site, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
4. Assess scope of leak – single site, area, main break? \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

### Immediate Actions:

5. If minor, log for work order for next business day, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
6. If major, request assistance, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
7. Isolate area water and water services, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
8. Isolate access if public hazard, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
9. Call for emergency locates 1-800-424-5555 \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
10. With staff assistance assess damage and materials needed to complete repair. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_  
HD Supply: \_\_\_\_\_,  
HD Fowler: \_\_\_\_\_,  
Pro-Vac: \_\_\_\_\_,

Others \_\_\_\_\_

11. Obtain needed materials, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
12. Record initial conditions photos, work order, notes, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
13. Insure work site safety and traffic control, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
14. If media or DOH contact/public information – contact management team to address, , \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
15. Complete repairs – swabbing pipe or super chlorinating, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
16. Flush repaired main or service, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
17. Return services to customers, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
18. Collect Bacteria sample & CL2 sample, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
19. Contact Pierce County for emergency road permit, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
20. Complete work order, mapping, notes,

### Notifications:

21. If possible, notify customers, \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - a. Notify law enforcement \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
  - b. Notify fire department \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
22. Notify On-Call service of outage \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
23. Notify management team of incident. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
24. Notify DOH if loss of pressure and potential for back-flow incident. \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

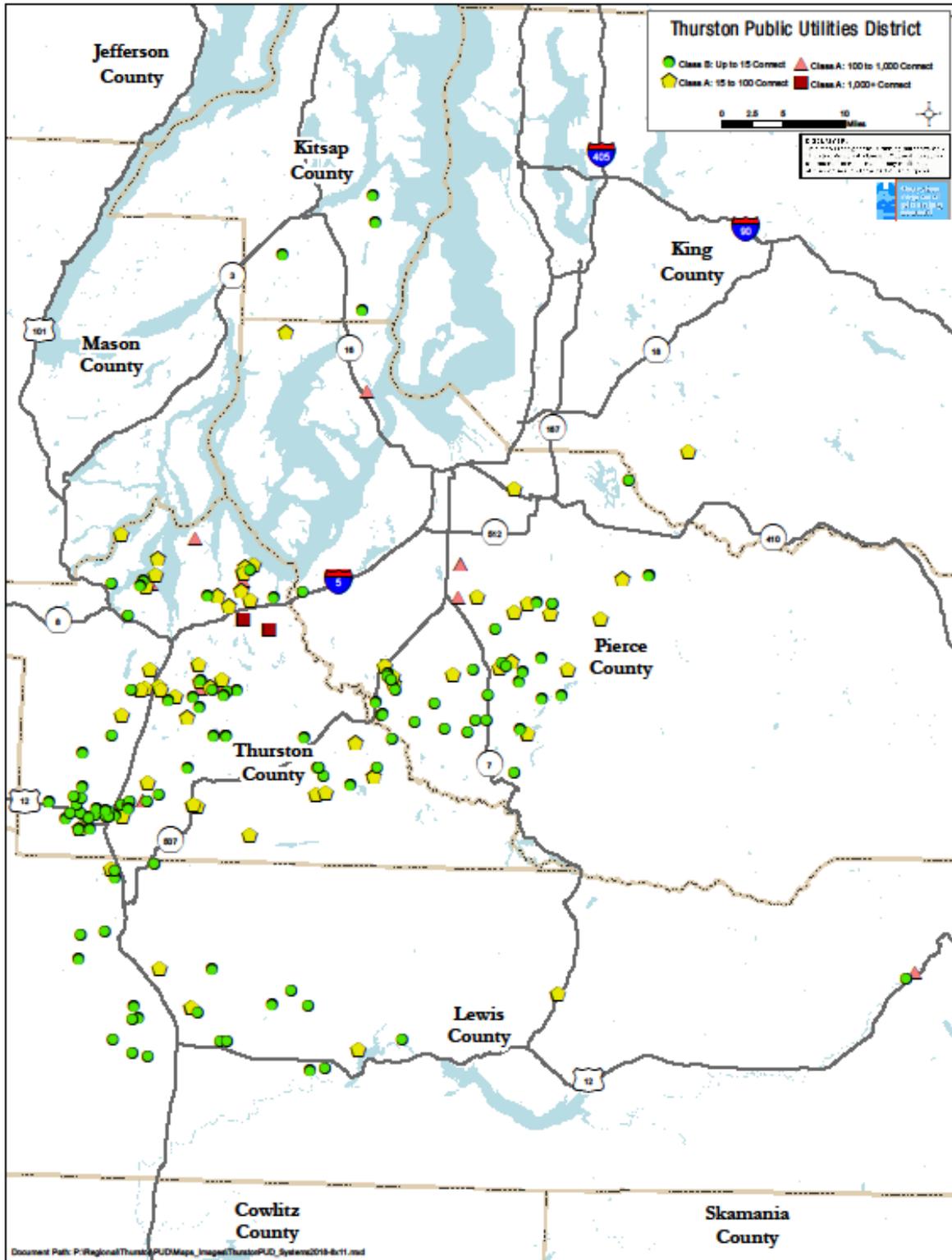
### Follow-up Actions:

25. Make sure everything is in order, put away & refueled \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
26. Evaluate what worked well and what didn't \_\_\_:\_\_\_ am/pm, \_\_\_\_\_
27. Update action plan \_\_\_:\_\_\_ am/pm, \_\_\_\_\_

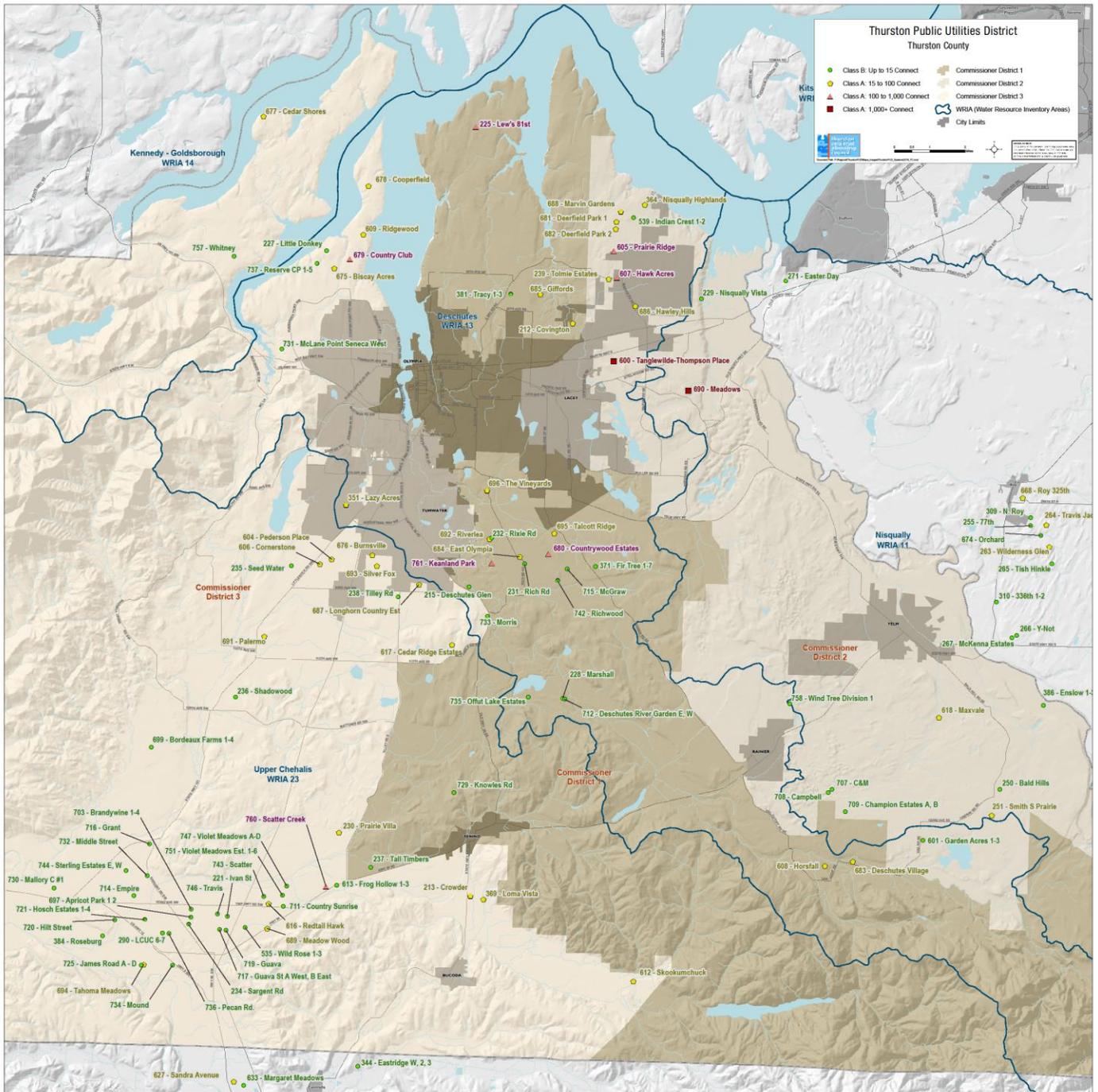
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## APPENDIX C: Water System Maps

# All Counties Map



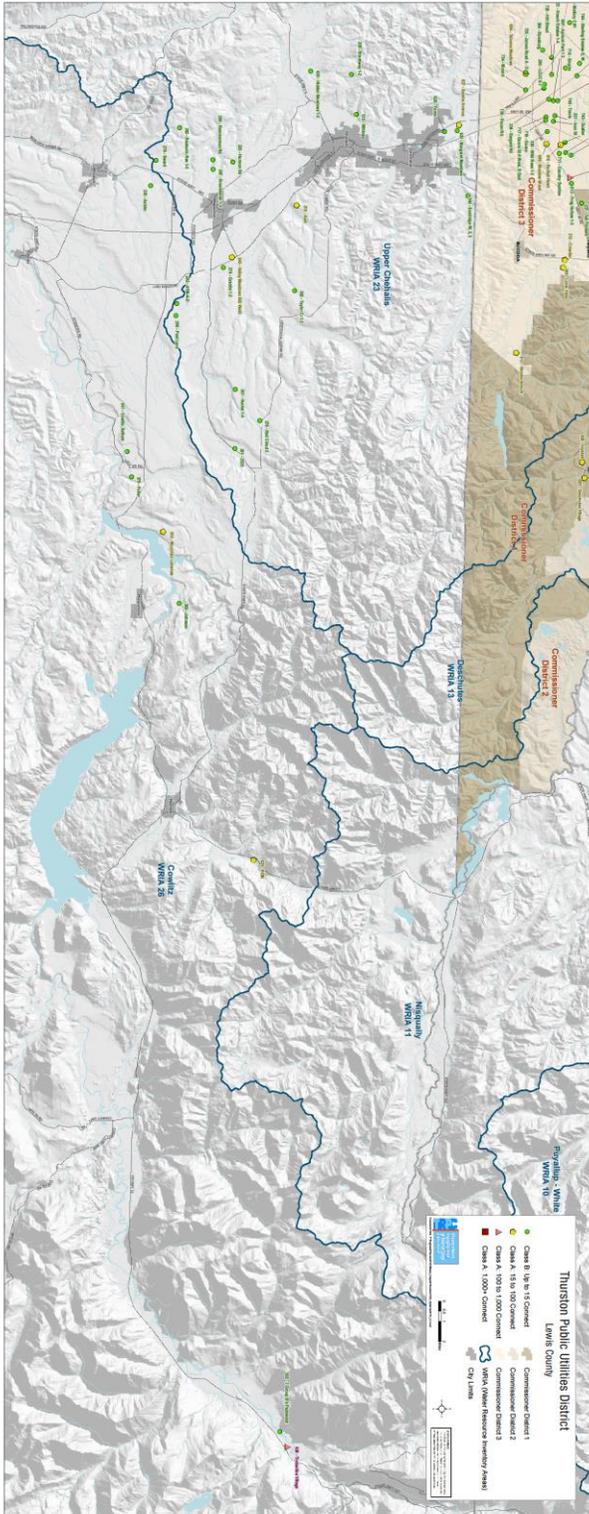
## C.1 Thurston County Water Systems



## C.2 Pierce County Water Systems



### C.3 Lewis County Water Systems



# Appendix Q

## Water Shortage Plan

Water System Plan – Part A

## **THURSTON PUD**

### **WATER SHORTAGE RESPONSE PLAN FOR DEMAND REDUCTION DURING EMERGENCY, OPERATIONAL, AND DROUGHT SITUATIONS**

#### ***PLAN OBJECTIVES***

The Water Shortage Response Plan (WSRP) provides systematic responses and methods to reduce customer water demand due to a water supply shortage from an emergency, drought event, or operational situation.

The objective of the WSRP is to establish actions and procedures for evaluating supply options and managing water demand during a water supply shortage. It is intended for use during infrequent and unusual events and is not a substitute for the development of water supply projects and conservation programs. The WSRP establishes strategies in advance of actual conditions. The District is prepared to maintain essential public health and safety, and minimize adverse impacts to residents and businesses, should a water shortage event occur.

#### ***PLAN DESCRIPTION***

The WSRP provides approaches that can be tailored to specific water shortages. The responses become more assertive as conditions become progressively more serious. These responses are presented in four stages: Voluntary, Outdoor Restrictions, Mandatory and Rationing.

- Stage 1, Voluntary Water Use Efficiency – This includes public outreach activities and program promotion to encourage voluntary water use efficiency by the consumer.
- Stage 2, Outdoor Restrictions – This stage includes various strategies to reduce outdoor water use, such as encouraging water efficient devices and compliance with alternating days for outdoor watering.
- Stage 3, Mandatory Outdoor Restrictions and Indoor Water Use Efficiency – This stage includes prohibiting outdoor use with consequences for violators. Consumers are also asked to reduce indoor water use.
- Stage 4, Water Rationing – This stage is intended to ration a limited supply of water so as to serve only essential uses.

A menu of water use reduction measures have been developed for each WSRP Stage. Actions to respond to the specific water shortage situation can be tailored through choices within the menus. More severe stages build on previous stages. Objectives and actions from less severe stages should all be considered for implementation with a more severe stage. During a water shortage situation, the Management Team will provide a recommendation for specific implementation of the WSRP to the General Manager and Board of Commissioners.

## ***PLAN IMPLEMENTATION CONSIDERATIONS***

There are issues associated with implementing the WSRP that are relevant to all four stages. These matters should be considered prior to implementation of the WSRP and when changing WSRP stages:

- ❖ Each water shortage situation will be unique. The WSRP cannot anticipate every possible scenario and predict all supply and demand management actions that may be necessary. The WSRP establishes a range of supply and demand management actions in advance of the situation and defines the mechanisms by which decisions can be made and communicated during the event.
- ❖ Communication is the key to providing customers with the information necessary to implement and achieve water use reductions during a water shortage situation. Providing a clear and consistent message throughout each situation is considered a priority. Contact through signage, Call-Em-Alls (automated phone calls), door hangers and direct mail should be considered.
- ❖ The media can play an important role during an event by communicating the nature and significance of the event and the actions that are being taken to manage the situation. During water shortage emergency events, the District General Manager serves as the Public Information Officer (PIO) to the media, with trained backup personnel to assist as necessary. All media requests for information go through the General Manager. The scope and severity of an event may also affect the role the media is willing to take in broadcasting information.
- ❖ Customers prefer to be provided an opportunity to meet water use reduction goals through voluntary compliance measures. The decision to enact mandatory restrictions is less controversial if it is evident to the public that a voluntary approach has not sufficiently reduced the demand.
- ❖ During each WSRP stage, customers are asked to curtail certain water uses in order to reduce demand. This may result in hardships for some customers. Cooperation with the curtailment actions is more likely if the public perceives the actions to be fairly distributed.

## ***PLAN IMPLEMENTATION FACTORS***

When a water shortage situation is identified, the Management Team will consider whether the WSRP should be implemented, and at which stage implementation should start. A variety of factors would form the basis of these decisions, including the following:

### **Water Supply Factors**

- Groundwater rights status for that particular year.
- Available groundwater supply and operational condition of District wells.
- Current aquifer levels.
- The rate of decline in aquifer levels, compared with the normal operating levels.
- Surface water situations in proximity to District wells.
- Available surface water supply in the regional water system, and whether or not the purveyor of the regional supply has entered into its own water shortage contingency plan.
- Water supply situation of adjacent purveyors and the availability of water through emergency interties if necessary.
- Amount of time required to implement a supply enhancement measure.
- Weather conditions as derived from short- and long-term weather forecasts and modeling by the National Weather Service and the Drought Monitor.

## **Water Demand Factors**

- Trends and seasonal forecasts for the system's daily water demands.
- The estimated margin of safety provided by the demand reduction compared with the level of risk assumed if no action is taken.
- Amount of time required to implement a water use reduction measure.
- Media availability.
- Ease of customer understanding of water use reduction measure.
- Customer response.
- Magnitude of expected savings provided by a water use reduction measure.

## **Other Factors**

- The value of lost water sales revenue compared with the increased margin of reliability.
- Consultation with the District's Board of Commissioners and elected officials and staff of other local and regional government entities.
- The length of time a WSRP stage would be in place. (This determination should avoid implementation followed quickly by termination, and then potential re-implementation of the WSRP. This is to avoid confusion and to enhance the customer's confidence in the Board's decision.)
- Required time lags to shift administrative gears and institute measures.
- Ultimate cost to the District customers, both residential and commercial.
- Equity in demand reduction between customer classes.
- Current events.

## ***WATER SUPPLY SHORTAGE DESCRIPTIONS***

### **Emergencies**

Water shortage emergencies could potentially occur when there is damage to major infrastructure that in turn affects water supply, storage or distribution to customers' homes and businesses. Response to this type of emergency includes reestablishing water for basic domestic uses as well as for fire protection. The District's *Emergency Response Plan* should be referred to during any water supply shortage emergency. The *Emergency Response Plan* includes procedures to be followed during an emergency situation to reestablish the system's operation.

Emergencies are characterized by urgency and may initially require quick and immediate responses. The initial response may have a lack of preparation time to implement meaningful water use reduction strategies. Once an assessment has been made on the length of time necessary to restore normal service, the response strategy may change. Emergencies may require major curtailment actions by customers in a short period of time. Emergencies may be also be localized, requiring water use reductions in a small geographic area. Flexibility is the key to designing any emergency strategy.

### **Droughts**

Droughts are naturally occurring but unpredictable weather events of varying frequency, duration and severity. Available regional data indicates that a low probability of a multiple year drought exists in our region. This data includes weather records collected for the past century, tree ring analysis, and soil sampling.

The District is primarily served by groundwater systems. For management of water system operations, the District assumes the aquifers tapped by District wells recharge normally every year. Because the District wells tap multiple aquifers at varying depths it is unlikely that all District wells will be equally affected

## **Water Shortage Response Plan**

by a drought event. Unusual weather events such as a dry winter season can affect this recharge cycle and cause shortages.

A summer of sustained higher than normal temperatures following a winter of lower than normal precipitation can contribute to considerable aquifer drawdown, which affects both water quantity and quality. Although drawdown around the wells can become a problem, the District's groundwater aquifers generally act as storage reservoirs. Drought events lasting one or two years historically have not had any impact on the District water supply.

### **Operational Situations**

An operational situation requiring implementation of the WSRP can occur when a critical link in the District's system is not available for service. The inability to operate a portion of the water system's infrastructure at full capacity may result in a situation where there is a need to significantly reduce water use, but over a limited period of time. The affected critical link could be a storage tank, well, booster pump, treatment system, telemetry system or transmission facility.

### **WSRP Water Use Reductions (Curtailment) versus Conservation**

There are important differences between long-term conservation programs and curtailment, or reducing water use during a WSRP situation. During a WSRP emergency, actions are designed to quickly reduce water use, are relatively short-lived, and usually involve some tradeoffs or hardships for customers. Conservation programs, on the other hand, are long-term programs structured to encourage customers to reduce water waste and increase water efficiency in a sustainable manner. Some programs offer financial incentives for implementing water conservation, such as the District's irrigation audit program or rebate programs. The focus of the public message and information strategy is different for each program. The long-term conservation message of encouraging an environmental ethic and saving money shifts during water supply shortage situations to a more personal message. However, conservation methods included in the conservation program may be promoted as part of the strategies employed during a water supply shortage situation.

## ***WATER SHORTAGE RESPONSE PLAN STAGES***

### ***STAGE ONE: Voluntary Water Use Efficiency***

#### **Objectives:**

- To inform the District's water customers of a water shortage, and the need to reduce water use and eliminate water waste.
- To reduce water use to meet consumption goals through voluntary customer actions.
- To forestall or minimize the need for more stringent demand or supply management actions.
- To minimize the disruption to customers while meeting consumption goals.
- To maintain the highest water quality standards throughout the shortage.

#### **Triggers:**

There are a variety of conditions that may cause concern about water availability and signal a potential water shortage. Conditions that would trigger the Voluntary Stage include:

- Total aquifer supply storage is not projected to be at standard operating capacity as of June 1, due to low aquifer levels.
- Total aquifer supply storage is significantly below historical normal levels for the current time of year, and data indicates that expected demands may not be met if this trend worsens or continues.
- Total regional supply is significantly below historical normal levels, and regional water purveyors have indicated an intention to implement the advisory stage of their plans.
- Weather conditions over the previous winter(s) have been particularly dry with lower than normal rainfall quantities.
- Operational situations are predicted that may affect the District's ability to provide water service at a level necessary to meet projected demands.

The Advisory may be withdrawn when water supply conditions return to a normal situation.

#### **Public Message:**

"The potential exists for lower than normal water supply. Customers are asked to reduce consumption unless conditions return to normal. We will keep you informed."

Or

"The potential exists for operational situations that would make it difficult for the demand to be met at all times. Customers are asked to reduce consumption until the situation is corrected. We'll keep you informed."

**Internal Operating Actions:**

1. The District's Management Team will meet to evaluate conditions, determine actions and make task assignments.
2. Intensify communication with all staff members.
3. Intensify data collection actions for well pumping records, tank level records, monitoring aquifer levels, regional water supply levels and weather conditions.
4. Assess current water main flushing activities to determine whether they should be accelerated to be completed prior to the peak season or reduced to conserve supply.
5. Assess water quality in aquifers and distribution system to target areas that may experience severe degradation with reduced consumption.
6. Develop a list of critical water uses and users.
7. Initiate planning and preparation for Voluntary stage actions. Evaluate the ability, resources, and plans to move into the Voluntary stage and begin preparatory measures.

**Communication Actions:**

1. Brief the Board of Commissioners and all District staff members.
2. Prepare and distribute public information materials explaining the WSRP Stages and expected ranges of actions. Depending on the time available to disseminate information, this may include newsletters or other bill inserts or direct mail.
3. Prepare "Frequently Asked Questions and Answers" for customers, including developers, that may be planning new landscaping. This information should include time of day and seasonal considerations.
4. Post updated status reports on the District's website.
5. Post signs at entrances to areas served by the District. Signs would promote conservation and could include information supporting the use of the District's lawn watering calendar.

## ***STAGE TWO: Outdoor Restrictions***

### **Objectives:**

- To inform the District water customers of a water shortage, the need to reduce water use and eliminate water waste.
- To reduce water use to meet consumption goals through voluntary customer actions.
- To forestall or minimize the need for more stringent demand or supply management actions.
- To minimize the disruption to customers while meeting consumption goals.
- To maintain the highest water quality standards throughout the shortage.

### **Triggers:**

The Outdoor Restrictions Stage is implemented when one or more of the following factors apply:

- The limited water supply conditions identified in the Advisory Stage have developed.
- Operational situations exist that will limit the District's ability to provide water supply.
- Water use demand projections indicate a systematic response to reducing the demand is required.

### **Public Message:**

"Summer is here and it is time to be water conscious. Excessive use stresses the treatment system and affects the quality of the water delivered to your homes.

In order to preserve the integrity of your water system, please observe the following outdoor watering schedule:

Even-numbered address, water on even-numbered days  
Odd-numbered address, water on odd-numbered days

Watering should only be in the evening hours after 8 p.m. and before midnight. This should assure that the system has time to recover before normal morning use.

Excessive outdoor water use places great strain on water resources and the water system. Please exercise caution in using water outdoors. We have enclosed a helpful brochure on outdoor water use."

### **Internal Operating Actions:**

1. Continue actions listed in Advisory Stage.
2. Operations Team to prepare weekly reports for the Management Team on supply conditions and consumption levels.
3. Management Team will consider the current and projected supply conditions and the seasonal demand and set consumption goals, which may be revised as necessary.
4. Eliminate all operating system water uses, such as pipeline flushing, where determined to be non-essential to maintain water quality.

5. Restrict hydrant permits to essential purposes, including recall of hydrant permits previously issued. This should include contacting each registered hydrant user.
6. Activate any existing emergency interties with adjacent purveyors to increase emergency supply availability.
7. Increase water quality monitoring actions.
8. Initiate remaining planning and preparation for the Mandatory Stage.

**Communication Actions:**

1. Management Team will establish systematic communications with the Board of Commissioners, including the suggested nature and scope of the voluntary measures and strategies.
2. Coordinate with affected customers and groups regarding irrigation use.
3. Conservation and Public Information Specialist will initiate a public information, media and advertising campaign:
  - Publish a list of recommended actions for customers to take to reduce their water consumption in the District newsletter, and the District website.
  - Send out a direct mailing to all District customers with a list of the recommended actions.
  - Promote consumption goals for typical households, and a percentage reduction goal for commercial customers.
  - Develop a marketing plan that serves to keep customers informed about supply and demand conditions, recommends customer actions to reduce demand significantly, reinforces desired customer actions, and reminds customers that if goals are not achieved, mandatory restrictions may be necessary.
  - Identify what potential next steps will be necessary to reduce demand including timing, type of restrictions, and if surcharges should be imposed.
  - Provide water quality information to the public, so that if flushing is necessary, they understand that it is essential to ensure water quality.
4. Post updated status reports on the District website.
5. Post signs at entrances to areas served by the District. Signs would promote conservation and could include information supporting the use of a lawn-watering calendar.
6. Identify customers with large irrigation accounts and teach them how to use daily weather information, such as rainfall and evapotranspiration (ET) rates to minimize irrigation use.
7. Contact largest customers to request a percentage reduction.

***CUSTOMER WATER USE REDUCTION ACTIONS***

1. Limit all lawn/turf watering to match the Lawn Watering Calendar, or less frequently to one day per week.
2. Prohibit all daytime irrigation - lawn/turf **and** garden watering - between 1:00 AM and 8:00 PM.

**Examples of Residential Indoor Actions:**

- Put food coloring in your toilet tank. If it seeps into the bowl without flushing, you have a leak. Fixing it could save up to 1,000 gallons per month.
- Run your washing machine and dishwasher only when they are full. Doing so could save up to 1,000 gallons per month.
- Keep a pitcher of cold drinking water in the refrigerator, rather than running the faucet until the water gets cold.
- Shorten your showers by a minute or two and save 150 gallons per month. Try to limit showering time to five minutes.
- Avoid letting the faucet run while shaving, brushing teeth, or washing vegetables and save up to 25 gallons per month.
- While waiting for hot water, use a container to catch tap water that would normally be wasted and use it to water indoor or outdoor plants.

**Residential Outdoors:**

- Wash cars less often. Instead of using the hose, consider a commercial car wash that recycles water.
- Do not use water to clean sidewalks, driveways, and decks. Use a broom or a power blower instead.
- Always use a shut-off nozzle when using the hose. Be sure there are no leaks in any hose fittings.
- Eliminate outdoor water play, such as running through a sprinkler, plastic water slides, and wading/swimming pools that require frequent re-filling.
- Cover pools and hot tubs when not in use to minimize evaporative losses.

**Commercial and Residential Landscape:**

- Water lawns and gardens only early in the morning or late in the evening to reduce water loss from evaporation. 30 percent or more of the water used is lost to evaporation when watering in the heat of the day.
- Consider letting established lawns go dormant until the shortage is over. Homes that normally water lawns will save from 25 to 50 percent by not watering lawns. Water your lawn deeply at least once a month to help it survive the drought.
- Do not water lawns when it is raining! Learn how to change the program that controls your system in order to cut back on irrigation time. Turn off automated irrigation system clocks during rainy spells. Consider installing a rain sensor on automatic irrigation systems that will override the system during rainfall. Consider having an irrigation audit done to ensure that your system is using water efficiently.
- Water established plants only when necessary, testing the soil moisture levels in the root zone with your fingers. Two to four inches of mulch (such as compost or wood chips) in your planting beds will help retain moisture.
- Use a rain barrel to capture water from rooftops. Water from rain barrels can be used to water plants or for car washing.
- Create tree wells around trees to minimize runoff when watering.

### ***STAGE THREE: MANDATORY STAGE***

#### **Objectives:**

- To ensure that throughout the remaining duration of the water shortage, an adequate water supply exists to protect public health and safety.
- To restrict certain water uses in order to meet consumption goals that have not been met through voluntary customer actions.

#### **Triggers:**

This stage is implemented when the Management Team determines that:

- Measures to reduce water use implemented in the Voluntary Stage are not adequately reducing demand.
- The time available to implement measures to reduce water use is not sufficient to allow education of customers required for voluntary compliance.
- It is evident the level of water use reduction required would not be achieved through voluntary compliance.

#### **Public Message:**

"The District finds it necessary to impose mandatory restrictions to reduce demand because the voluntary approach is not resulting in the necessary water use reductions. The District is continuing to rely on the support and cooperation of the public but needs to restrict certain water uses in order to ensure that throughout the duration of this shortage, an adequate supply of water is available for public health and safety."

#### **Internal Operating Actions:**

1. Continue actions from Voluntary and Outdoor Restriction Stages, as appropriate.
2. Management Team to develop a list of recommended water use restrictions and exemptions from restrictions.
3. Management Team to set up a process for receiving, recording and responding to reported violations of restrictions.
4. Finalize and implement procedures to provide to the Board of Commissioners to adopt water use restrictions and assess fines where mandatory restrictions are not followed. See Mandatory Restrictions Enforcement Checklist.
5. Initiate planning and preparation for the Rationing Stage.

**Communication Actions:**

1. Management Team will provide periodic reports to the Board of Commissioners, including the suggested nature and scope of the mandatory restrictions, implementation strategies, and customer response data.
2. Through a Call-Em-All and direct mail, announce to District customers the:
  - Scope and nature of mandatory restrictions
  - Reasons for imposing the restrictions
  - Consumption goals
  - Additional restrictions that may be imposed if water use reduction goals are not achieved
  - Enforcement mechanisms and fines
  - Projections for how long restrictions will be in place
  - Rate surcharges
3. Clearly distinguish between lawn/turf watering and watering gardens and ornamentals.
4. Clearly identify any exemptions from water use restrictions.
5. Clearly state that no exemptions from lawn watering restrictions will be provided for new lawn installations.
6. If some irrigation is allowed under the water use restrictions, contact large irrigation customers, including North Thurston School District and inform them that the District may shut down their irrigation meters in the event of an immediate water shortage supply situation.
7. Provide area landscape firms with water use restriction information.
8. To promote understanding between neighbors, the District urges customers that irrigate with water from private wells or Lake Sammamish, with legal water rights, to inform the District and neighbors of the water source.
9. Post updated status reports on the District website.
10. Post signs at entrances to areas served by the District. Signs would note major water use restrictions and promote conservation.
11. Continue and enhance communication actions from the Voluntary and Outdoor Restrictions Stages.
12. Evaluate resources and plans for moving into the Rationing Stage. As appropriate, begin preparatory measures.

**MANDATORY CUSTOMER WATER USE RESTRICTIONS MENU**

1. Prohibit all lawn/turf watering, including new lawn/turf installations.
2. Prohibit use of any ornamental fountain using drinking water for operation or make-up water.
3. Prohibit car washing except at commercial car wash facilities that recycle water.
4. Rescind all hydrant permits.
5. Prohibit washing of sidewalks, streets, decks or driveways, except as necessary for public health and safety.
6. Limit pressure washing of buildings to situations that require it as part of a scheduled building rehabilitation project (e.g. painting.).
7. Prohibit water waste, including untended hoses without shut-off nozzles, obvious leaks, and allowing water running to waste (such as gutter flooding and irrigation systems with spray patterns that are directed at paved areas).

## ***MANDATORY RESTRICTIONS ENFORCEMENT CHECKLIST***

- \_\_\_\_\_ Determine fines and/or surcharges to be imposed for mandatory restriction infractions. Determine whether or not there will be "one fine for all infractions," or whether certain selected water use reduction actions would command a higher fine than others.
  
- \_\_\_\_\_ Determine the number of warnings before fines or surcharges applied.
  
- \_\_\_\_\_ Establish a database for tracking violations.
  
- \_\_\_\_\_ Print self-duplicating "Notice of Violation" forms, one copy for location where violation occurred, one to record violation with billing. Print violations and fines on the Notice of Violation.
  
- \_\_\_\_\_ Assign and train staff with customer service and communication experience to "Water Watch."
  
- \_\_\_\_\_ Establish procedure for "Water Watchers" to record warnings and penalties on customer accounts.
  
- \_\_\_\_\_ Establish a "hotline" for customers to report violations. To help avoid frivolous complaints, recorded message should note that only complaints with name and address of complainant will be pursued.
  
- \_\_\_\_\_ Provide all field and customer service staff members with fact sheets and question-and-answer sheets. Provide briefings on restrictions, enforcement procedures. Train field staff to tag obvious violations.

## ***STAGE FOUR: RATIONING STAGE***

### **Objectives:**

- To ensure that throughout the water shortage situation, an adequate water supply exists to protect public health and safety.
- To sharply reduce water demand.
- Restrict certain defined water uses in order to meet consumption goals.

### **Triggers:**

This Stage is implemented when the Management Team determines that:

- If it is necessary to sharply reduce demand, as a critical water supply situation exists.
- Significant water use reduction is required to maintain public health and safety.
- Measures to reduce water use implemented in the Voluntary and Mandatory Stages have not adequately reduced demand.
- The time available to implement measures to reduce water use is not sufficient to allow education of customers required for voluntary or mandatory compliance.
- It is evident the level of water use reduction required would not be achieved through voluntary or mandatory compliance.

### **Public Message:**

"The District finds it necessary to impose water rationing to reduce demand so the public health and safety of District customers can be maintained. The District needs to restrict certain water uses and is relying on the cooperation of the public. Failure to comply with the water use restrictions will result in fines."

### **Internal Operating Actions:**

1. Continue actions from Voluntary, Outdoor Restrictions and Mandatory Stages, as appropriate.
2. Define the problem as an emergency and follow procedures for the Board of Commissioners to formally declare an emergency.
3. Management Team to develop a list of recommended water use to be curtailed and exemptions from curtailment. (Curtailment is used here in place of "Restriction" from the Mandatory Stage, to differentiate between the actions taken during different stages.)
4. Management Team to establish water use reduction goals. Single family residential may be set as a standard per house allotment or as a percentage reduction from the previous year's consumption. Since the Rationing Stage is for critical situations the reductions may be requested below the customers normal winter month use. Commercial, multifamily and industrial users will be asked to reduce water use by a set percentage of their average consumption during the previous year.
5. Establish water rate surcharges based on consumption and provide to the Board of Commissioners for adoption.
6. Establish penalties or excess use charges for customers that exceed the water allotment and provide to the Board of Commissioners for adoption.
7. Utility billing system to be adjusted or modify billing system to implement any approved surcharges and penalties.
8. Increase enforcement actions, in accordance with the applicable resolution approved by the Board of Commissioners. (See Mandatory Stage.)
9. Provide training for personnel and deploy additional water curtailment enforcement patrols.
10. Inform local law enforcement of curtailment actions and the potential need for assistance.
11. Further enhance aquifer level and water quality monitoring actions.
12. Management Team to increase meeting frequency to daily status briefings, to review the current situation and determine which actions are working and those that need to be improved. Focus on

Water Shortage Response Plan

messages that are easy to communicate, implement and have the potential to sharply reduce demand.

**Communication Actions:**

1. Management Team will increase the frequency of reports to the Board of Commissioners. The initial report will include suggested nature and scope of proposed curtailments. Subsequent reports should provide detail on the implementation of the Rationing State and customer response data.
2. Through Call-Em-Alls and direct mail, communicate to District customers the:
  - Scope and nature of rationing and curtailments
  - Reasons for imposing the curtailments
  - Water use reduction goals
  - Enforcement mechanisms and fines
  - Projections for how long curtailments will be in place
  - Rate surcharges
3. Clearly identify any exemptions from the water use curtailment.
4. Inform customers about possible pressure reductions and problems this may cause.
5. Provide area landscape firms with water use curtailment information.
6. Post updated status reports on the District website.
7. Post signs at entrances to areas served by the District. Signs should note major water use curtailments and promote conservation.
8. Continue and enhance communication actions from the Voluntary, Outdoor Restrictions and Mandatory Stages.

**Enforcement:**

The District will install flow restrictors in services that violate the District's restrictions after written communications.

***RATIONING CUSTOMER WATER USE CURTAILMENT MENU***

1. Prohibit all lawn/turf irrigation.
2. Prohibit all lawn/turf watering, including new lawn/turf installations.
3. Prohibit all irrigation of gardens and ornamental landscapes.
4. Prohibit use of any ornamental fountain using drinking water for operation or make-up water.
5. Prohibit car washing except at commercial car wash facilities that recycle water.
6. Rescind all hydrant permits.
7. Prohibit washing of sidewalks, streets, decks or driveways, except as necessary for public health and safety.
8. Prohibit pressure washing of buildings unless water is obtained from sources other than the District.
9. Prohibit filling or addition of water to swimming pools at public and private club facilities.
10. Consider limitation of issuance of new meter installations for irrigation and/or domestic uses.

Appendix R  
Cross Connection Control Plan

Water System Plan – Part A

# **Cross-Connection Control Program -- Plan**

## **Public Utility District No. 1 of Thurston County**

### **A. Requirement for Program**

Public Utility District No. 1 of Thurston County (TPUD), which owns numerous public water systems throughout various counties, has the responsibility to protect their public water systems from contamination due to cross connections. A cross connection may be defined as “*any actual or potential physical connection between a potable water line and any pipe, vessel, or machine that contains or has a probability of containing a non-potable gas or liquid, such that it is possible for a non-potable gas or liquid to enter the potable water system by backflow.*”

All public water systems are required to develop and implement cross-connection control (CCC) programs. The CCC requirements are contained in Washington Administrative Code (WAC) 246-290-490 of the Group A Drinking Water Regulations. The minimum required elements of a CCC program are:

1. Establishment of legal authority and program policies;
2. Evaluation of premises for cross-connection hazards;
3. Elimination and/or control of cross connections;
4. Provision of qualified personnel;
5. Inspection and testing of backflow preventers;
6. Quality control of testing process;
7. Response to backflow incidents;
8. Public education for consumers;
9. Record keeping for CCC program; and
10. Special requirements for reclaimed water use.

Other CCC program requirements include:

1. Coordination with the Local Administrative Authority (LAA), i.e., the local building or plumbing official regarding CCC activities;
2. Prohibition of the return of used water into the public water system (PWS) distribution system; and
3. Inclusion of a written CCC program in a Water System Plan (WSP) or a Small Water System Management Program (SWSMP).

Note: Throughout this CCC program plan the term *customer* is used. *Customer* as used herein means the property owner and/or occupant of the premises served by the PWS (i.e., whoever interfaces with the PWS regarding water service). Also, unless otherwise defined, all CCC-related terms used in this program have the same definitions as those contained in WAC 246-290-010 of the Washington State Drinking Water Regulations.

## **B. Program Objectives**

The objectives of TPUD's CCC program are to:

1. Reasonably reduce the risk of contamination of the public water distribution system; and
2. Reasonably reduce TPUD's exposure to legal liability arising from the backflow of any contaminant originating from the customer's plumbing system and then supplied to other customers

## **C. Summary of Program Decisions**

The following table summarizes the major policy and program decisions adopted by TPUD. The items in the table represent CCC program areas that have more than one acceptable approach or option.

**CCC Program Decision Summary Table Public Utility District No. 1 of Thurston County**

<b>Decision Item</b>	<b>Decision</b>
<b>1. Type of Program [General, WAC 246-290-490(2)(e)]</b>	
a. Premises isolation only	X
b. Premises isolation and in-premises protection (combination program)	
<b>2. Extent of Coordination with LAA [WAC 246-290-490(2)(d)]</b>	
a. Information exchange	X
b. Interaction	
c. Joint program	
<b>3. Relationship with Customer [Element 1]</b>	
a. Signed service agreement or contract	
b. Ordinance/resolution; implied service agreement	X
<b>4. Enforcement of Corrective Action [Element 1]</b>	
a. Rely upon shut-off of water service	X
b. Rely upon TPUD-installed premises isolation	
<b>5. Assessment and Re-assessment of Hazard [Element 2]</b>	
a. By TPUD’s staff or equivalent	X
b. By cross-connection control specialist (CCS) employed by customer; report reviewed by TPUD’s CCS	
<b>6. Location and Ownership of Premises Isolation Assembly [Element 3]</b>	
a. On TPUD’s service line	
b. On customer’s service line	X
<b>7. CCS Option – TPUD’s Program Management [Element 4]</b>	
a. TPUD’s staff member certified	X
b. Inter-agency agreement or use other agency’s CCS	
c. Contract with consultant CCS	X
<b>8. Testing of Assemblies [Element 5]</b>	
a. By TPUD’s staff or TPUD-employed backflow assembly tester (BAT)	
b. By customer-employed (contractor) BAT	X
<b>9. Cost Recovery [WAC 246-290-100(4)(h) and –105(4)(p)]</b>	
a. Borne by all customers (general water rates)	
b. Assessed to specific class (commercial meters)	
c. Each customer directly bears cost	X

## D. Required Elements of Program

The drinking water regulations for Group A public water systems in Washington, WAC 246-290, require CCC programs to include certain minimum elements. The elements are listed in WAC 246-290-490(3). This section describes how TPUD intends to comply with each of the required program elements. Elements are numbered the same as they appear in the WAC.

**Element 1:** *Adoption of a written legal instrument authorizing the establishment and implementation of a CCC program.*

TPUD has adopted a resolution (Resolution No. 05-15), shown on Attachment 1, which authorizes TPUD to implement a CCC program. The resolution also authorizes the system to terminate water service to consumers who do not comply with the resolution. However, the primary method for protection of the distribution system will be the installation of a backflow preventer by the customer, at the customer's expense.

The service contract referred to in the resolution (included in Attachment 2) shall be the primary enforcement authority for all customers.

The written and implied contract terms are discussed further under Element 3.

<i>Legal Instrument Status</i>	<i>Schedule</i>
<i>Preparation of proposed legal instrument</i>	<i>October 2005</i>
<i>Introduction of the legal instrument to governing body</i>	<i>November 2005</i>
<i>Adoption of legal instrument</i>	<i>December 2005</i>
<i>Legal instrument becomes effective</i>	<i>February 2005</i>

**Element 2:** *Development and implementation of procedures and schedules for evaluating new and existing service connections to assess the degree of hazard.*

### Initial Cross-Connection Hazard Surveys

The procedures for evaluating the backflow prevention requirements for new and existing customers are as follows:

1. For all ***new non-residential services***, TPUD will require that the customer submit with the application for water service an evaluation (performed at customer's expense) by a DOH-certified cross-connection control specialist (CCS) of the hazard posed by the proposed plumbing system, with recommendations for the installation at the meter of either a double-check valve assembly (DCVA) or a reduced-pressure principle backflow assembly (RPBA). TPUD may accept the recommendations or submit the recommendations to a CCS for peer review and concurrence, before acceptance.

As an alternative to the above requirement for a survey by a CCS, the customer may agree to install an approved air gap (AG) or RPBA for premises isolation as a condition of service.

2. For all ***new residential services***, TPUD will require that the customer submit with the application for water service a completed "Water Use Questionnaire" (copy included in Attachment 2). If the customer's questionnaire indicates special plumbing, such as a lawn sprinkler system, or hazardous

water use on the premises, the customer shall submit to TPUD an evaluation by a DOH-certified CCS of the hazard posed by the proposed special plumbing system, with recommendations for the installation at the meter of either a DCVA or an RPBA.

As an alternative to the above requirement for a survey by a DOH-certified CCS, TPUD, at its discretion, may specify the backflow preventer required to be installed as a condition of service.

3. For all *existing non-residential services*, TPUD will require the customer to submit to TPUD, within thirty (30) days of notification, an evaluation by a DOH-certified CCS, of the hazard posed by the plumbing system, with recommendations for the installation at the meter of either a DCVA or an RPBA. TPUD may accept the recommendations or submit the recommendations to a CCS for peer review and concurrence, before acceptance.

As an alternative to the above requirement for a survey by a DOH-certified CCS, the customer may agree to install an AG or RPBA for premises isolation within 90 days of notification by TPUD or an alternate time period acceptable to TPUD.

4. For all *existing residential services*, TPUD will require the customer to submit to TPUD, within thirty (30) days of notification, a completed “Water Use Questionnaire.” If the customer’s reply indicates special plumbing or water use on the premises, the customer shall submit an evaluation by a TPUD DOH-certified CCS of the hazard posed to the water system by the customer’s plumbing system, with recommendations for the installation at the meter of either a DCVA or an RPBA.

As an alternative to the above requirement for a survey by a CCS, TPUD may specify the backflow preventer required to be installed as a condition of service. TPUD’s CCS will provide guidance on the type of backflow preventer to be installed.

5. For all existing services, should the customer fail to supply the required information for a hazard assessment or fail to submit a completed “Water Use Questionnaire,” TPUD may have the assessment made by a CCS employed by TPUD, require the installation of an RPBA for premises isolation, or take other such actions consistent with the previously stated policies and bill the customer for the associated costs.

**Cross-Connection Hazard Survey Schedule for Initial Hazard Assessments**

The schedule for initial hazard assessment is outlined in the following table. The schedule starts from the date the CCC program is established.

<b>Initial Assessment Task</b>	<b>Schedule</b>
Assessment of all new connections	At time of application for water service
Identification and assessment of high-hazard premises which are listed on Table 9 of Washington Administrative Code (WAC) 246-290-490	Within nine months
Identification and assessment of hazardous premises supplemental to Table 9 of WAC 246-290-490	Within 12 months
Identification of residential connections with special plumbing facilities and/or water use on the premises	Within 15 months

## Cross-Connection Hazard Survey Schedule for Subsequent Hazard Re-Assessments

For subsequent cross-connection hazard surveys, procedures for evaluating the backflow prevention requirements are:

1. For **residential services**, TPUD will require the customer to submit to TPUD, within two months of TPUD notification, a completed “Water Use Questionnaire.” The procedure used for evaluating the hazard re-assessment and the potential change in the required backflow prevention will be the same as used for the initial hazard assessment.
2. For all **non-residential services**, TPUD will require the customer to submit to TPUD, within two months of TPUD notification, a hazard re-assessment (at the customer’s expense) by a DOH-certified CCS.

The frequency of hazard re-assessments will be as shown in the table below:

Type of Service	Frequency of Re-Evaluation
Any services with reduced-pressure principle backflow assembly (RPBA) installed for premises isolation	None required as long as the RPBA passes annual tests and inspections
Commercial services with double-check valve assembly (DCVA) installed for premises isolation	Every two years and upon change in use or ownership
Residential services with special plumbing where TPUD relies upon compliance with Uniform Plumbing Code (UPC)	Every 2-3 years (questionnaire)
Residential services with DCVA installed for premises isolation	Every 4-5 years (questionnaire)
Residential services with no known special plumbing or water use on the premises	Every 4-5 years and upon change in use, ownership, or plumbing system (questionnaire)

TPUD will inform the customer that TPUD's survey of a customer's premises (whether by a representative of TPUD or through the evaluation of a questionnaire completed by the customer) is for the sole purpose of establishing TPUD's minimum requirements for the protection of the public water supply system, and that the required backflow protection will be commensurate with TPUD's assessment of the degree of hazard.

TPUD will also inform the customer or any regulatory agencies that TPUD's survey, requirements for the installation of backflow prevention assemblies, lack of requirements for the installation of backflow prevention assemblies, or other actions by TPUD’s personnel or agent do not constitute an approval of the customer's plumbing system or an assurance to the customer or any regulatory agency of the absence of cross connections.

**Element 3:** *Development and implementation of procedures and schedules for elimination and/or control of cross-connections.*

## Backflow Preventer Requirements

The following service policy shall apply to all new and existing customers:

1. TPUD will require that water service to all **non-residential customers** be isolated at the meter by a DOH-approved DCVA or RPBA acceptable to TPUD, unless otherwise specifically exempted by TPUD. All high-hazard connections of the type described in Table 9 of WAC 246-290-490 shall be isolated with an RPBA.
2. TPUD will require all **residential customers** with facilities of the type described in Table 9 of WAC 246-290-490 to be isolated with an RPBA. All other residential customers with special plumbing or water use on the premises will be isolated with a DCVA. "Special plumbing" includes, but is not limited to, the following:
  - a. A lawn irrigation system;
  - b. A solar heating system;
  - c. An auxiliary source of supply, e.g., a well or creek;
  - d. Piping for livestock watering, hobby farming, etc.;
  - e. Residential fire sprinkler system; and
  - f. Property containing a small boat moorage.
3. **Additional premises requiring premises isolation.** TPUD has chosen to supplement Table 9 of WAC 246-290-490(4) by identifying additional premises or premises types for which premises isolation is mandated. Such premises will include public swimming pools.
4. **For all customers that have a written service contract with TPUD,** the required premises isolation DCVA or RPBA shall be:
  - Purchased and installed by the customer (at the customer's expense) immediately downstream of the water meter in accordance with TPUD's standards described hereinafter; and
  - Maintained, tested, and inspected in accordance with TPUD's standards described hereinafter.

For new customers, TPUD will not turn on water (except for testing purposes) at the meter until the customer complies with the above requirements.

The failure of the customer to comply with TPUD's installation and maintenance requirements shall constitute a breach of contract by the customer. TPUD may then proceed with corrective action provisions stipulated in the contract.

5. **Customers without written contracts** are considered to have an implied contract that requires the customer to bear all reasonable costs of service. TPUD will install the required DCVA or RPBA on the service, upstream of the meter, and charge the customer for the cost of the initial installation, and all future maintenance, testing, and repair, as set forth in TPUD's schedule of rates and charges. The failure of the customer to pay these costs shall constitute a breach of contract by the customer, and TPUD will proceed with the established delinquency of payment procedures. As an alternative, the customer may sign a service contract and install the required backflow preventer downstream of the meter in accordance with TPUD's installation standards described hereinafter.

## 6. **Approved Backflow Preventers and Installation**

All backflow preventers relied upon by TPUD to protect the public water system shall meet the definition of “approved backflow preventer” as contained in WAC 246-290-010. TPUD will obtain and maintain a current list of assemblies approved for installation in Washington State from the DOH Office of Drinking Water.

All backflow preventers will be installed in:

- The orientation for which they are approved;
- A manner and location that facilitates their proper operation, maintenance, and testing or inspection;
- A manner that will protect them from weather-related conditions such as flooding and freezing; and
- Compliance with applicable safety regulations.

Installation standards contained in the most recently published edition of the Pacific Northwest Section, American Water Works Association (PNWS-AWWA) *CCC Manual* or the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research (USCFCCCHR) *CCC Manual* shall be followed unless the manufacturer’s requirements are more stringent.

TPUD has no regulatory responsibility or authority over the installation and operation of the customer's plumbing system. The customer is solely responsible for compliance with all applicable regulations and for prevention of contamination of his plumbing system from sources within his/her premises. Any action taken by TPUD to survey plumbing, inspect or test backflow prevention assemblies, or to require premises isolation (installation of DCVA or RPBA on service) is solely for the purposes of reducing the risk of contamination of TPUD's distribution system.

TPUD will inform the customer that any action taken by TPUD shall not be construed by the customer as guidance on the safety or reliability of the customer’s plumbing system. TPUD will not provide advice to the customer on the design and installation of plumbing other than through the general public education program discussed in Element 8.

Except for easements containing TPUD's distribution system, TPUD will not undertake work on the customer's premises, unless TPUD needs to install a backflow preventer for customers that do not comply. In such circumstances, the device will be installed, at the owner’s expense, on the customer’s side of the service meter.

## 7. **Schedule for Installation of Backflow Preventers**

The following table shows the schedule that TPUD will follow for installation of backflow preventers when they are required (based on the hazard evaluation).

<b>Type of Service</b>	<b>Schedule</b>
New connections with cross-connection hazards	Before service is initiated
Existing connections with Table 9-type hazards and other high cross-connection hazards	Within 90 days after notification
Existing connections with other than Table 9 of WAC 246-290-490 or high cross-connection hazards	Within 180 days after notification (suggested)
Existing fire protection systems using chemicals or supplied by unapproved auxiliary water source	Within 90 days after notification
Existing fire protection systems not using chemicals and supplied by TPUD's water	Within 1 year after notification (suggested)

TPUD may consider granting an extension of time for installation of backflow preventer for an existing connection if requested by the premise's owner.

**Element 4:** *Provision of qualified personnel, including at least one person certified as a CCS, to develop and implement the CCC program.*

1. **Program Administration:** The responsibility for administration of the CCC Program rests with the TPUD. General policy direction and risk management decisions are established by the Public Utility District No. 1 of Thurston County Commissioners.
2. TPUD will employ or have on staff at least one person certified by DOH as a CCS to develop and implement the CCC program. As an alternative, or when no staff or employees are properly qualified, TPUD may retain a DOH-certified CCS on contract to provide the necessary expertise and services.
3. The following cross-connection related tasks will be performed by or under the direction of TPUD's certified CCS (on staff or under contract):
  - Preparation of and recommendations regarding changes to the CCC program;
  - Performance of and/or reviews of CCC hazard evaluations;
  - Recommendations on the type of backflow preventer to be installed;
  - Recommendations on schedules for retrofitting of backflow preventers;
  - Inspections of backflow preventers for proper application and installation;
  - Reviews of backflow preventer inspection and test reports;
  - Reviews of backflow testing quality control information;
  - Recommendations and/or the granting of exceptions to mandatory premises isolation;
  - Participation in or cooperation with other water utility staff in the investigation of backflow incidents and other water quality problems;
  - Completion of Backflow Incident Reports; and
  - Completion of CCC Activity and Program Summary Reports.
4. TPUD may delegate other CCC program activities to other personnel who are not certified CCSs, including clerical support staff. These activities include:
  - Administration of paperwork associated with service agreements;
  - Mailing, collecting, and initial screening of hazard evaluation/water use questionnaires;
  - Mailing of assembly testing notices;
  - Receiving and screening of assembly testing reports;
  - CCC program database administration and record keeping;

- Dissemination of public education material; and
- Assisting tasks associated with coordination with the LAA.

5. The following table identifies the current CCS employed or retained on contract by TPUD to manage TPUD’s CCC program and/or act as the CCC technical resource for TPUD:

Name of CCS	James Campbell
Address	1230 Ruddell Road SE
City, State, Zip	Lacey, WA 98503
Telephone Number	360-790-2662
CCS Certification Number	10679

***Element 5:*** *Development and implementation of procedures to ensure that approved backflow preventers are inspected and/or tested (as applicable).*

**1. Inspection and Testing of Backflow Preventers**

All backflow preventers that TPUD relies upon for protection of their water systems will be subject to inspection and, if applicable, testing.

Inspection and testing of backflow preventers will be as follows:

- TPUD’s DOH-certified CCS will inspect backflow preventers for proper application (i.e., to ensure that the preventer installed is commensurate with the assessed degree of hazard).
- Either a DOH-certified CCS or backflow assembly tester (BAT) will perform inspections of backflow preventers for correct installation.
- A DOH-certified backflow assembly tester will test all assemblies relied upon by TPUD to protect the public water system.

**2. Frequency of Inspection and Testing**

Inspection and testing of backflow preventers will be conducted:

- At the time of installation;
- Annually after installation;
- After a backflow incident; and
- After repair, reinstallation, relocation, or re-plumbing.

TPUD may require a backflow preventer to be inspected and/or tested more frequently than once a year, when it protects against a high-health hazard or when it repeatedly fails tests or inspections.

**3. Responsibility for Inspection and Testing**

TPUD will be responsible for inspection and testing of all TPUD-owned backflow preventers.

TPUD will require the customer to be responsible for inspection and testing of backflow preventers

owned by the customer. The customer shall employ, at customer expense, a DOH-certified BAT pre-approved by TPUD to conduct the inspection and test within the time period specified in the testing notice sent by TPUD. The customer may request an extension of the due date for returning a test report by submitting a written request to TPUD. TPUD may grant one extension up to 90 days.

#### **4. Approved Test Procedures**

TPUD will require that all assemblies relied upon to protect the public water system be tested in accordance with DOH-approved test procedures as specified in WAC 246-290-490(7)(d). Any proposal to use alternate test procedures must be approved by TPUD's CCS.

TPUD will require all assembly tests to be reported on the form shown in Attachment 2 and returned as specified above.

#### **5. Notification of Inspection and/or Testing**

TPUD will notify in writing all customers who own backflow preventers that are relied upon to protect the public water system to have their backflow preventer(s) inspected and/or tested. Notices will be sent out not less than 30 days before the due date of the inspection and/or test. The notice will also specify the date (up to 30 days after the due date of the inspection and/or test date) by which the inspection/test report must be received by TPUD.

#### **6. Enforcement**

When a customer fails to send in the inspection/test report within 15 days after the due date specified, and TPUD has not approved an extension to the due date, TPUD will take the following enforcement action:

- TPUD will send a second notice giving the customer an additional 15 days to send in the inspection/test report.
- If the customer has not sent in the inspection/test report within 10 days of the due date given in the second notice, TPUD will send a third notice, by certified mail, or by hand delivery, giving the customer an additional 15 days to send in the report. The notice will also inform the customer that failure to satisfactorily respond to this notice will result in water service shut-off.
- TPUD will send copies of the third notice to the owner and occupants of the premises (if different from the customer) and to the LAA.
- If the owner and/or occupants have not responded satisfactorily to TPUD within 10 days of the due date specified in the third notice, TPUD will implement water service shut-off procedures.
- TPUD will offer to arrange for the inspection and/or testing of the customer-owned backflow preventers by a certified BAT and will bill the customer the actual or typical cost of inspection and/or testing in the service area plus reasonable administrative costs. Collection and enforcement procedures for such charges will be the same as for other water utility charges.

**Element 6:** *Development and implementation of a backflow prevention assembly testing quality assurance/quality control program.*

#### **1. List of Pre-Approved BATs**

TPUD will maintain a list of local, DOH-certified BATs that are pre-approved by TPUD to perform the following activities:

- Backflow preventer inspection for proper installation; and
- Backflow assembly testing.

TPUD will also maintain a list of local DOH-certified CCSs that are pre-approved by TPUD to perform the following activities:

- Cross-connection hazard evaluations;
- Backflow preventer inspection for proper application; and
- Backflow preventer inspection for proper installation.

The list(s) will be revised annually or more frequently if necessary, based on information provided by the Washington Environment Training Center (WETRC). Under contract to DOH, WETRC has developed and maintains an online public list of certified BATs. The resource is located at [www.wetric.org](http://www.wetric.org). Certified BAT information is accessed at the site by first selecting the “Backflow Assembly Tester” link on the website’s home page. Then, the “BAT Public Listing” link is selected. It is on this page that updated lists of currently certified BATs may be viewed by County or by individual BAT name. In addition, an entire list for the state can be viewed and printed.

## **2. Pre-Approval Qualifications**

BATs and CCSs who wish to be included on TPUD’s pre-approved list and/or provide testing in TPUD’s service area must apply to TPUD and furnish the following information:

- Evidence of current DOH certification in good standing;
- Make and model of testing equipment (BAT listing only);
- Evidence of test equipment verification of accuracy and/or calibration within the past 12 months (BAT listing only);
- Evidence showing possession of a license to operate a business in the jurisdiction where service will be performed.
- TPUD may consider the inclusion of the applicant on a current list of pre-approved CCSs or BATs issued by a City or County as sufficient evidence of qualification to be included on TPUD’s pre-approved list.

## **3. Quality Assurance**

TPUD’s CCS will review within 30 days of receipt the backflow preventer inspection/test report forms submitted by the customer. TPUD’s CCS may accept reports that are signed by a CCS or BAT not on the pre-approved CCS or BAT list provided that the same information as listed in “Pre-Approval Qualifications” is also submitted to TPUD.

TPUD’s CCS will provide follow up on test reports that are deficient in any way.

TPUD’s CCS will report incidences of fraud or gross incompetence on the part of any BAT or CCS to DOH Operator Certification program staff.

**Element 7:** *Development and implementation (when appropriate) of procedures for responding to backflow incidents.*

### **1. Backflow Incident Response Plan**

As required by WAC 246-290-415(2), TPUD has developed a backflow incident response plan as supplement to its emergency response plan. The TPUD incident response plan includes the following elements:

- Notification of affected population;
- Notification and coordination with other agencies, such as DOH, the LAA, and the local health jurisdiction;
- Identification of the source of contamination;
- Isolation of the source of contamination and the affected area(s);
- Cleaning, flushing, and other measures to mitigate and correct the problem; and
- Apply corrective action to prevent future backflow occurrences.

Please see Attachment 3 for the complete TPUD Backflow Incident Response Plan.

**Element 8:** *Development and implementation of a cross-connection control public education program.*

### **1. Customer Education**

TPUD distributes public education messages about cross-connection hazards, including ways to avoid such hazards, to system customers in its annual newsletter and biennially in consumer confidence reports (CCRs).

The information distributed by TPUD will include, but not be limited to, the following subjects:

- Cross-connection hazards in general;
- Irrigation system hazards and corrective actions;
- Fire sprinkler cross-connection hazards;
- Importance of annual inspection and/or testing of backflow preventers; and
- Thermal expansion in hot water systems when backflow preventers are installed for premises isolation.

**Element 9:** *Development and maintenance of cross-connection control records.*

### **1. Types of Records and Data to be Maintained**

TPUD will maintain records of the following types of information required by WAC 246-290-490:

- Service connections/customer premises information including:
  - Assessed degree of hazard; and
  - Required backflow preventer to protect the public water system.

- Backflow preventer inventory and information including:
  - Air gap (AG) location, installation and inspection dates, inspection results and person conducting inspection;
  - Backflow assembly location, assembly description (type, manufacturer, make, model, size, and serial number), installation, inspection and test dates, test results and data, and person performing test; and
  - Information on atmospheric vacuum breakers used for irrigation system applications, including manufacturer, make, model, size, dates of installation and inspections, and person performing inspections.

TPUD will maintain records on all assemblies that protect the public water system from contamination. At a minimum, TPUD will maintain records on all premises isolation assemblies required to protect the public water system.

## **2. Reports to be Prepared and Submitted to DOH**

TPUD will prepare the following reports required by WAC 246-290-490 including:

- Cross-connection control program activities report for the calendar year, to be sent to DOH when requested;
- Cross-connection control program summary information, when required, or when there are significant policy changes;
- Backflow incident reports to DOH (and voluntarily to the PNWS-AWWA CCC Committee); and
- Documentation when exceptions to mandatory premises isolation are granted.

At a minimum, TPUD's CCS will prepare and sign the exceptions reports.

TPUD's CCS will prepare and sign all CCC-related reports required by WAC 246-290-490.

TPUD's CCS will review all CCC-related reports for correctness.

### **Element 10:** *Additional cross-connection control requirements for reclaimed water.*

In the event that reclaimed water use is proposed within the PWS's service area, TPUD will make all cross-connection control requirements mandated by the Permitting Authority in accordance with Chapter 90.46 RCW part of the written CCC program plan and comply with such additional requirements.

## **E. Other Provisions**

### **1. Coordination with Local Administrative Authority**

Both WAC 246-290-490 and the Uniform Plumbing Code amended for Washington require coordination between the water purveyor and the Local Administrative Authority (LAA) in all matters pertaining to cross-connection control.

TPUD will provide a copy of this CCC program to all counties within which service is rendered, via a copy of TPUD's water system plan or in a separate document. TPUD will inform all applicable LAAs

of any changes in policy or procedure that may impact the LAAs.

TPUD will provide information to LAAs in a timely manner regarding any:

- Requirement imposed on a residential customer for the installation of a DCVA or an RPBA on the service, with a description of the cross-connection hazard identified;
- Upgrade of the premise's isolation backflow preventer, i.e., from a DCVA to an RPBA;
- Action taken to discontinue water service to a customer; and
- Backflow incident known by TPUD to have contaminated the public water system or a customer's plumbing system.

TPUD may pursue development of written agreements with LAAs, if warranted. Such agreements will be developed in coordination with LAAs, and will include items such as delineation of responsibilities, policies and procedures regarding evaluations of new and existing connections, and communication protocols between TPUD and LAAs.

- 2. Prohibition of Return of Used Water.** The PWS must prohibit the intentional return of used water to TPUD's distribution system per WAC 246-290-490 (2)(1).

Used water is defined as water that has left the control of TPUD. This includes water used for heating and cooling purposes and water that may flow back into the distribution system from customers with multiple connections.

It is the policy of TPUD to:

- Prohibit the intentional return of used water to the distribution system by any customer served by the public water system; and
  - Require that all customers with multiple connections, where the hydraulics permit the potential return of used water, to install a backflow preventer (DCVA or RPBA) commensurate with the degree of hazard at each point of connection.
- 3. Unapproved Auxiliary Supplies.** All water supplies other than those owned by TPUD are considered unapproved auxiliary supplies as defined in WAC 246-290-010. TPUD will require backflow protection for customers with auxiliary supplies on their premises as follows:
    - Per Table 9 of WAC 246-290-490, TPUD will require the installation of an RPBA for premises isolation at the service connection to any customer having an unapproved auxiliary supply on the premises that is interconnected with TPUD's water system whether or not there is a physical connection between the unapproved auxiliary supply and TPUD's water system.
    - TPUD will require the installation of a DCVA for premises isolation at the service connection to any customer with an unapproved auxiliary water supply not interconnected with TPUD's water system.
  - 4. Tanker Trucks.** TPUD may allow tanker trucks to obtain water from TPUD's water system under the following conditions:
    - The tanker truck is equipped with an approved AG or an approved RPBA with a current satisfactory inspection or test report.

- The tanker truck will obtain water from TPUD-designated watering points only. These watering points are equipped with TPUD-installed backflow preventers.
5. **Temporary Water Connections.** TPUD will not supply water through temporary connections, such as those used for construction projects or main disinfection, except through a backflow preventer arrangement approved by TPUD. The applicant for the temporary connection shall document that the backflow preventer is a DOH-approved model and has passed an inspection and/or test within the past 12 months and/or upon relocation, whichever is more recent.
  6. **Interties and Wholesale Water Customers.** TPUD will require that interties with other public water systems or wholesale customers (such as mobile home parks) be isolated at the point of delivery by:
    - A minimum of a DCVA; and
    - A minimum of an RPBA if TPUD considers the purchasing system or wholesale customer to pose a high-health hazard to TPUD's system.

TPUD may waive or reduce the level of protection at the intertie, if the purchasing public water system or wholesale customer:

- Is a Group A public water system **not** exempt from DOH regulation as per WAC 246-290-020(2);
- Has a CCC program that complies with WAC 246-290-490 and which has been approved by DOH; and
- Implements the CCC program at a level satisfactory to TPUD.

## **F. Relationship to Other Planning and Operations Program Requirements**

TPUD will consider the requirements and consequences of the CCC program on the utility's planning and operations requirements. Such considerations include, but are not limited to ensuring:

- And promoting adequate communication between CCC program personnel and other water utility staff;
- That adequate training is provided to all staff to recognize potential cross-connection control problems;
- That cross-connection issues be considered in water quality investigations;
- That the design of the water distribution system makes adequate provisions for expected head losses incurred through the installation of and experienced by backflow assemblies;
- That CCC program personnel be consulted in the design of water and wastewater treatment facilities and when proposals are made to receive or distribute reclaimed water;
- That operations under normal and abnormal conditions do not result in excessive pressure losses; and
- That adequate financial and administrative resources are available to carry out the CCC program.

## Attachment 1 – Resolution No. 05-15

### **CERTIFIED COPY OF CROSS-CONNECTION CONTROL POLICY RESOLUTION ADOPTED AT MEETING OF COMMISSIONERS OF PUBLIC UTILITY DISTRICT NO. 1 OF THURSTON COUNTY**

We, the undersigned, being the President and Secretary of Public Utility District No. 1 of Thurston County, do hereby certify that the following resolution was adopted unanimously by the Commissioners of Public Utility District No. 1 of Thurston County at the meeting of the Commissioners held at the offices of the Thurston County Public Utility District No. 1, Suite G, 210 Union Avenue, Olympia, Washington, 98501, which meeting was held on December 13, 2005, and that said Resolution has not been revoked.

#### **Resolution No. 05-15**

##### **Finding of Fact**

WHEREAS it is the responsibility of a Thurston Public Utility District (TPUD) to provide water that meets Washington State drinking water quality standards, to the customer at the meter, and

WHEREAS it is TPUD's responsibility to prevent the contamination of the public water system from the source of supply (i.e., to the customer's connection to the service pipe or meter), and

WHEREAS it is a requirement of the Washington State Department of Health (DOH) for TPUD to establish a cross connection-control program satisfactory to DOH, and

WHEREAS cross-connections within the customer's plumbing system pose a potential source for the contamination of the public water supply system;

NOW, THEREFORE, it is hereby

RESOLVED that Thurston Public Utility District, hereinafter referred to as TPUD, establishes the following service policy to protect the purveyor-owned water system from the risk of contamination. For public health and safety, this policy shall apply equally to all new and existing customers.

##### **Definitions**

Unless otherwise defined, all terms used in this resolution pertaining to cross-connection control have the same definitions as those contained in WAC 246-290-010 of the Washington State Drinking Water Regulations.

### **Prevention of Contamination**

TPUD shall consider the customer's plumbing system, starting from the termination of TPUD's water service pipe, to be a potential high-health hazard requiring the isolation of the customer's premises by a DOH-approved, customer-installed and maintained reduced-pressure principle backflow assembly (RPBA) or reduced-pressure detector assembly (RPDA). The RPBA or RPDA shall be located at the end of TPUD's water service pipe (i.e., immediately downstream of the meter). Water shall only be supplied to the customer through a DOH-approved, customer-installed and maintained RPBA or RPDA.

Notwithstanding the aforesaid, the TPUD, upon an assessment of the risk of contamination posed by the customer's plumbing system and use of water, may allow:

- A single-family or duplex residential customer to connect directly to the water service pipe, i.e., without a DOH-approved double-check valve assembly (DCVA) or RPBA
- Any customer other than a single-family or duplex residential customer, as a minimum, to be supplied through a DOH-approved, customer-installed and maintained DCVA or double-check detector assembly (DCDA).

### **Conditions for Providing Service**

TPUD shall only provide water service based on the following terms and limitations:

1. The customer agrees to take all measures necessary to prevent the contamination of the plumbing system within his/her premises and TPUD's distribution system that may occur from backflow through a cross connection. These measures shall include the prevention of backflow under any backpressure or backsiphonage condition, including the disruption of the water supply from the Purveyor's system that may occur during routine system maintenance or during emergency conditions, such as a water main break.
2. The customer agrees to install, operate, and maintain at all times his plumbing system in compliance with the current edition of the Uniform Plumbing Code having jurisdiction as it pertains to the prevention of contamination and protection from thermal expansion, due to a closed system that could occur with the present or future installation of backflow preventers on the customer's service and/or at plumbing fixtures.
3. For cross-connection control or other public health-related surveys, the customer agrees to provide for TPUD's employees or agents free access to all parts of the premises during reasonable working hours of the day for routine surveys and at all times during emergencies.

Where agreement for free access for TPUD's survey is denied, TPUD may supply water service provided that premises isolation is provided through a DOH- approved reduced-pressure principle backflow assembly (RPBA).

4. The customer agrees to install all backflow prevention assemblies requested by the TPUD and to maintain those assemblies in good working order. The assemblies shall be of a type, size, and make approved by DOH and acceptable to TPUD. The assemblies shall be installed in accordance with the recommendations given in the most recently published edition of the *Cross Connection Control Manual, Accepted Procedures and Practice*, published by the Pacific Northwest Section, American Water Works Association, or latest edition thereof. The assemblies shall be installed in accordance with TPUD's construction standards and specifications.
5. The customer agrees to:
  - (a) Have all assemblies (e.g., RPBA's and/or DCVAs) that TPUD relies upon to protect the public water distribution system tested upon installation, annually thereafter and/or more frequently if requested by TPUD, after repair, and after relocation;
  - (b) Have all testing done by a purveyor-approved and currently DOH-certified Backflow Assembly Tester (BAT);
  - (c) Have the RPBA or DCVA tested in accordance with DOH-approved test procedures; and
  - (d) Submit to the TPUD the results of the test(s) on TPUD-supplied test report forms within the time period specified by TPUD.
6. The customer agrees to bear all costs for the aforementioned installation, testing, repair, maintenance and replacement of the RPBA, RPDA, DCVA or DCDA installed to protect TPUD's distribution system.
7. At the time of application for service, if required by TPUD, the customer agrees to submit to TPUD plumbing plans and/or a cross-connection control survey of the premises conducted by a purveyor-approved and DOH-certified Cross-Connection Control Specialist (CCS).

The cross-connection control survey shall assess the cross-connection hazards and list the backflow preventers provided within the premises. The results of the survey shall be submitted prior to TPUD turning on water service to a new customer. The cost of the survey shall be borne by the customer.

8. For classes of customers other than single-family residential, when required by TPUD, the customer agrees to periodically submit a cross-connection control re-survey of the premises by a DOH-certified CCS acceptable to TPUD. TPUD may require the re-survey to be performed in response to changes in the customer's plumbing or water use, or performed periodically (annually or less frequently) where TPUD considers the customer's plumbing system to be complex or subject to frequent changes in water use. The cost of the re-survey shall be borne by the customer.
9. Within 30 days of a request by TPUD, a residential customer shall agree to complete and submit to TPUD a "Water Use Questionnaire" for the purpose of surveying the

health hazard posed by the customer's plumbing system on TPUD's distribution system. Further, the residential customer agrees to provide within 30 days of a request by TPUD a cross-connection control survey of the premises by a DOH-certified CCS acceptable to TPUD.

10. The customer agrees to obtain the prior approval from TPUD for all changes in water use, and alterations and additions to the plumbing system, and shall comply with any additional requirements imposed by TPUD for cross-connection control.
11. The customer agrees to immediately notify TPUD and the local health jurisdiction of any backflow incident occurring within the customer's premises (i.e., entry of any contaminant/pollutant into the drinking water) and shall cooperate fully with TPUD to determine the reason for the backflow incident.
12. The customer acknowledges the right of TPUD to discontinue the water supply within 72 hours of giving notice to the customer, or a lesser period of time if required to protect public health, if the customer fails to cooperate with TPUD in the survey of premises, in the installation, maintenance, repair, inspection, or testing of backflow prevention assemblies or air gaps required by TPUD, or in TPUD's effort to contain a contaminant or pollutant that is detected in the customer's system.

Without limiting the generality of the foregoing, in lieu of discontinuing water service, TPUD may install an RPBA on the service pipe to provide premises isolation, and recover all costs for the installation and subsequent maintenance and repair of the assembly, appurtenances, and enclosure from the customer as fees and charges for water. The failure of the customer to pay these fees and charges may result in termination of water service in accordance with TPUD's water billing policies.

13. Where TPUD imposes mandatory premises isolation in compliance with DOH regulations, or agrees to the customer's voluntary premises isolation through the installation of a RPBA immediately downstream of TPUD's water meter, the customer acknowledges his obligation to comply with the other cross-connection control regulations having jurisdiction (i.e., Uniform Plumbing Code). Although TPUD's requirements for installation, testing, and repair of backflow assemblies may be limited to the RPBAs used for premises isolation, the customer agrees to the other terms herein as a condition of allowing a direct connection to TPUD's service pipe.
14. The customer agrees to indemnify and hold harmless TPUD for all contamination of the customer's plumbing system or TPUD's distribution system that results from an unprotected or inadequately protected cross connection within the customer's premises. This indemnification shall pertain to all backflow conditions that may arise from TPUD's suspension of water supply or reduction of water pressure, recognizing that the air gap separation otherwise required would require the customer to provide adequate facilities to collect, store, and pump water for his/her premises.
15. The customer agrees that, in the event legal action is required and commenced

between TPUD and the customer to enforce the terms and conditions herein, the substantially prevailing party shall be entitled to reimbursement of all incurred costs and expenses including, but not limited to, reasonable attorney's fees as determined by the Court.

16. The customer acknowledges that TPUD's survey of a customer's premises is for the sole purpose of establishing TPUD's minimum requirements for the protection of the public water supply system, commensurate with TPUD's assessment of the degree of hazard.

It shall not be assumed by the customer or any regulatory agency that TPUD's survey, requirements for the installation of backflow prevention assemblies, lack of requirements for the installation of backflow prevention assemblies, or other actions by TPUD's personnel constitute an approval of the customer's plumbing system or an assurance to the customer of the absence of cross connections therein.

17. The customer acknowledges the right of TPUD, in keeping with changes to Washington State regulations, industry standards, or TPUD's risk management policies, to impose retroactive requirements for additional cross-connection control measures.

TPUD will record the customer's agreement to the above terms for service on an "Application for Water Service," "Application for Change of Water Service," "Water Use Questionnaire," or other such form prepared by the Purveyor and signed by the customer.

#### **Implementation of the Cross-Connection Control Policy**

TPUD will engage the services of a DOH-certified CCS to develop, implement and be in responsible charge of the TPUD cross-connection control program.

TPUD, under the direction of the aforementioned CCS, will prepare a written cross-connection control program plan to implement the requirements of this resolution. The written program shall be consistent with this resolution and shall comply with the requirements of Chapter 246-290 WAC (Group A Drinking Water Regulations).

TPUD will use the most recently published editions of the following publications as references and technical aids:

1. *Cross-Connection Control Manual, Accepted Procedures and Practice*, published by the Pacific Northwest Section, American Water Works Association, or latest edition thereof.
2. *Manual of Cross-Connection Control*, published by the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California, or latest edition thereof.

3. *Cross-Connection Control Guidance Manual for Small Water Systems*, published by the DOH Office of Drinking Water.

TPUD will incorporate the written program plan into all Water System Plans and will submit the plan to DOH for approval when requested.

TPUD, in consultation with the aforementioned CCS, shall have the authority to make reasonable decisions related to cross connections in cases and situations not provided for in the resolution or written program.

If any provision in this resolution, or in the written cross-connection control program is found to be less stringent than or inconsistent with the Drinking Water Regulations (Chapter 246-290 WAC), or other Washington state statutes or rules, the more stringent state statute, rule, or regulation shall apply.

Said Resolution passed by the unanimous vote of the Commissioners.

We do further certify that said meeting was attended by all of the Commissioners of Public Utility District No. 1 of Thurston County and that the Resolution was adopted by the unanimous vote of the Commissioners of Public Utility District No. 1 of Thurston County.



Paul Pickett  
Commissioner and President of PUD

Attest:



Alan M. Corywin  
Commissioner and Secretary of PUD

## **Attachment 2**

# **Cross Connection Control Program -- Sample Forms and Letters** **Public Utility District No. 1 of Thurston County**

### **Sample Forms**

- Backflow Prevention Assembly Test/Air Gap Inspection Report;
- Backflow Prevention Assembly Test/Air Gap Inspection Report - File Record;
- Backflow Assembly Testers - Pre-Approved for Submitting Test Reports;
- Preliminary Cross Connection Control Hazard Assessment Form – Non-Residential Customers;
- Cross-Connection Control Hazard Survey Report – Non-Residential Customers;
- Water Use Questionnaire - Residential Customers;
- Backflow Incident Report Form.

### **Sample Letters**

- Request to Complete Water Use Questionnaire;
- Notice of Survey of Premises (Non-Residential/Multi-Family Residential) Customer Employed Cross Connection Control Specialist;
- Request to Install Backflow Prevention Assembly;
- Request to Submit Test of Backflow Prevention Assembly;
- Second Notice to Test Backflow Prevention Assembly.

## Backflow Prevention Assembly Test/Air Gap Inspection Report

PWS ID \_\_\_\_\_ WATER SYSTEM NAME \_\_\_\_\_ COUNTY \_\_\_\_\_  
 ACCOUNT # \_\_\_\_\_ BACKFLOW PREVENTER ID \_\_\_\_\_ TEST REPORT ID \_\_\_\_\_  
 NAME OF PREMISES \_\_\_\_\_ Commercial  Residential   
 SERVICE ADDRESS \_\_\_\_\_ CITY \_\_\_\_\_ ZIP \_\_\_\_\_  
 CONTACT PERSON \_\_\_\_\_ PHONE ( ) \_\_\_\_\_ FAX ( ) \_\_\_\_\_  
 LOCATION OF ASSEMBLY \_\_\_\_\_  
 DOWNSTREAM PROCESS \_\_\_\_\_ DCVA  RPBA  PVBA  OTHER \_\_\_\_\_  
 NEW INSTALL  EXISTING  REPLACEMENT  OLD SER. # \_\_\_\_\_ PROPER INSTALLATION? YES  NO   
 MAKE OF ASSEMBLY \_\_\_\_\_ MODEL \_\_\_\_\_ SERIAL NO. \_\_\_\_\_ SIZE \_\_\_\_\_

INITIAL TEST	DCVA / RPBA CHECK VALVE NO.1	DCVA / RPBA CHECK VALVE NO.2	RPBA	PVBA/SVBA AIR INLET
PASSED <input type="checkbox"/> FAILED <input type="checkbox"/>	LEAKED <input type="checkbox"/> _____ PSID	LEAKED <input type="checkbox"/> _____ PSID	OPENED AT _____ PSID #1 CHECK _____ PSID AIR GAP OK? _____	OPENED AT _____ PSID DID NOT OPEN <input type="checkbox"/>
NEW PARTS AND REPAIRS	CLEAN REPLACE PART <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____	CLEAN REPLACE PART <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____	CLEAN REPLACE PART <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____	CHECK VALVE HELD AT _____ PSID LEAKED <input type="checkbox"/> CLEANED <input type="checkbox"/> REPAIRED <input type="checkbox"/>
TEST AFTER REPAIRS  PASSED <input type="checkbox"/> FAILED <input type="checkbox"/>	LEAKED <input type="checkbox"/> _____ PSID	LEAKED <input type="checkbox"/> <input type="checkbox"/> _____ PSID	OPENED AT _____ PSID #1 CHECK _____ PSID	AIR INLET _____ PSID CHK VALVE _____ PSID

AIR GAP INSPECTION: Required minimum air gap separation provided? Yes  No  Detector Meter Reading \_\_\_\_\_

REMARKS: \_\_\_\_\_ LINE PRESSURE \_\_\_\_\_ PSI  
 \_\_\_\_\_ CONFINED SPACE? \_\_\_\_\_

*I certify that this report is accurate, and I have used WAC 246-290-490 approved test methods and test equipment.*

TESTERS SIGNATURE: \_\_\_\_\_ CERT. NO. \_\_\_\_\_ DATE \_\_\_\_/\_\_\_\_/\_\_\_\_

TESTERS NAME PRINTED: \_\_\_\_\_ TESTERS PHONE # ( ) \_\_\_\_\_

REPAIRED BY: \_\_\_\_\_ DATE \_\_\_\_/\_\_\_\_/\_\_\_\_

FINAL TEST BY: \_\_\_\_\_ CERT. NO. \_\_\_\_\_ DATE \_\_\_\_/\_\_\_\_/\_\_\_\_

CALIB/VERIF DATE \_\_\_\_/\_\_\_\_/\_\_\_\_ GAUGE # \_\_\_\_\_ MODEL \_\_\_\_\_ SERVICE RESTORED? YES  NO

(SPECIALTY) PLUMBER CERT. NO. \_\_\_\_\_ CONTRACTOR LICENSE NO. \_\_\_\_\_



## Backflow Assembly Testers Pre-Approved for Submitting Test Reports to Public Utility District No. 1 of Thurston County {Insert date here}

The following table lists Backflow Assembly Testers (BATs) that are pre-approved to test backflow assemblies in our water system’s service area. We compiled the list by identifying individual testers who requested to work in this area or who previously submitted properly completed test reports to our system. An asterisk (\*) denotes BATs that are also DOH-certified Cross-Connection Control Specialists (CCSs). *Note: listing does not constitute an endorsement of these BATs by our system or a certification of the quality of services they provide.*

To appear on our pre-approved BAT list, the tester must:

- Show proof of current BAT certification from DOH;
- Submit documentation that his/her assembly test equipment has been verified for accuracy within the last 12 months and calibrated if needed; and

As an alternative to the above, pre-approved testers must document that they appear on the approved BAT list of another nearby water system that has a testing QA/QC program acceptable to our system.

WAC 246-290-490 requires a DOH-certified BAT to test all assemblies (RPBA, RPDA, DCVA, etc.) that protect the distribution system. Assemblies that protect the public water system must be tested in accordance with DOH-approved field test procedures:

- Upon installation, and annually thereafter;
- After repair, reinstallation, or relocation; and
- After a backflow incident.

Note: the DOH BAT certification is a special certification separate from other waterworks operator certification categories, plumbing licenses, contractor registration, etc. Other licenses, certifications and/or registrations may be required to install backflow prevention assemblies and/or perform maintenance work on assemblies within buildings. **However, only a currently DOH-certified BAT may test the assemblies that protect the public water system from contamination.**

Name of Tester Company Name and Address	Phone Number	BAT Certificate Number

## Preliminary Cross-Connection Control Hazard Assessment Form *Non-Residential Customers*

**Name of Customer or Business:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Phone Number:** \_\_\_\_\_

**Description of Business:** \_\_\_\_\_

Is your business or premises of a type included in the table below (check all that apply)?

Agricultural (farm or dairy)		Metal plating industry	
Beverage bottling plant		Mortuary	
Car wash		Petroleum processing or storage plant	
Chemical plant		Pier or dock	
Commercial laundry or dry-cleaners		Radioactive material processing plant or nuclear reactor	
Having both reclaimed water and potable water provided		Survey access denied or restricted	
Film processing facility		Wastewater lift station or pumping station	
Food processing plant		Wastewater treatment plant	
Hospital, medical center, nursing home, veterinary, medical, or dental clinic, or blood plasma center		Having an unapproved auxiliary water supply interconnected with the potable water supply	
Having separate irrigation system using TPUD's water and adding chemicals*		Other (describe) [TPUD to add other types of premises considered to be high-hazard]	
Laboratory		Other (describe) [See above]	

\*e.g., parks, playgrounds, golf courses, cemeteries, estates, etc.

Other potential cross-connection concerns:

Irrigation system

Fire sprinkler system, using  not using  chemicals or anti-freeze

Swimming pool

Other (describe): \_\_\_\_\_

**Note to Customer:** This form is used for preliminary assessment only. TPUD may require a more thorough assessment at a later date.

**This form was completed by (print name):** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Please return completed form by {insert date} and send to: Thurston Public Utility District, 1230 Ruddell Road SE, Lacey WA 98503.**

# **Cross-Connection Control Hazard Survey Report**

## *Non-Residential Customers*

## Cross-Connection & Backflow Prevention Hazard Analysis Survey

Site Address \_\_\_\_\_ System \_\_\_\_\_

Meter No. \_\_\_\_\_

Date Hazard Analysis Performed \_\_\_\_\_

Personnel Performing Hazard Analysis \_\_\_\_\_

Property Type

Residential \_\_\_\_\_ Commercial \_\_\_\_\_ Industrial \_\_\_\_\_ Other \_\_\_\_\_

Type of Commercial / Industrial \_\_\_\_\_

Is there an irrigation system present?	Yes _____	No _____
Is there an Auxiliary Water System present including wells, private storage tanks, reservoirs or systems capable of pumping water from lakes, streams, ponds, etc.?	Yes _____	No _____
Is there a dedicated Fire Line or Fire Sprinkler System Present?	Yes _____	No _____
Is the building taller than three stories?	Yes _____	No _____
Is there a Pool, Jacuzzi, Hot Tub, Ornamental Pond, Fountain or Solar Energy System Present?	Yes _____	No _____
Is the property being served by a reclaimed water system?	Yes _____	No _____
Any observed existing cross connection?	Yes _____	No _____

**Current Backflow Preventer Information**

Size: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Model: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Type: \_\_\_\_\_

**If Backflow Prevention is Required but not Currently Installed Check Here.**

Comments:

# Cross-Connection Control Reporting Form

## Residential Customers

### CROSS-CONNECTION CONTROL REPORTING FORM

State law requires consumers of public water supplies to inspect their facilities no less than once every five years. Completing and returning this form fulfills that requirement!

**COMPLETION OF THIS FORM IS A REQUIREMENT OF SERVICE.**

Customer Name: \_\_\_\_\_

Service Address: \_\_\_\_\_

Primary Phone: \_\_\_\_\_ Alternate Phone: \_\_\_\_\_

	Yes	No
1. Underground lawn irrigation system?.....	<input type="radio"/>	<input type="radio"/>
If yes, is it protected by a testable backflow preventer?.....	<input type="radio"/>	<input type="radio"/>
2. Swimming pool or hot tub?.....	<input type="radio"/>	<input type="radio"/>
If yes, is it protected by a testable backflow preventer?.....	<input type="radio"/>	<input type="radio"/>
3. Photo, chemical, medical, or other lab facilities?.....	<input type="radio"/>	<input type="radio"/>
If yes, is it protected by a testable backflow preventer?.....	<input type="radio"/>	<input type="radio"/>
4. Private well or other source of water?.....	<input type="radio"/>	<input type="radio"/>
If yes, is it protected by a testable backflow preventer?.....	<input type="radio"/>	<input type="radio"/>
5. Boiler heat or water to air heat pump?.....	<input type="radio"/>	<input type="radio"/>
If yes, is it protected by a testable backflow preventer?.....	<input type="radio"/>	<input type="radio"/>
6. Garden hoses connected to possible contaminants?.....	<input type="radio"/>	<input type="radio"/>
If yes, is it protected by a hose bib vacuum breaker?.....	<input type="radio"/>	<input type="radio"/>
7. Water softener?.....	<input type="radio"/>	<input type="radio"/>
If yes, is it protected by an air gap?.....	<input type="radio"/>	<input type="radio"/>
8. Residential fire sprinkler system?.....	<input type="radio"/>	<input type="radio"/>
9. Animal watering troughs?.....	<input type="radio"/>	<input type="radio"/>
10. Home-based business?.....	<input type="radio"/>	<input type="radio"/>

**If yes to number 10, please list type (e.g. beauty salon, machine shop, etc.) and describe below.**

\_\_\_\_\_  
\_\_\_\_\_

**Failure to complete and return this form puts your water system in violation of State Health Department Regulation Title 179. If a completed form is not returned to our office, your water service may be subject to disconnection.** Cross-connection is operated by TPUD Resolution 05-15. This resolution is available online at [www.thurstonpud.org](http://www.thurstonpud.org). If you have any questions, please contact our office at (866) 357-8783.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

*Thank you. This form will help prevent the accidental contamination of our drinking water.*

OFFICE USE ONLY		
Account Number:	Water System:	Initials:

<http://thurstonpud.org/docs/New%20Forms%20'18/CrossConnectionControlReportingForm01042018.pdf>

## Backflow Incident Report Form

Reporting Agency: \_\_\_\_\_ Report Date: \_\_\_\_\_

Reported By: \_\_\_\_\_ Title: \_\_\_\_\_

Mail Address: \_\_\_\_\_ City: \_\_\_\_\_

State: \_\_\_\_\_ Zip Code: \_\_\_\_\_ Telephone: \_\_\_\_\_

Date of Incident: \_\_\_\_\_ Time of Occurrence: \_\_\_\_\_

General Location (Street, etc.): \_\_\_\_\_

### Backflow Originated From:

Name of Premises: \_\_\_\_\_

Street Address: \_\_\_\_\_ City: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Telephone: \_\_\_\_\_

Type of Business: \_\_\_\_\_

### Description of Contaminants:

(Attach Chemical Analysis or MSDS if available)

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### Distribution of Contaminants:

Contained within customer's premises: Yes : \_\_\_\_\_ No: \_\_\_\_\_

Number of persons affected: \_\_\_\_\_

### Effect of Contamination:

Illness Reported: \_\_\_\_\_

Physical irritation reported: \_\_\_\_\_

Backflow Incident Report Form

Page 2 of 3

Cross-Connection Source of Contaminant (boiler, chemical pump, irrigation system, etc.):

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Cause of Backflow (main break, fire flow, etc.):

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Corrective Action Taken to Restore Water Quality (main flushing, disinfection, etc.):

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Corrective Action Ordered to Eliminate or Protect from Cross Connection (type of backflow preventer, location, etc.)

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Previous Cross-Connection Survey of Premises:

Date: \_\_\_\_\_ By: \_\_\_\_\_

Types of Backflow Preventer Isolating Premises:

RPBA: \_\_\_\_\_ RPDA: \_\_\_\_\_ DCVA: \_\_\_\_\_ DCDA: \_\_\_\_\_ PVBA: \_\_\_\_\_ SVBA: \_\_\_\_\_

AVB: \_\_\_\_\_ Air Gap: \_\_\_\_\_ None: \_\_\_\_\_ Other Type: \_\_\_\_\_

Date of Latest Test of Assembly: \_\_\_\_\_

Backflow Incident Report Form  
Page 3 of 3

Notification of Washington State Health Department:

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Person Notified: \_\_\_\_\_

Many backflow incidents occur that are not reported. This is usually because:

- The incidents are of short duration;
- The incidents are not detected;
- Neither the customer nor TPUD realizes that a contamination was caused by a backflow incident;
- The customer is not aware the incident should be reported;
- Customers do not know who to report the incidents to; and/or
- Liability concerns on the part of either the customer or TPUD or both.

DOH and the PNWS-AWWA Cross-Connection Control Committee are making an effort to bring backflow incidents to the attention of water purveyors, Local Administrative Authorities, legislators, and the general public. If you have any knowledge of a backflow incident, please fill out a copy of the Backflow Incident Report Form and return it to DOH and the PNWS-AWWA CCC committee.

Attach sheets with additional information, sketches, and/or media information, and mail to:

*PNWS-AWWA CCC Committee  
c/o George Bratton  
1252 S. Farragut Drive  
Coupeville, WA 98239*

# Letter Requesting Customer to Complete Water Use Questionnaire

Providing safe, reliable, affordable, and sustainable service.

June 24, 2020

«CustomerName»  
 «MAddress1»  
 «MAddress2»  
 «MCity», «MState» «MZip»

«AttnLine»

**SUBJECT: Cross Connection Questionnaire Request**

The «ServiceDistrict» takes pride in providing safe drinking water to our customers. Although the water that reaches your home or business meets all State and Federal drinking water standards and is safe to drink, contamination can still occur within your own plumbing system. This potential for contamination can be caused by an *unprotected cross connection* which is a connection between your drinking water and any substance other than drinking water. Examples of such a connection are: lawn sprinkler systems, livestock water troughs, swimming pools, decorative ponds, or even a garden hose submerged in a hot tub. Cross connections can pose a health risk if *backflow* occurs. Backflow is a reversal of the normal flow direction. (See the enclosed brochure for a better understanding of cross connections and backflow as well as the means of protection available)

The «Regulation» has established rules and requirements to enable the «ServiceDistrict» to protect our water system from contamination. One of these requirements is to implement a *Cross Connection Control Program*. The goal of this program is to identify potential cross connection hazards and take appropriate actions to protect against the possibility of backflow. This is accomplished by the installation of a backflow preventer, which is a mechanical unit designed to stop a flow reversal. Your help is needed to identify and control these hazards, because you are most familiar with how water is being used within your premises.

Please complete the enclosed Cross Connection Questionnaire so that we may better understand how your water is being used. Return it to us within 30 days of the date of this letter. Your participation is essential to the success of our Cross-Connection Control Program.

Thank you for your cooperation in protecting our community's drinking water. Your prompt response is appreciated. Please contact us with any questions or updates to your account.

Sincerely,

«DistrictContact»  
 «ContactTitle»  
 «ContactPhone»

## Notice of Survey of Premises (Non-Residential/Multi-Family Residential)

Providing safe, reliable, affordable, and sustainable service.

June 24, 2020

«CustomerName»  
«MAddress1»  
«MAddress2»  
«MCity», «MState» «MZip»

«AttnLine»

RE: «SAddress1» «SAddress2» «SCity» «SState»  
**SUBJECT: Notice of Initial Cross Connection Survey**

The protection of the drinking water supply in «ServiceDistrict» is a matter of mutual concern and benefit. Pursuant to «Regulation» regulating our Cross-Connection Control Program, we will soon be conducting surveys throughout our water system. We would appreciate your cooperation during this process.

Literature is enclosed which explains water quality issues and the need for cross connection control and backflow prevention. Please read and become familiar with the information as it answers the most frequently asked questions. We will be in touch to schedule an appointment for your survey.

If you would like to learn more about our Cross-Connection Control Program, feel free to contact us at the number below.

Sincerely,

«DistrictContact»  
«ContactTitle»  
«ContactPhone»

## Request to Install Backflow Prevention Assembly

Date

Customer Account Number (optional)

Customer Name

Customer Address Line 1

Customer Address Line 2

Dear \_\_\_\_\_ Water System Customer:

Washington State drinking water regulations, WAC 246-290-490, require public water systems to develop and implement cross-connection control programs. Cross-connection control programs protect public health by preventing contamination of the drinking water as it is delivered to people served by the water system. **The purpose of this letter is to inform you of a requirement to install a backflow assembly.**

Our water system's policy considers each of our customer's plumbing systems, starting from the termination of the service pipe downstream of the water meter, to pose a potential cross-connection hazard to the public water system. Our policy requires a backflow prevention assembly commensurate with the degree of hazard to be installed on the service line. The purpose of this backflow prevention assembly is to isolate your plumbing system from the water distribution system. We've attached a copy of Resolution **{insert number}** describing our cross-connection control policy.

We have received the cross-connection control survey report submitted by your Cross-Connection Control Specialist (CCS). The survey assessed the overall public health hazard posed by your plumbing system (and water use) to the public water system. We agree with the assessment made by the CCS. **Based on the assessment, a Department of Health-approved {insert type of assembly} is required to be installed on your service line (at a location downstream of the water meter).**

Please make arrangements for the assembly to be installed by **{insert date}** or when your plumbing system is modified, whichever comes sooner. We realize that this expense was not anticipated, so if you are unable to comply with this deadline, please contact us to discuss an alternative date. We've enclosed a copy of our standard installation drawings for this type of assembly. Your CCS should oversee the installation of the assembly to ensure compliance with these standards.

We appreciate your cooperation in this matter. If you have any questions, please contact me at (360) 357-8783.

Sincerely,

Name

CCC Program Manager

cc: {City/County Plumbing Inspector}

Enclosures: Standard Installation Drawings

# Request to Submit Test of Backflow Prevention Assembly

Providing safe, reliable, affordable, and sustainable service.

June 24, 2020

**Test to be completed by  
the end of  
«TestDue»**

«CustomerName»  
«MAddress1»  
«MAddress2»  
«MCity», «MState» «MZip»

«AttnLine»

RE: Backflow Prevention Assembly(s) at «SAddress1» «SCity», «SState» «SZip»

**SUBJECT: Annual Test Notice**

Our records indicate the backflow prevention assembly(s) listed below are due for annual testing. The test(s) must be completed by the due date specified in the box above. A list of certified Backflow Assembly Testers who are qualified to test assemblies in the area is enclosed.

<u>Serial Number</u>	<u>Last Test</u>	<u>Location</u>
«Serial»	«Status1»	«Location»
«Serial2»	«Status2»	«Location2»
«Serial3»	«Status3»	«Location3»
«Serial4»	«Status4»	«Location4»
«Serial5»	«Status5»	«Location5»
«Serial6»	«Status6»	«Location6»
«Serial7»	«Status7»	«Location7»
«Serial8»	«Status8»	«Location8»
«Serial9»	«Status9»	«Location9»
«Serial10»	«Status10»	«Location10»

Once the test(s) has been completed, the Tester is required to provide you with a copy of the test report and forward a copy to the address below.

Thank you for your cooperation in protecting our community’s drinking water. Your prompt response is appreciated. Please contact us with any questions or updates to your account.

Sincerely,

«DistrictContact»  
«ContactTitle»  
«ContactPhone»

## Second Notice to Test Backflow Prevention Assembly

Providing safe, reliable, affordable, and sustainable service.

June 24, 2020

«CustomerName»  
 «MAddress1»  
 «MAddress2»  
 «MCity», «MState» «MZip»

«AttnLine»

RE: Backflow Prevention Assembly(s) at «SAddress1»

**SUBJECT: First Notice of Non-Compliance**

According to our records, the backflow prevention assembly(s) listed below is past due for annual testing. The test(s) were to be completed by the end of «TestDue». A list of certified Backflow Assembly Testers who are qualified to test assemblies in your area is enclosed. You have 15 days from the date of this letter to have the test(s) completed. The Tester you select must forward us the test report within this time frame.

<b>Serial Number</b>	<b>Last Test</b>	<b>Location</b>
«Serial»	«Status1»	«Location»
«Serial2»	«Status2»	«Location2»
«Serial3»	«Status3»	«Location3»
«Serial4»	«Status4»	«Location4»
«Serial5»	«Status5»	«Location5»
«Serial6»	«Status6»	«Location6»
«Serial7»	«Status7»	«Location7»
«Serial8»	«Status8»	«Location8»
«Serial9»	«Status9»	«Location9»
«Serial10»	«Status10»	«Location10»

Thank you for your cooperation in protecting our community’s drinking water. Your prompt response is appreciated. Please contact us with any questions or updates to your account.

Sincerely,

«DistrictContact»  
 «ContactTitle»  
 «ContactPhone»

## Attachment 3

# Cross Connection Control Program -- Backflow Incident Response Plan Public Utility District No. 1 of Thurston County

### A. General

This Backflow Incident Response Plan is considered a supplement to the Emergency Response Plan.

The PUD will immediately begin a backflow incident investigation whenever the initial evaluation of a water quality complaint indicates that:

1. A backflow incident has occurred (i.e., drinking water supply has been contaminated) or may have occurred; or
2. The complaint can't be explained as a "normal" aesthetic problem.

Also, whenever a water main break (or power outage for pumped systems) causes a widespread loss of water pressure in the system (creating back-siphonage conditions), the PUD will initiate a check of distribution system water quality as a precursor to the need for a backflow incident investigation.

WAC 246-290-490 requires the PUD to notify DOH, the Local Administrative Authority and local health jurisdiction as soon as possible, but no later than the end of the next business day when a backflow incident contaminates the potable water supply (in the distribution system and/or in the customer's plumbing system). The PUD's list of emergency contact telephone numbers is included in the Water System Plan.

A backflow incident investigation is often a team effort. The investigation will be made by or initially led by the PUD's DOH-certified Cross-Connection Control Specialist. The investigation team may include state health (regional) staff, local health personnel and/or local plumbing inspectors.

### B. Short List of Tasks

The PUD will use the following short list of tasks as initial guidance for dealing with backflow incidents. The PUD will also consult the most recently published edition of the PNWS-AWWA *Backflow Incident Investigation Procedures Manual* referenced above for greater detail as soon as possible after learning of a possible or confirmed backflow incident.

#### 1. Customer Notification

- a. As soon as possible, the PUD will notify customers not to consume or use water.
- b. The PUD will start the notification with the customers nearest in location to the assumed source of contamination (usually the customer(s) making the water quality complaint).
- c. The PUD will inform the customer about the reason for the backflow incident investigation and the PUD's efforts to restore water quality as soon as possible. The PUD will let the customer

know that customers will be informed when they may use water, the need to boil water used for consumption until a satisfactory bacteriological test result is obtained from the lab, etc.

- d. Where a customer cannot be contacted immediately, the PUD will place a written notice on the front door handle, and a follow-up visit will be made to confirm that the customer received notice about the possible contamination of the water supply.
- e. When dealing with a backflow incident, the PUD will let customers know that it could take several days to identify the source and type of contaminant(s) and to clean and disinfect the distribution system.

## **2. Identification of Source of Contamination**

- a. The PUD will give consideration to the distribution system as a potential source of the contaminant (e.g., air valve inlet below ground).
- b. The PUD will not start flushing the distribution system until the source of contamination is identified (flushing may aggravate the backflow situation and will likely remove the contaminant before a water sample can be collected to fully identify the contaminant).
- c. The PUD will conduct a house-to-house survey to search for the source of contamination and the extent that the contaminant has spread through the distribution system. Note: a check of water meters may show a return of water (meter running backward) to the distribution system.
- d. When the cross connection responsible for the system contamination is located, the PUD may discontinue water service to that customer, until the customer completes the corrective action ordered by the PUD.

## **3. Isolation of Contaminated Portion of System**

- a. The PUD will isolate the portions of the system that are suspected of being contaminated by closing isolating valves; leave one valve open to ensure that positive water pressure is maintained throughout the isolated system.
- b. The PUD will be sure to notify all affected customers in the isolated area first and then notify other customers served by the system.

## **4. Public Health Impacts**

- a. The PUD will seek immediate input from and work with state and local health agencies to accurately communicate and properly mitigate potential health effects resulting from the backflow incident.
- b. If appropriate, the PUD will refer customers that may have consumed the contaminant or had their household (or commercial) plumbing systems contaminated to public health personnel and Local Administrative Authorities (plumbing inspectors).

## **5. Cleaning/Disinfecting the Distribution System**

- a. The PUD will develop and implement a program for cleaning the contaminated distribution

system consistent with the contaminant(s) identified.

- b. Where both chemical and bacteriological contamination has occurred, the PUD will disinfect the system after the removal of the chemical contaminant.
- c. Where any bacteriological contamination is suspected, the PUD will provide field disinfection.

### **C. Additional Information on Cleaning/Disinfecting the Distribution System**

Most chemical or physical contaminants can be flushed from the water distribution system or customer's plumbing system with adequate flushing velocity. However, this may not be the case in systems where scale and corrosion deposits (e.g., tuberculation on old cast iron mains) provide a restriction to obtaining adequate flushing velocity, or where chemical deposits or bacteriological slimes (biofilm) are present (on which the chemical contaminant may adhere).

To remove a chemical or physical contaminant from the distribution system, the PUD may need to:

1. Physically clean the affected area using foam swabs (pigs); and/or
2. Alter the form of the chemical contaminant (e.g., through oxidation using chlorination or addition of detergents).

When adding any chemical (including chlorine) to remove a contaminant from the distribution system, it is essential that the PUD fully understand the chemistry of the contaminant. **Adding the wrong chemical could make the contaminant more toxic to customers and/or more difficult to remove from the distribution system.**

To disinfect water mains using the "slug" or "continuous flow" method, a field unit should be used for chlorine injection, such as a chemical feed - metering or proportioning pump for sodium hypochlorite. The PUD will contact the appropriate DOH regional office to discuss proposed approaches to contaminant removal and disinfection prior to taking corrective action.

# Appendix S

## Recordkeeping and Reporting

Water System Plan – Part A

## RECORD KEEPING SCHEDULES

CROSS CONNECTION CONTROL			
Records	Retention Time	Retention Schedule	DAN
Backflow Incident Records	5 years	SOS - Utility Services Records	UT55-06A-03 Rev. 0
Backflow Preventer Inspection and Inventory	Life	SOS - Utility Services Records	UT55-06A-01 Rev. 0
Backflow Preventer Master List	Life	SOS - Utility Services Records	UT55-06A-02 Rev. 0
Cross-Connection Control Annual Summary Reports	5 years	SOS - Utility Services Records	UT55-06A-25 Rev. 0

FIELD OPERATIONS			
Records	Retention Time	Retention Schedule	DAN
Hydrant Records	Life of hydrant	SOS - Utility Services Records	UT55-06A-09 Rev. 0
Locates	1 year after request complete	SOS - Utility Services Records	UT50-32-05 Rev. 1
Meter Readings - for Billing	3 years after end of fiscal year	SOS - Utility Services Records	UT55-05B-18 Rev. 1
Meter Records	Life of meter	SOS - Utility Services Records	UT55-06A-12 Rev. 0
Pipe Records	Life of pipe	SOS - Utility Services Records	UT55-06A-13 Rev. 0
Service Orders	6 years after the end of fiscal year	SOS - Utility Services Records	UT55-05B-25 Rev. 1
Source meter readings	10 years	WAC 246-290-480, subsection a	x
Valve Records	Life of valve	SOS - Utility Services Records	UT55-06A-20 Rev. 0

PLANNING			
Records	Retention Time	Retention Schedule	DAN
Project reports, construction documents, drawings, inspection reports and approvals	Life of the facility	WAC 246-290-480, subsection f	UT55-06A-19 Rev. 0
Water System Comprehensive Plans	Permanent	SOS - Utility Services Records	UT55-06A-22 Rev. 0

WATER QUALITY AND COMPLIANCE			
Records	Retention Time	Retention Schedule	DAN
Corrective action taken for violations of primary drinking water standards and copies of public notification	10 years	WAC 246-290-480, subsection d	UT55-06A-34 Rev. 0
Bacteriological Analysis Results (ie. Toal Coliform and E-coli tests)	5 years	WAC 246-290-480, subsection a	x
Chemical Analysis Reports - Regulatory Compliance	Life of the water system	SOS - Utility Services Records	UT55-06A-27 Rev. 0
Chemical Raw Data Records - Regulatory Compliance	Life of the water system	SOS - Utility Services Records	UT55-06A-28 Rev. 0
Date and duration of any membrane failure for more than four hours	5 years	WAC 246-290-485, subsection e(iv)	x
Department-specified minimum disinfectant residual	10 years	WAC 246-290-485, subsection e(i)	x
Department-specified compliance requirements for membrane filtration or alternative treatment	5 years	WAC 246-290-485, subsection e(iii)	x
Lead and Copper Compliance Records	12 years after end of calendar year	SOS - Utility Services Records	UT55-06A-29 Rev. 0
Records Regarding a Variance or Exemption	5 years after expiration	40 CFR 141.33, subsection d	x
Date and duration of any failure to maintain the minimum disinfection residual for more than four hours	5 years	WAC 246-290-485, subsection e(ii)	x
Water treatment performance including type of chemicals used and quantity, and amount of water treated	3 years	WAC 246-290-480, subsection g(iii)	x

OTHER			
Records	Retention Time	Retention Schedule	DAN
Groundwater Permit Files	6 years after termination of permit	SOS - Utility Services Records	UT55-06B-12 Rev. 0
Maps and Geographical Data	Permanent	SOS - Utility Services Records	UT55-06A-18 Rev. 0
Other records of operations and analysis	3 years	WAC 246-290-480, subsection a	x
Sanitary Survey reports, summaries, or communications	10 years after completion	WAC 246-290-480, subsection e	UT55-06A-31 Rev. 0
Water Availability Hookup Request Forms	2 years	SOS - Utility Services Records	UT55-06A-36 Rev. 0
Water Facilities Inventory (WFI) Form	6 years after end of calendar year	SOS - Utility Services Records	UT55-06A-32 Rev. 0

**REPORTING SCHEDULES**

<b>CROSS CONNECTION CONTROL</b>			
<b>What is Thurston PUD Reporting</b>	<b>Who is it reported to</b>	<b>When does it need to be reported</b>	<b>Source</b>
A backflow incident that contaminated the water system or that occurred within a customers property.	DOH and the local health jurisdiction.	The end of the next business day.	WAC 246-290-490
Cross Connection Control (CCC) program summary report.	DOH	Every year.	WAC 246-290-490
All CCC records and reports.	DOH	Upon request.	WAC 246-290-490

<b>CORRECTIVE ACTIONS</b>			
<b>What is Thurston PUD Reporting</b>	<b>Who is it reported to</b>	<b>When does it need to be reported</b>	<b>Source</b>
Completion of corrective actions for significant deficiencies found during a Sanitary Survey, source fecal contamination, or specified by monitoring and follow up requirements.	DOH	Within 30 days of completing the corrective action.	WAC 246-290-485

<b>GENERAL</b>			
<b>What is Thurston PUD Reporting</b>	<b>Who is it reported to</b>	<b>When does it need to be reported</b>	<b>Source</b>
A notification of receipt of a DOH issued order, a failure to comply with a DOH issued order, or upon receiving a red operating permit.	Customers within the water system. A copy of the customer notification for DOH.	Within 3 months.	WAC 246-290-71003
An updated Water Facilities Inventory form (WFI).	DOH	Every year plus within 30 days of any change in name, category, ownership or management, or addition of source or storage facilities.	WAC 246-290-480
Consumer Confidence Reports (CCR)	Customers within the water system.	Before July 1st.	WAC 246-290-72002
Water Use Efficiency Reports.	DOH and customers within the water system. Also available to the public.	Before July 1st.	WAC 246-290-840
Source meter readings.	DOH	Response time is not specified.	WAC 246-290-480

<b>PUBLIC NOTICES</b>			
<b>What is Thurston PUD Reporting</b>	<b>Who is it reported to</b>	<b>When does it need to be reported</b>	<b>Source</b>
Certification of compliance with public notification regulations including a copy of each type of notice sent to customers and the media.	DOH	Within 10 days of completing the public notification requirements.	40 CFR § 141.31 WAC 246-290-480
The most recent public notice of any ongoing violation, exemption, or variance.	New Customers	Prior to turning on service.	40 CFR § 141.206

<b>WAIVERS</b>			
<b>What is Thurston PUD Reporting</b>	<b>Who is it reported to</b>	<b>When does it need to be reported</b>	<b>Source</b>
Summaries or communications related to monitoring waivers.	DOH	Within the monitoring cycle or upon DOH direction.	WAC 246-290-480
A DOH issued waiver.	Customers within the water system. A copy of the customer notification for DOH.	When the waiver is issued, plus annually for as long as the waiver is in effect. Also, when new customers apply for service.	WAC 246-290-71007

<b>WATER QUALITY</b>			
<b>What is Thurston PUD Reporting</b>	<b>Who is it reported to</b>	<b>When does it need to be reported</b>	<b>Source</b>
Failure to comply with any National Primary Drinking Water Regulation including monitoring.	DOH	Within 48 hours.	40 CFR § 141.31 WAC 246-290-480
Tier 1 Violations.	DOH and customers within the water system.	Within 24 hours.	40 CFR § 141.202 WAC 246-290-480
Tier 2 Violations.	Customers within the water system.	Within 30 days. The notice must remain in place for 7 days or until the violation is resolved, whichever is longer. The notice must be repeated every 3 months until the violation is resolved.	40 CFR § 141.203
Tier 3 Violations.	Customers within the water system.	Within 1 year. The notice must remain in place for 7 days or until the violation is resolved, whichever is longer. The notice must be repeated every year until the violation is resolved. The annual CCR is valid notice.	40 CFR § 141.204
Test results of any applicable measurement or analysis required under the CFR and WAC.	DOH	The 10th of the next of month or 10 days after the monitoring period ends, whichever is shorter.	40 CFR § 141.31 WAC 246-290-480
The presence of total coliform in a sample.	DOH	Within 10 days.	WAC 246-290-480
Treatment technique violations.	DOH	The end of the next business day.	WAC 246-290-480
Disinfection byproducts.	DOH	Specified in the Water Quality Monitoring Schedule (WQMS) by the DOH.	WAC 246-290-480
Disinfection residuals.	DOH, TPCHD, Lewis County	The 10th of the next month.	WAC 246-290-480
For Group B water systems, a positive E. coli sample, nitrate concentration above 10.0 mg/L, or a threat of acute contamination, such as a flood event.	Local DOH and customers within the water system.	Within 24 hours.	WAC 246-291-360

Appendix T  
O&M Contract

Water System Plan – Part A

## WATER SYSTEM MANAGEMENT CONTRACT

THIS AGREEMENT made and entered into to be effective Xxxxxx, \_\_, 2020, by and between Thurston County Public Utility District No. 1, a municipal corporation organized under the laws of the State of Washington, (hereinafter referred to as "PUD"), and \_\_\_\_\_, the owner of the water system hereinafter described, (hereinafter referred to as "Owner"), in consideration of the mutual benefits and promises herein set forth, agree as follows:

WHEREAS, the Owner is the owner of the water system commonly referred to as \_\_\_\_\_ and described in **Exhibit 1** attached hereto and incorporated herein, (hereinafter "Water System"), which system has \_\_\_\_\_ active customers, and

WHEREAS, PUD is engaged in the business of managing water systems, and

WHEREAS, the parties have reached an agreement wherein the PUD will provide management services to the Owner in the management of the system as hereinafter set forth.

NOW, THEREFORE, for and in consideration of the mutual undertakings herein set forth, the parties agree as follows:

1. **ENGAGEMENT:** Owner hereby engages PUD to manage the water system and the PUD hereby accepts such engagement on the terms and conditions herein set forth.

2. **TERM:** This Agreement, and the services to be provided by the PUD hereunder shall commence as of \_\_\_\_\_, and shall continue for a period of one year thereafter provided, however, that this Agreement and the PUD's engagement hereunder shall be automatically extended each year on the anniversary hereof for one year unless otherwise modified or terminated by the parties as hereinafter set forth herein.

3. **SERVICES:** The PUD shall provide the services described in **Exhibit 2** attached hereto and incorporated herein.

4. **COMPENSATION:** As compensation for the performance of the PUD's services hereunder, the Owner will pay to the PUD compensation as set forth in **Exhibit 3** attached hereto and incorporated herein. The PUD will bill the Owner monthly for the services provided in the management of the water system during the preceding month, and the Owner will pay the same within fifteen (15) days after receipt.

5. **NATURE OF RELATIONSHIP:** In the performance of its services under this Agreement, the PUD will function solely as an independent contractor.

6. **TERMINATION OF SERVICES:**

If either party desires to terminate this Agreement, for whatever reason, the party desiring to terminate this Agreement shall give thirty (30) days prior written notice to the other party. Said termination shall be effective on the 30th day following the delivery of the notice to the non-terminating party.

7. **COOPERATION:** Owner agrees to cooperate with the PUD in all matters pertaining to the water system and the services to be provided pursuant to this Agreement. The Owner agrees to initiate a lien on the property if the expenses on the property exceed \$300.00.

8. **NOTICES:** All notices and other communications required to be in writing shall be deemed to have been fully given if personally delivered to or mailed by United States mail, postage prepaid, Certified Mail, Return Receipt Requested to the parties at the addresses below stated:

To PUD:  
1230 Ruddell Rd SE  
Lacey WA 98503

To Owner:

9. **RIGHT OF FIRST REFUSAL:** If Owner desires to sell, assign or transfer the water system, during the term of this contract and for one year thereafter, the PUD shall have the right to purchase such system under the following terms and conditions. Upon obtaining a written good faith offer to purchase the system by the Owner, which offer the Owner is willing to accept, the Owner shall notify, by written notice, the PUD of the offer. Within thirty (30) days after its receipt by the PUD, the PUD may, at its option, accept the offer by giving notice to the owner of its election to purchase under this right of first refusal for the price as stated in the offer. Upon receipt of notice from the PUD of its intent to purchase pursuant to this right of first refusal, the Owner shall sell to the PUD and convey to the PUD the water system as soon as the transaction can reasonably be closed. The failure of the PUD to notify the Owner of its desire to exercise its first refusal rights within said thirty (30) day period as required herein shall result in the termination of the PUD's first refusal right, as to the proposed sale.

If the PUD does not elect to purchase the water system in accordance with this right of first refusal, the Owner shall be entitled to sell said water system to the prospective purchaser in accordance with the terms and conditions upon which the purchase was to be made as described in the notice given to the PUD. However, if the sale is not completed on the terms and conditions as set forth in the notice to the PUD the Owner shall not be entitled to complete the sale to said third party purchaser on any other terms without first submitting the subsequent proposal to the PUD under the first refusal rights as set forth herein.

10. **INDEMNIFICATION:** Owner will hold and save PUD harmless from loss, damage, liability or expense (including expense of litigation) resulting from any actual or alleged injury or death to any person or from any loss or damage to any property occurring upon the premises of the water system, or caused by or resulting from any action or omission of the owner or its employees or agents in or about the water system. Owner, at its own expense, shall obtain and pay the premiums for a public liability policy of insurance with an insurance company authorized to write such insurance within the State of Washington, with minimum limits of \$500,000.00 for property damage, and \$500,000.00 per person per accident or occurrence for bodily injuries, death and damages. Said policy shall indemnify and save harmless the PUD against any claims, demands, losses or damages, liabilities or expense, and the PUD shall be named as one of the insured and shall be furnished with a copy of such policy or policies.

PUD will hold and save Owner harmless from loss, damage, liability or expense (including expense of litigation) resulting from any actual or alleged injury or death to any person or from any loss or damage to any property occurring upon the premises of the water system, or caused by or resulting from any action or omission of PUD or its employees or agents in or about the water system. PUD at its own expense, shall obtain and pay the premiums for a public liability policy of insurance with an insurance company authorized to write such insurance within the State of Washington, with minimum limits of \$1,000,000.00 for property damage, and \$1,000,000.00 per person per accident or occurrence for bodily injuries, death and damages.

11. **BINDING AGREEMENT:** This Agreement shall be binding upon the parties, their assigns and their successors in interest.

12. **SEVERABILITY:** If any provisions of this Agreement are declared or found to be illegal, unenforceable or void, then both parties shall be relieved of the obligations under said provision. The remainder of this Agreement shall not be affected by such declaration or finding and shall be enforceable to the fullest extent permitted by law.

13. **CONSTRUCTION:** This Agreement shall be construed in accordance with the laws of the State of Washington.

14. **JURISDICTION AND VENUE:** Jurisdiction and venue in any action brought hereunder shall be with the Superior Court of the State of Washington for Thurston County.

15. **WAIVER:** Failure to insist upon strict compliance with any of the terms and covenants of this Agreement shall not be deemed a waiver of the parties rights thereunder to enforce the same, nor shall any waiver by any of the parties of any breach of the other party hereof be held to be a waiver of any succeeding breach of any provision or a waiver of the provisions itself.

16. **CAPTIONS:** Captions and paragraph headings herein are for convenience only and or not a part hereof and shall not be used in construing this Agreement.

17. **ENTIRE AGREEMENT:** There are no other agreements that modify,

supplement or affect this Agreement, and any modifications or amendments thereof shall not be effective unless and until the same are reduced to writing and executed by the parties.

18. **WARRANTY:** The Owner warrants to the PUD that the water system and all of the components thereof comply with all statutes, regulations, and standards established by the State of Washington, the county in which the water system is located, the Department of Health for both the State of Washington and the county within the system is located, and any other municipal corporation having jurisdiction of the water system. The Owner guarantees and warrants to the PUD that should the system or any part thereof fail to comply with the statutes, ordinances, rules and regulations of the State of Washington, the county within which the system is located, the Department of Health aforesaid and any other municipal government having jurisdiction, the Owner will, at its expense, reasonably bring the system into compliance, or will contract with the PUD to bring the system into compliance at the sole expense of the Owner.

IN WITNESS WHEREOF, the parties have signed this Agreement to be effective the day and year first above written.

\_\_\_\_\_  
, President

\_\_\_\_\_  
, Treasurer

THURSTON COUNTY PUBLIC UTILITY  
DISTRICT NO. 1  
\_\_\_\_\_

\_\_\_\_\_  
John Weidenfeller, General Manager

# Appendix U Financial Projections

Water System Plan – Part A

**Thurston PUD  
Summary of Projected Revenue and Expenses**

	2017	2018	2019	Adjusted Budget 2020	Projected 2021	Projected 2022	Projected 2023	Projected 2024	Projected 2025	Projected 2026	Projected 2027	Projected 2028	Projected 2029
<b>Operating Revenues</b>													
Metered & Unmetered Water Revenue (1)	3,007,197	5,167,711	5,263,190	5,736,359	5,908,450	6,085,703	6,268,274	6,456,323	6,650,012	6,849,513	7,054,998	7,266,648	7,484,647
Sales to Irrigation	67,063	120,104	131,608	198,314	202,280	206,326	210,452	214,661	218,955	223,334	227,800	232,356	237,004
Miscellaneous Service Revenue	55,523	136,910	130,573	138,000	140,760	143,575	146,447	149,376	152,363	155,410	158,519	161,689	164,923
Other Water Revenue (2)	465,918	745,900	673,427	918,922	994,193	994,193	994,193	994,193	942,163	942,163	942,163	942,163	942,163
<b>Total Operating Revenue</b>	<b>3,595,701</b>	<b>6,170,625</b>	<b>6,198,799</b>	<b>6,991,595</b>	<b>7,245,683</b>	<b>7,429,797</b>	<b>7,619,366</b>	<b>7,814,553</b>	<b>7,963,493</b>	<b>8,170,420</b>	<b>8,383,480</b>	<b>8,602,856</b>	<b>8,828,737</b>
<b>Operating Expenses (3)</b>													
Salaries & Benefits, Employees & Commissioners	1,485,808	2,520,812	2,569,510	3,210,193	3,306,499	3,405,694	3,507,865	3,613,101	3,721,494	3,833,138	3,948,132	4,066,576	4,188,574
Water System Operations	361,714	553,637	552,949	629,458	642,047	654,888	667,986	681,346	694,972	708,872	723,049	737,510	752,261
Contractual Services	181,288	198,695	214,001	235,910	240,628	245,441	250,350	255,357	260,464	265,673	270,986	276,406	281,934
Rent and Janitorial	70,654	108,107	98,826	93,500	95,370	97,277	99,223	101,207	103,232	105,296	107,402	109,550	111,741
Transportation	66,501	129,203	133,177	140,550	143,361	146,228	149,153	152,136	155,179	158,282	161,448	164,677	167,970
Insurance	39,032	33,615	77,051	99,000	100,980	103,000	105,060	107,161	109,304	111,490	113,720	115,994	118,314
Administrative Operations	220,271	359,951	368,002	416,350	424,677	433,171	441,834	450,671	459,684	468,878	478,255	487,820	497,577
Miscellaneous	70,097	88,186	107,509	110,400	112,608	114,860	117,157	119,501	121,891	124,328	126,815	129,351	131,938
Taxes	195,207	333,697	344,391	360,805	371,629	382,778	394,261	406,089	418,272	430,820	443,745	457,057	470,769
<b>Total Operating Expenses</b>	<b>2,690,572</b>	<b>4,325,903</b>	<b>4,465,414</b>	<b>5,296,166</b>	<b>5,437,799</b>	<b>5,583,337</b>	<b>5,732,888</b>	<b>5,886,567</b>	<b>6,044,490</b>	<b>6,206,778</b>	<b>6,373,553</b>	<b>6,544,943</b>	<b>6,721,078</b>
<b>Non-Operating Revenues (Expenses)</b>													
Interest Income	26,286	65,514	99,120	94,200	94,671	95,144	95,620	96,098	96,579	97,062	97,547	98,035	98,525
Property Tax Revenue (4)	281,046	286,252	299,763	298,591	301,577	304,593	307,639	310,715	313,822	316,960	320,130	323,331	326,565
Election costs (5)	(29,041)	(31,054)	(31,054)	(40,000)	(40,000)	(41,000)	(41,000)	(43,000)	(43,000)	(44,000)	(44,000)	(45,000)	(45,000)
Grant Revenues (6)	180,962	23,954	-										
Other, net (7)	-	4,459	23,136	42,000	43,260	44,558	45,895	47,271	48,690	50,150	51,655	53,204	54,800
<b>Total Non-Operating Revenues (Expenses)</b>	<b>459,253</b>	<b>349,125</b>	<b>390,966</b>	<b>394,791</b>	<b>399,508</b>	<b>403,295</b>	<b>408,153</b>	<b>411,085</b>	<b>416,090</b>	<b>420,172</b>	<b>425,332</b>	<b>429,570</b>	<b>434,890</b>
<b>Revenue Available for Debt Service</b>	<b>1,364,383</b>	<b>2,193,847</b>	<b>2,124,350</b>	<b>2,090,220</b>	<b>2,207,392</b>	<b>2,249,756</b>	<b>2,294,632</b>	<b>2,339,070</b>	<b>2,335,093</b>	<b>2,383,814</b>	<b>2,435,259</b>	<b>2,487,484</b>	<b>2,542,549</b>
Debt Service - Bonds	300,006	691,137	732,431	1,059,304	1,239,700	1,243,552	1,241,290	1,243,355	1,244,260	1,239,110	1,238,225	1,238,150	1,238,712
Debt Service - Junior Lien Loans	258,284	255,132	282,341	298,372	296,659	295,027	293,395	291,762	213,262	204,825	203,725	202,625	201,525
<b>Available for other purposes</b>	<b>806,092</b>	<b>1,247,579</b>	<b>1,109,577</b>	<b>732,544</b>	<b>671,033</b>	<b>711,177</b>	<b>759,947</b>	<b>803,953</b>	<b>877,571</b>	<b>939,880</b>	<b>993,309</b>	<b>1,046,709</b>	<b>1,102,311</b>
<b>DEBT SERVICE COVERAGE RATIO</b>	<b>2.44</b>	<b>2.32</b>	<b>2.09</b>	<b>1.54</b>	<b>1.44</b>	<b>1.46</b>	<b>1.50</b>	<b>1.52</b>	<b>1.60</b>	<b>1.65</b>	<b>1.69</b>	<b>1.73</b>	<b>1.77</b>

(1) Projected growth in water sales due to growth in customers at 1% annually and assumed annual rate increases of approximately 2% through 2029

(2) Other water revenue is from capital surcharges that are capped in 2021, and DWSRF surcharges expected to be paid off in 2024.

(3) Water System Operating Expenses projected to increase 3% annually. Administrative Expenses projected to increase 2% annually.

(4) Property Tax assessment increase assumed at 1%.

(5) Includes estimated annual cost of bi-annual county wide election of PUD Commissioners.

(6) Grant Revenues are not anticipated to be available in the future.

(7) Other Income includes rental income from commercial office space anticipated to increase 3% annually.



Appendix V  
Financial Policies/Guidelines to Aid in Setting Rates

Water System Plan – Part A

# Public Utility District No. 1 of Thurston County

## Financial Policies/Guidelines to Aid in Setting Rates

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These financial policies and guidelines have been developed to assist Public Utility District No. 1 of Thurston County (PUD) in achieving financial and rate stability from year-to-year.

In addition, these proposed policies should provide consistency in decision-making to both the PUD Board of Commissioners (Board) and utility management.

These policies and guidelines are to be used as a starting point in the PUD's overall utility financial planning and rate setting process.

The policies and guidelines listed below will be reviewed from time to time to determine if they are still relevant and appropriate.

### **1. Rates Should Be Established Using a “Generally Accepted” Rate Setting Methodology.**

When reviewing rates, it is important to use a methodology that is “generally accepted” in the financial and rate setting community as well as the utility industry. This assures a legally defensible approach as well as consistency of the analysis over time.

1.1 The PUD will use any one of the following “generally accepted” approaches to establish rates for its utility:

- Revenue requirement analysis
- Cost of service analysis
- Rate design analysis

#### **REVENUE REQUIREMENTS:**

1.1.1 Revenue requirements will be established on a “cash basis” approach that will include operation & maintenance (O&M) expenses, taxes/transfers, debt service and capital improvements funded from rates.

1.1.2 Revenues and costs based on current operations will be projected annually for a ten-year time period.

1.1.3 Projections of O&M costs should include any estimated incremental O&M costs associated with future capital improvements.

1.1.4 Projections of O&M costs should include any estimated incremental O&M costs associated with mandated program requirements.

1.1.5 Any wholesale cost increases imposed upon the PUD by a wholesale supplier/partner should be equitably passed through to the PUD's ratepayers coincident with when these rates become effective upon the PUD.

#### **COST OF SERVICE:**

1.2.1 A rate study will be used to equitably allocate utility costs to the customer classifications of service.

- 1.2.2 The rate study will use techniques that are “generally accepted” by the industry (e.g. American Water Works Association).
- 1.2.3 The rate study will, at a minimum, consider the following cost components:
- ✓ *Commodity/base costs* – those costs that vary with the total amount, or flow of water consumed by a customer over an extended period of time (e.g. electricity and chemicals)
  - ✓ *Capacity costs* – those costs that vary with maximum demand, or the maximum rates of flow to customers (e.g. sizing facilities to meet peak demands)
  - ✓ *Public fire protection costs* – those costs related to the public fire protection function (e.g. hydrants and over-sizing of mains)
  - ✓ *Customer related costs* – those costs that vary with the number of customers on the system (e.g. postage, meter maintenance expense)
  - ✓ *Revenue related costs* – those costs associated with the amount of revenue received by the utility
- 1.2.4 The rate study will consider the specific circumstances and unique characteristics of the systems in the rate study methodology.

**RATE DESIGN:**

- 1.3.1 User charges (rates) will be established so that operating revenues are at least equal to the direct and indirect operating costs, to include costs of administration for each utility type.
- 1.3.2 Rate designs will be reflective of utility needs, and also reflect the greater public purpose and policy goals of the PUD (e.g. conservation, economic development, ability to pay, etc.).
- 1.3.3 Rates will recognize and attempt to incorporate a fixed charge for the up-front fixed costs associated with serving customers and a usage or volumetric charge that attempts to recover the variable costs of operating the utility.
- 1.3.4 Rates will be set at a level that recovers necessary costs, by classification, yet flexible enough to accomplish the PUD’s objectives (e.g. public purpose programs).
- 1.3.5 Rates will be designed to be equitable and detailed to a level that reflects the service provided (e.g., private fire protection, multi-family services, etc.).

**2. The PUD’s Utilities will be Managed to Maintain Financial Stability Over Time.**

The PUD’s goal is to maintain financial stability over time. Financial stability is not only a prudent financial management goal; it also helps minimize financial costs in the long-term. Above all, financial stability will provide the community with the confidence of knowing a strong, consistent management team is managing the utility.

2.1 Financial Policies and Measures Will be Developed to Measure, Manage and Achieve Financial Stability.

**RESERVES:**

- 2.1.1 The PUD will maintain utility reserves required by law, ordinance and bond covenants, to provide cash working capital for normal and ordinary

operations, and also provide some insurance against economic downturns and emergencies.

- 2.1.2 Minimum reserve funds will be established on an annual basis during the budget cycle as follows:

**General Reserves** – General reserves are composed of property taxes assessed and interest income. These reserves reflect the difference between property tax assessments/adjustments and expenses related to Commissioner activities.

**Operating Reserves** – Operating reserves are composed of Active Working Capital Cash and Operating Reserves. These reserves reflect the timing difference between billing for revenues and payment of expenses. The Operating Reserve can also be used to cover unanticipated cash operating expenses or lower than expected revenue collections. The basis for establishing a minimum total operating reserve level for each utility will be 60 days of the O&M expenses for that utility.

**Emergency/Capital Reserves** – The emergency/capital reserve is essentially to protect the utilities against the financial impacts from unanticipated emergencies. It provides funding for emergency repairs or failure of essential equipment that needs to be replaced immediately. This level of emergency/capital reserves will be deemed sufficient to finance the required cash flow until such time that adequate emergency financing can be secured from conventional outside resources.

Capital reserves are used to fund the cash flow requirements of capital infrastructure construction. These reserves can increase and decrease significantly depending on funding sources available and the capital projects that are planned during the year. The PUD may set aside other funding sources (line of credit) to be used as short-term capital reserves to bridge the gap where traditional funding sources are not available.

**Bond Reserves** – Bond reserves may be legally required for specific debt issues. Bond reserves will be established in accordance with the legal covenants of the debt issue.

- 2.1.3 The PUD may establish other reserves for specific needs that are over and above the reserves noted above.
- 2.1.4 Maintenance of minimum reserves should not, on its own, trigger the need for a rate adjustment, (e.g. rates will be reviewed after two consecutive years of loss of revenue or diminishing reserves as a result of covering costs).

**DEBT MANAGEMENT:**

- 2.1.5 The PUD uses debt as a usual tool in managing and financing large projects. Some of the types of debt available to the PUD include revolving lines of credit, bond issues and low-interest loans.
- 2.1.6 Capital projects financed through debt issuance will not be financed for a term longer than the expected useful life of the project assets.

- 2.1.7 Capital financings will be designed to minimize the cost of funds, ensure equity over time among ratepayers, and provide for a timely completion of capital projects.
- 2.1.8 While both debt and pay as you go financing may be used to finance utility capital needs, the debt financing component will be managed to minimize annual volatility in rate requirements.
- 2.1.9 The District has a goal of paying for a minimum of 20 percent of the capital program with cash from rates and charges over the long run. The District will finance all minor capital expenses for routine replacements, refurbishments and capital outlay with funds on hand.
- 2.1.10 With respect to the issuance of any debt, alternative issuance timing and amortization structures will be analyzed to ensure the most cost-efficient financing, given prevailing market conditions at the time of the sale.
- 2.1.11 The amount and timing of any future debt offerings will be planned to comply with the additional bonds test and rate covenants for its senior lien bonds, as well as with these financial policies.
- 2.1.12 The District will maintain regular communication with rating agencies that rate the bonds and will update the agencies in the event of material adverse changes.

**INVESTMENTS:**

- 2.1.13 Thurston County acts as the PUD’s treasurer. All investments fall under the County Treasurer’s Investment Policy. If, in the future, the PUD decides to manage its own investment portfolio, a District investment policy will be needed.

2.2 Other Financial and Cash Planning Thresholds

**LIQUIDITY:**

- 2.2.1 The PUD’s utilities will maintain sufficient reserves, and of such a nature, that it maintains liquidity greater than or equal to 60 days operating expenses.

**CASH FLOW:**

- 2.2.2 Each utility should have annual net income (total revenue less O&M, taxes, debt service and capital projects funded from rates) greater than or equal to zero (\$).

**DEBT SERVICE COVERAGE:**

- 2.2.3 The PUD will set rates and charges adequate to ensure that revenues are sufficient to cover all operating expenses and provide a cover on senior lien debt at least equal to the minimum required by the resolution for the PUD’s bonds, with a target of 1.25 times or higher.

**CAPITAL IMPROVEMENT FUNDING FROM RATES:**

- 2.2.4 On an annual basis, each utility should adequately fund through its rates an amount for capital improvement funding and escalated (increased) over time to reflect the impacts of inflation and replacement cost of infrastructure.

- 2.2.5 As new large capital facilities are added to the PUD, consideration may be given to phasing-in the rate impact of policy 2.2.4.

### **3. Rates Should be Stable Over Time.**

Financial stability of a utility also provides rate stability. Rate stability reinforces that costs are being managed and controlled, thereby gaining customers' confidence of the management team's credibility.

- 3.1 Rates Should be Stable in Their Ability to Generate Sufficient Revenues, but also in the Customer's Perception of the Rate Changes from Year to Year.
  - 3.1.1 Rates should be reviewed by the PUD, on an annual basis, to assure that they provide sufficient revenues.
  - 3.1.2 Annual rate reviews will consider a six -year projected period to attempt to stabilize and minimize rates over time.
  - 3.1.3 Needed rate adjustments will attempt to minimize impacts to customers by phasing-in large rate adjustments over time.
  - 3.1.4 Rates should reflect pass-through components for costs that fluctuate and are not controllable by the PUD, such as wholesale water costs and energy costs.
  - 3.1.5 The PUD's Goal, subject to the availability of resources, is that a comprehensive rate study will be conducted by an outside party at least every 5 years in order to assess the fairness of the rates to the PUD's ratepayers and to ensure that the necessary revenue is available for the PUD's operating and capital needs.

### **4. The PUD will maintain utility facilities at a level that will provide for the public well-being and safety of the residents.**

The PUD's operating and maintenance (O&M) program will be maintained at a level that assures system reliability and efficiency. A well thought out maintenance program will extend the life of the system infrastructure that will, in turn, reduce infrastructure costs in the long-term.

- 4.1 Sufficient funding should be made to provide for adequate maintenance and/or replacement of capital plant and equipment. This is to protect the PUD capital investment and to minimize future maintenance and replacement costs.
  - 4.1.1 The PUD will adequately fund costs for meeting current industry standards and regulations (e.g. Safe Drinking Water Act) in the annual financial review.
  - 4.1.2 The PUD will develop and maintain a facilities, vehicle and equipment Asset Management Plan identifying replacements required.
  - 4.1.3 The PUD will develop a 6-year Capital Improvement Plan and update it annually. The capital improvement plan will be coordinated with the operating budget and impacts to ratepayers.
  - 4.1.3 The PUD will adopt a Capital Surcharge sufficient to complete replacements required to extend the life of the utility's infrastructure.
  - 4.1.4 The PUD will make capital improvements according to an adopted Capital Improvement Program.

- 4.1.5 The annual Capital Improvement Program for each utility will consider mandated capital, growth related capital and replacement, reproduction and refurbishment capital.

**5. The PUD will consider the impacts of rates on their customers and financial and operating needs will be balanced against the rates and financial impacts.**

Utility rates are the primary communication the PUD has with its utility customers. Whenever possible, the PUD's rates should be easy to understand, stable from year-to-year and minimize the overall impacts to customers.

5.1 Rates will be easy to understand and the PUD will attempt to keep rate increases to a minimum.

5.1.1 Rates for each utility will be structured to promote understanding by the PUD's customers (e.g. bills that are easy to hand calculate and understand).

5.1.2 The PUD's goal is that rate adjustments will be phased-in, over time, when large financial impacts to customers are anticipated (e.g. eliminate rate shock).

5.2 Rates will be reviewed for their overall competitiveness.

5.2.1 Any rate adjustment to a utility should consider the PUD's "competitiveness" with neighboring utilities.

5.2.2 The "competitiveness" of the PUD's rates should not take precedence over prudent financial and business practices.

## **DEFINITIONS**

**Bond Covenant** – A legally binding term of agreement between a bond issuer (the District), and a bond holder. Usually includes maintaining a certain Debt Service Coverage Ratio (DSCR), and continued reporting on the status of the District financial status.

**Capital Improvement Plan/Budget** – The portion of the budget which focuses on the acquisition, maintenance, or creation of fixed assets. This budget projects costs for the next five years at a minimum.

**Capital Projects** – Projects which result in the creation or maintenance of fixed assets.

**Capital Transfer** – The portion of the rate revenue assigned to fund the capital budget.

**Cash** – Any cash or equivalent which can be converted into cash readily. It will include cash, and non-restricted investments.

**Connection Fee** – The fees charged for a new connection to the District's water systems.

**Debt Service Coverage Ratio (DSCR)** – This is the measure of the cash flow available to pay current debt obligations. It is calculated by: (Net Income + Depreciation + Amortization + Interest Expense) / Debt Service for the year.

**Debt Service Requirement** – The amount of debt service, both principal and interest, required to be paid for the year.

**Electronic Municipal Market Access (EMMA)** – The website managed by the Municipal Securities Rulemaking Board which is currently the official repository for information on municipal bonds including official disclosure, trade data, and required post-issuance data.

**Extraordinary Maintenance** – These expenses are for large and non-routine maintenance projects.

**Fixed Assets** – Assets with a value of over \$5,000 and a life expectancy of greater than one year.

**General Obligation Bond** – Municipal bonds which are secured by the District's credit and taxing power in whole.

**Local Utility District (LUD)** – A local assessment district authorized under RCW 54.16.120, for the purpose of funding improvements or new infrastructure which benefits a defined group of properties. A special assessment is levied on the members of the LUD to fund the project.

**LUD Bond** – A type of Revenue Bond where the funds are used to finance a project in a LUD, and repaid by assessments collected from the LUD.

**Operating Budget** – The portion of the budget focused on known and forecasted expenses for a given calendar year which cover the normal, operating cycle of the District.

**Operating Revenues** – Revenues generated from all District operating activities.

**Post Issue Compliance** – The policy to fulfill all the requirements mandated AFTER a bond issue. It includes items listed in the bond covenants and also requirements by the Securities and Exchange Commission (SEC).

**Reserves** – Cash held by the District for a stated purpose. For example, bond reserves are cash amounts held, usually equal to the largest debt service payment, until the bond is paid in full.

**Restricted Funds** – A reserve of money that can only be used for specific purposes dictated by internal (Commission), or external (e.g. bond covenants) direction.

**Revenue Bonds** – Municipal Bonds that finance income-producing projects and are secured by a specified revenue source.

**SEC** – Securities and Exchange Commission, a federal agency whose mission is to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation.

Appendix W  
Water Rights Self-Assessment Form

Water System Plan – Part A



# Water Right Self-Assessment Form for Water System Plans

331-372 • 1/13/2017

All water right permits, claims, and certificates must be evaluated in a water right self-assessment for all sources used to supply the water system. The self-assessment compares the parameters and other limitations of existing water rights against current and forecasted water production, as described in your water system plan, to determine whether the rights are adequate to serve your system's current and future water needs.

You must account for all sources of supply and total quantities of water withdrawn from the source. If you purchase water from another purveyor through a non-emergency intertie, you must complete the INTERTIES section of the self-assessment.

## A Note on Exempt Wells

If you're seeking DOH approval of a new Group A or Group B water system using an exempt well, you must complete the self-assessment, although certain fields will not apply. Talk to your DOH regional planner about using the Water Right Self-Assessment form for a Small Water System Management Program instead of this version.

Local governments must ensure that an adequate potable water supply is available from the exempt well before issuing a building permit. Before developing a permit exempt well, check with your local authorities on their criteria for establishing an adequate potable water supply for your planned public water system.

## Water Right Parameters

Below is a brief description of the parameters associated with a typical water right. For the self-assessment, you only need to describe the last two bulleted items if they apply to your water rights.

**Source Type** – this refers to whether the source is surface water, groundwater or a spring.

**Source Location** – this refers to the location of points of groundwater withdrawal or surface water diversion for each right.

**Purpose of Use** – this refers to the type of use, such as municipal water supply, community domestic, industrial or agricultural purposes.

**Place of Use** – this describes where water can be put to beneficial use under the right. Under the 2003 Municipal Water Law, RCW 90.03.386, the place of use for a water right held for municipal water supply purposes may be the system's service area as identified in an approved water system plan or small water system management program.

See [Ecology Policy 2030](#) for information on how Ecology administers the Municipal Water Law.



If you need this publication in an alternative format, call 800.525.0127 (TDD/TTY call 711). This and other publications are available at [www.doh.wa.gov/drinkingwater](http://www.doh.wa.gov/drinkingwater).

**Period of Use** – this refers to time-of-year limitations in which the water right may be put to use. If any water right has a time-of-year limitation, please include this information in the INTERRUPTIBLE WATER RIGHTS section.

**Provisions or Limiting Conditions** – this refers to any provisions or conditions placed on the water right. If a water right has a limiting condition or other provision, such as a collection and reporting requirement, other than a time-of year limitation, include this information in the ADDITIONAL COMMENTS section at the bottom of the self-assessment and in the water system plan narrative.

See [Ecology Policy 1040](#) for more information on water right terminology. If you have questions about your water rights, please contact the Ecology regional office in your area.

## Completing the Water Right Self-Assessment Form

The self-assessment is a Word document to allow users to make changes or to expand the document. You may use another format, if preferred, as long as all required information is included. Below is a description of all fields and how to complete them. This form is divided into four different sections. Each section is described in the headings below.

See the column identifiers (A, B, C, etc) at the bottom of each column for guidance in completing the necessary calculations.

**Water Right Permit, Certificate, or Claim Number:** This number is assigned by Ecology when a permit application is filed. It's listed at the top of the permit or certificate. For water right claims, this is the registration number stamped in the lower left hand corner of the claim form.

**WFI Source #:** Identify the individual sources (e.g. well #1, well #2) as defined on the DOH Water Facilities Inventory form. If a water right is associated with multiple sources, list all sources in the same row in this column. If a source is associated with multiple water rights, identify each water right on a separate row.

If you have any source(s) that is not currently being used (categorized as standby, back-up, or emergency), and the source has an associated water right that is not listed in column #1, please include the source and water right information in the ADDITIONAL COMMENTS section. This will identify that the source is still intended for a beneficial use under RCW 90.03.015(4). See [Ecology Policy 1040](#).

### **EXISTING WATER RIGHTS SECTION** *(olive green color, top section)*

This section refers to existing water rights. It does not include any water right applications that have been submitted to Ecology.

**Primary Qi (Instantaneous Quantity):** This is also known as instantaneous flow rate. It's the amount of water allowed to be taken under the right from the source during a period of peak operation. For surface water, this is generally expressed in terms of cubic feet per

second (cfs). For groundwater, this is generally expressed in terms of gallons per minute (gpm). One cfs equals 448.8 gpm. Please indicate the units of measurement you are using for each source. If there are situations where the flow rate will be limited (e.g. limitations established on the source when other sources are utilized), please note them in the ADDITIONAL COMMENTS section in the form and in the WSP narrative.

**Non-Additive Qi:** This term was formally known as “supplemental.” Your water rights may use the old terminology. See [Ecology Policy 1040](#) for more information. Not all water rights have non-additive quantities. If a water right has non-additive Qi quantities, include the non-additive quantity in this field. This is generally listed in the “quantity, type of use, period of use” section on both permits and certificates. *Non-additive quantities should not be included in the primary Qi totals.*

**Primary Qa (Annual Quantity):** This is the amount of water that can be taken from the source under the right on an annual basis. It’s usually expressed in terms of acre-feet. An acre-foot is the amount of water necessary to submerge an acre of land to a depth of one foot. One acre-foot equals 43,560 cubic feet or 325,851 gallons of water.

**Non-Additive Qa:** This term was formerly known as “supplemental.” Your water rights may use the old terminology. See [Ecology Policy 1040](#) for more information. Not all water rights have non-additive quantities. If a water right has non-additive Qa quantities, include the non-additive quantity in this field. This is generally listed in the “quantity, type of use, period of use” section on both permits and certificates. *Non-additive quantities should not be included in the primary Qa totals.*

### **CURRENT SOURCE PRODUCTION SECTION** *(light green color, top section)*

This section refers to how much water is withdrawn from the source under each water right for the most recent full calendar year. You will need to determine any excess or deficiency for each water right after calculating how much water was withdrawn compared to how much water is allowed under each water right. If demand has decreased over past years, you may wish to include historic maximum production information in the ADDITIONAL COMMENTS section. This will provide a more complete picture of the use of your water rights.

Use the water use data and demand projections from your water system plan to define current and projected water needs. You can determine if you’ll need additional water rights based on the comparison of existing water rights, current water production, and projected 10- and 20-year needs.

**Total Qi (Instantaneous Quantity):** This refers to the total maximum instantaneous flow rate withdrawn from the source under each water right during the most recent calendar year. For surface water, this is expressed in terms of cubic feet per second (cfs). For groundwater, this is expressed in terms of gallons per minute (gpm). One cfs equals 448.8 gpm.

**Current Excess or Deficiency (Qi):** Please calculate the excess or deficiency for each water right after comparing the total amount withdrawn against each water right. Please use parentheses for deficient amounts.

**Total Qa (Annual Quantity):** This refers to the total volume of water withdrawn from each source under each water right during the most recent calendar year. It's usually expressed in acre-feet.

**Current Excess or Deficiency (Qa):** Please calculate the excess or deficiency for each water right after comparing the total amount withdrawn against each water right. Please use parentheses for deficient amounts.

### **10-YEAR FORECASTED SOURCE PRODUCTION SECTION** *(light blue color, top section)*

This section refers to how much water you project to withdraw from each source in ten years as determined in your water system plan. Please complete this section in the same manner (using the same units of measurement) as the current source production section using your 10-year forecasted amounts.

### **20-YEAR FORECASTED SOURCE PRODUCTION SECTION** *(darker blue color, top section)*

This section refers to how much water you project to withdraw from each source in twenty years as determined in your water system plan. Please complete this section in the same manner (using the same units of measurement) as the current source production section using your 20-year forecasted amounts. If you are unable to provide 20-year forecasts for each source, you may choose to include the combined 20-year total at the bottom.

### **PENDING WATER RIGHTS SECTION** *(second section of form)*

Please complete this section for any water right applications that have been submitted to Ecology. Please include the application number, whether it's a new or a change application, the date submitted, and the total quantities requested.

### **INTERTIES SECTION** *(third section of form)*

This section must be completed by purveyors who purchase any amount of wholesale water. If your system sells water to another public water system, include the quantity sold in the CURRENT SOURCE PRODUCTION section.

Purchasers of wholesale water must account for all water obtained through the intertie for non-emergency supply purposes. This is to ensure that all sources of supply are considered when evaluating whether new water rights are needed within 20 years.

Please identify the maximum quantity of water, expressed in the same manner as the above sections, allowed under each intertie contract. If there are limiting conditions or temporary

agreements that effect the long-term use of the intertie, you must account for such limiting conditions when evaluating the current and forecasted water supply needs in your water system plan.

Finally, purchasers of wholesale water are responsible for ensuring that the underlying water right (held by the purveyor selling water) are adequate for such use. You should confirm that the selling system has accounted for the wholesale area in their water system plan to ensure that the water right authorizes the distribution of water through the intertie.

### **INTERRUPTIBLE WATER RIGHTS SECTION** *(bottom section of form)*

This section refers to water rights that have an annual time-of-year interruption. Please complete this section for any water right listed in the above fields that has a time-of-year interruption. Please include the water right number, describe the limitation, and the time period of interruption. Purveyors with interruptible rights should develop a water shortage response plan as part of their water system plan to describe how demand will be met during periods of interruption through aggressive demand-side conservation, fixing leaks or other means.

### **ADDITIONAL COMMENTS SECTION** *(bottom section of form)*

If the system has any source that is not currently being used on a regular basis (such a source may be categorized as stand-by, back-up, emergency), you should identify the source in this section if the source has an associated water right that is not listed in the above sections. The purpose is to identify that such water rights are still intended for a future beneficial use as required under RCW 90.03.015(4). See Page 2, Item 9 (b) in [ECY Policy 2030](#). For these water rights, please briefly describe the future intended use of the source and when you expect to utilize the water right. This does not refer to sources categorized as seasonal sources.

You should also include any other comments in this section that will explain aspects of your water right portfolio that are not identified above.

# Water Right Self-Assessment Form for Water System Plan

Mouse-over any link for more information. Click on any link for more detailed instructions.

<u>Water Right Permit, Certificate, or Claim #</u> <small>*If water right is interruptible, identify limitation in yellow section below</small>	<u>WFI Source #</u> <small>If a source has multiple water rights, list each water right on separate line</small>	<u>Existing Water Rights</u> <small>Qi= Instantaneous Flow Rate Allowed (GPM or CFS) Qa= Annual Volume Allowed (Acre-Foot/Year) This includes wholesale water sold</small>				<u>Current Source Production – Most Recent Calendar Year</u> <small>Qi = Max Instantaneous Flow Rate Withdrawn (GPM or CFS) Qa = Annual Volume Withdrawn (Acre-Foot/Year) This includes wholesale water sold</small>				<u>10-Year Forecasted Source Production (determined from WSP)</u> <small>This includes wholesale water sold</small>				<u>20-Year Forecasted Source Production (determined from WSP)</u> <small>This includes wholesale water sold</small>			
		<u>Primary Qi</u> <small>Maximum Rate Allowed</small>	<u>Non-Additive Qi</u> <small>Maximum Rate Allowed</small>	<u>Primary Qa</u> <small>Maximum Volume Allowed</small>	<u>Non-Additive Qa</u> <small>Maximum Volume Allowed</small>	<u>Total Qi</u> <small>Maximum Instantaneous Flow Rate Withdrawn</small>	<u>Current Excess or (Deficiency) Qi</u>	<u>Total Qa</u> <small>Maximum Annual Volume Withdrawn</small>	<u>Current Excess or (Deficiency) Qa</u>	<u>Total Qi</u> <small>Maximum Instantaneous Flow Rate in 10 Years</small>	<u>10-Year Forecasted Excess or (Deficiency) Qi</u>	<u>Total Qa</u> <small>Maximum Annual Volume in 10 Years</small>	<u>10-Year Forecasted Excess or (Deficiency) Qa</u>	<u>Total Qi</u> <small>Maximum Instantaneous Flow Rate in 20 Years</small>	<u>20-Year Forecasted Excess or (Deficiency) Qi</u>	<u>Total Qa</u> <small>Maximum Annual Volume in 20 Years</small>	<u>20-Year Forecasted Excess or (Deficiency) Qa</u>
1																	
2																	
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6																	
<b>TOTALS =</b>																	

Column Identifiers for Calculations:    A                    B                    C                    =A-C                    D                    =B-D                    E                    = A-E                    F                    =B-F                    G                    =A-G                    H                    =B-H

<u>PENDING WATER RIGHT APPLICATIONS:</u> Identify any water right applications that have been submitted to Ecology.						
Application Number	New or Change Application?	Date Submitted	Quantities Requested			
			Primary Qi	Non-Additive Qi	Primary Qa	Non-Additive Qa

<u>INTERTIES:</u> Systems receiving wholesale water complete this section. Wholesaling systems must include water sold through intertie in the current and forecasted source production columns above.															
Name of Wholesaling System Providing Water	Quantities Allowed In Contract		Expiration Date of Contract	Currently Purchased <small>Current quantity purchased through intertie</small>				10-Year Forecasted Purchase <small>Forecasted quantity purchased through intertie</small>				20-Year Forecasted Purchase <small>Forecasted quantity purchased through intertie</small>			
	<u>Maximum Qi</u> <small>Instantaneous Flow Rate</small>	<u>Maximum Qa</u> <small>Annual Volume</small>		<u>Maximum Qi</u> <small>Instantaneous Flow Rate</small>	<u>Current Excess or (Deficiency) Qi</u>	<u>Maximum Qa</u> <small>Annual Volume</small>	<u>Current Excess or (Deficiency) Qa</u>	<u>Maximum Qi</u> <small>10-Year Forecast</small>	<u>Future Excess or (Deficiency) Qi</u>	<u>Maximum Qa</u> <small>10-Year Forecast</small>	<u>Future Excess or (Deficiency) Qa</u>	<u>Maximum Qi</u> <small>20-Year Forecast</small>	<u>Future Excess or (Deficiency) Qi</u>	<u>Maximum Qa</u> <small>20-Year Forecast</small>	<u>Future Excess or (Deficiency) Qa</u>
1															
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<b>TOTALS =</b>															

Column Identifiers for Calculations:    A                    B                    C                    =A-C                    D                    =B-D                    E                    =A-E                    F                    =B-F                    G                    =A-G                    H                    =B-H

<u>INTERRUPTIBLE WATER RIGHTS:</u> Identify limitations on any water rights listed above that are interruptible.		
Water Right #	Conditions of Interruption	Time Period of Interruption
1		
2		
3		

<u>ADDITIONAL COMMENTS:</u>