APPENDIX H – Water Use & Water Use Efficiency

Meadows 87784Q	S1 AKB320 S2 AKB321 S3 AKB322 S4 AKB323 S5 AKB324 S6 AKB325	7 dig CF 7 dig GAL (failed) 7 dig CF 7 dig CF 7 dig CF 7 dig CF

Water Right	Acre Ft	Gal Per Min
G2-26623C	498	1060
Show in GAL	162,273,798	

BILLING DATE	MONTHLY (AC) SOLD +BLOW OFF GALLONS	MONTHLY PUMPED GALLONS	MONTHLY DSL %	MONTHLY GAL PER DAY PER CONN	YTD (AC) SOLD + BLOW OFF GALLONS	YTD PUMPED GALLONS	YTD DSL %	YTD % of WATER RIGHT	# OF DAYS
Dec-16	3,196,787	3,366,703	5%	136	53,525,108	67,157,168	20%	41%	363
Nov-16	3,369,845	4,326,342	22%	175	50,328,321	63,790,465	21%	39%	330
Oct-16	3,435,945	4,913,073	30%	199	46,958,476	59,464,123	21%	37%	302
Sep-16	5,001,106	5,983,843	16%	245	43,522,531	54,551,050	20%	34%	273
Aug-16	7,807,871	9,673,428	19%	400	38,521,425	48,567,207	21%	30%	245
Jul-16	5,579,422	7,315,642	24%	303	30,713,554	38,893,779	21%	24%	212
Jun-16	5,664,499	6,546,212	13%	271	25,134,132	31,578,137	20%	19%	182
May-16	5,678,173	6,854,448	17%	283	19,469,633	25,031,925	22%	15%	155
Apr-16	3,224,030	4,467,228	28%	185	13,791,460	18,177,477	24%	11%	121
Mar-16	3,121,015	4,440,203	30%	184	10,567,430	13,710,249	23%	8%	93
Feb-16	3,645,303	5,436,015	33%	225	7,446,415	9,270,046	20%	6%	64
Jan-16	3,801,112	3,834,031	1%	159	3,801,112	3,834,031	1%	2%	32
Dec-15	3,177,115	6,009,799	47%	249	52,833,933	70,125,216	25%	43%	359
Nov-15	3,275,649	4,573,721	28%	190	49,656,818	64,115,417	23%	40%	330
Oct-15	3,745,558	4,525,400	17%	188	46,381,169	59,541,696	22%	37%	301
Sep-15	4,787,537	6,452,270	26%	268	42,635,611	55,016,296	23%	34%	273
Aug-15	5,927,474	6,787,202	13%	281	37,848,074	48,564,026	22%	30%	240
Jul-15	7,199,881	8,442,354	15%	350	31,920,600	41,776,824	24%	26%	212
Jun-15	6,843,751	8,492,343	19%	352	24,720,719	33,334,470	26%	21%	184
May-15	3,694,297	4,984,126	26%	207	17,876,968	24,842,127	28%	15%	151
Apr-15	3,463,120	4,772,928	27%	198	14,182,671	19,858,001	29%	12%	122
Mar-15	3,578,492	4,454,153	20%	185	10,719,551	15,085,073	29%	9%	94
Feb-15	3,508,973	5,166,780	32%	214	7,141,059	10,630,920	33%	7%	64
Jan-15	3,632,086	5,464,140	34%	227	3,632,086	5,464,140	34%	3%	33
Dec-14	3,319,011	4,523,904	27%	188	53,242,034	64,235,696	17%	40%	362
Nov-14	3,313,610	4,559,292	27%	189	49,923,023	59,711,792	16%	37%	333
Oct-14	3,750,801	5,332,305	30%	221	46,609,413	55,152,500	15%	34%	305
Sep-14	5,417,973	6,263,797	14%	260	42,858,612	49,820,195	14%	31%	272
Aug-14	6,350,714	7,487,921	15%	310	37,440,639	43,556,398	14%	27%	242
Jul-14	6,809,635	7,086,081	4%	294	31,089,925	36,068,477	14%	22%	215
Jun-14	4,949,875	6,336,682	22%	263	24,280,290	28,982,396	16%	18%	186
May-14	4,324,667	4,349,627	1%	180	19,330,415	22,645,714	15%	14%	154
Apr-14	3,729,969	4,883,385	24%	202	15,005,748	18,296,087	18%	11%	125
Mar-14	4,046,306	4,002,009	-1%	166	11,275,779	13,412,702	16%	8%	92
Feb-14	3,391,896	4,365,545	22%	181	7,229,473	9,410,693	23%	6%	63
Jan-14	3,837,577	5,045,148	24%	209	3,837,577	5,045,148	24%	3%	33

Meadows 87784Q	S1 AKB320 S2 AKB321 S3 AKB322 S4 AKB323 S5 AKB324 S6 AKB325			CF 7 digit GAL 7 digit (failed) CF 7 digit CF 7 digit CF 6 digit					
Billing	Route	WFI Active	WFI Approved	Connections	Water Right	Acre Ft	Gal Per Min		
25th	T0002	805	1896	804 Metered	G2-26623C	498	1060		
					Show in GAL	162,274,794			
BILLING DATE	MONTHLY (AC) SOLD +BLOW OFF GALLONS	MONTHLY PUMPED GALLONS	MONTHLY DSL %	MONTHLY GAL PER DAY PER CONN	YTD (AC) SOLD + BLOW OFF GALLONS	YTD PUMPED GALLONS	YTD DSL %	YTD % of WATER RIGHT	# OF DAYS
Dec-16				0	19,469,633	25,031,925	22%	15%	
Nov-16				0	19,469,633	25,031,925	22%	15%	
Oct-16				0	19,469,633	25,031,925	22%	15%	
Sep-16				0	19,469,633	25,031,925	22%	15%	
Aug-16				0	19,469,633	25,031,925	22%	15%	
Jul-16				0	19,469,633	25,031,925	22%	15%	
Jun-16				0	19,469,633	25,031,925	22%	15%	
May-16	5,678,173	6,854,448	17%	283	19,469,633	25,031,925	22%	15%	155
Apr-16	3,224,030	4,467,228	28%	185	13,791,460	18,177,477	24%	11%	121
Mar-16	3,121,015	4,440,203	30%	184	10,567,430	13,710,249	23%	8%	93
Feb-16	3,645,303	5,436,015	33%	225	7,446,415	9,270,046	20%	6%	64
Jan-16	3,801,112	3,834,031	1%	159	3,801,112	3,834,031	1%	2%	32
Dec-15	3,177,115	6,009,799	47%	249	52,833,933	70,125,216	25%	43%	359
Nov-15	3,275,649	4,573,721	28%	190	49,656,818	64,115,417	23%	40%	330
Oct-15	3,745,558	4,525,400	17%	188	46,381,169	59,541,696	22%	37%	301
Sep-15	4,787,537	6,452,270	26%	268	42,635,611	55,016,296	23%	34%	273
Aug-15	5,927,474	6,787,202	13%	281	37,848,074	48,564,026	22%	30%	240
Jul-15	7,199,881	8,442,354	15%	350	31,920,600	41,776,824	24%	26%	212
Jun-15	6,843,751	8,492,343	19%	352	24,720,719	33,334,470	26%	21%	184
May-15	3,694,297	4,984,126	26%	207	17,876,968	24,842,127	28%	15%	151
Apr-15	3,463,120	4,772,928	27%	198	14,182,671	19,858,001	29%	12%	122
Mar-15	3,578,492	4,454,163	20%	185	10,719,551	15,085,073	29%	9%	94
Feb-15	3,508,973	5,166,780	32%	214	7,141,059	10,630,920	33%	7%	64
Jan-15	3,632,086	5,464,140	34%	227	3,632,086	5,464,140	34%	3%	33
Dec-14	3,319,011	4,523,904	27%	188	53,242,034	64,235,696	17%	40%	362
Nov-14	3,313,610	4,559,292	27%	189	49,923,023	59,711,792	16%	37%	333
Oct-14	3,750,801	5,332,305	30%	221	46,609,413	55,152,500	15%	34%	305
Sep-14	5,417,973	6,263,797	14%	260	42,858,612	49,820,195	14%	31%	272
Aug-14	6,350,714	7,487,921	15%	310	37,440,639	43,556,398	14%	27%	242
Jul-14	6,809,635	7,086,081	4%	294	31,089,925	36,068,477	14%	22%	215
Jun-14	4,949,875	6,336,682	22%	263	24,280,290	28,982,396	16%	18%	186
May-14	4,324,667	4,349,627	1%	180	19,330,415	22,645,714	15%	14%	154
Apr-14	3,729,969	4,883,385	24%	202	15,005,748	18,296,087	18%	11%	125
Mar-14	4,046,306	4,002,009	-1%	166	11,275,779	13,412,702	16%	8%	92
Feb-14	3,391,896	4,365,545	22%	181	7,229,473	9,410,693	23%	6%	63
Jan-14	3,837,577	5,045,148	24%	209	3,837,577	5,045,148	24%	3%	33
Dec-13	3,116,512	3,880,430	20%	161	51,811,497	58,139,290	11%	36%	357
Nov-13	3,783,930	3,948,505	4%	164	48,694,985	54,258,860	10%	33%	329
Oct-13	3,519,751	4,629,581	24%	192	44,911,055	50,310,355	11%	31%	303
Sep-13	4,210,283	4,855,911	13%	201	41,391,304	45,680,774	9%	28%	270
Aug-13	7,132,711	8,547,216	17%	354	37,181,021	40,824,863	9%	25%	242
Jul-13	6,582,093	7,431,126	11%	308	30,048,310	32,277,647	7%	20%	209
Jun-13	4,509,886	5,226,987	14%	217	23,466,217	24,846,521	6%	15%	180
May-13	4,922,640	5,390,654	9%	223	18,956,331	19,619,534	3%	12%	151
Apr-13	3,739,334	4,542,350	18%	188	14,033,691	14,228,880	1%	9%	119
Mar-13	3,200,864	3,758,655	15%	156	10,294,357	9,686,530	-6%	6%	91
Feb-13	3,260,659	2,769,652	-18%	115	7,093,493	5,927,875	-20%	4%	61
Jan-13	3,832,834	3,158,223	-21%	131	3,832,834	3,158,223	-21%	2%	32
Dec-12	3,421,337	2,727,345	-25%	113	52,953,606	52,794,776	0%	33%	359
Nov-12	3,342,244	2,960,324	-13%	123	49,532,269	50,067,431	1%	31%	329
Oct-12	4,987,470	5,107,520	2%	212	46,190,025	47,107,107	2%	29%	302
Sep-12	6,209,028	5,919,236	-5%	245	41,202,555	41,999,587	2%	26%	268
Aug-12	7,073,881	6,866,508	-3%	285	34,993,527	36,080,351	3%	22%	239
Jul-12	5,274,380	5,422,724	3%	225	27,919,646	29,213,843	4%	18%	209
Jun-12	3,779,420	4,270,289	11%	177	22,645,266	23,791,119	5%	15%	179
May-12	4,459,546	4,260,531	-5%	177	18,865,846	19,520,830	3%	12%	151
Apr-12	3,755,199	4,136,475	9%	171	14,406,300	15,260,299	6%	9%	122
Mar-12	3,304,462	3,535,658	7%	147	10,651,101	11,123,824	4%	7%	90
Feb-12	3,168,685	3,271,759	3%	136	7,346,639	7,588,166	3%	5%	60
Jan-12	4,177,954	4,316,407	3%	179	4,177,954	4,316,407	3%	3%	34
Dec-11	3,733,620	4,181,612	11%	173	56,215,118	55,550,366	-1%	34%	359
Nov-11	4,040,816	3,801,316	-6%	158	52,481,498	51,368,754	-2%	32%	326
Oct-11	5,098,592	3,640,747	-40%	151	48,440,682	47,567,438	-2%	29%	298
Sep-11	7,154,388	7,258,434	1%	301	43,342,090	43,926,691	1%	27%	270
Aug-11	6,985,617	6,016,829	-16%	249	36,187,702	36,668,257	1%	23%	237
Jul-11	6,182,070	5,813,701	-6%	241	29,202,085	30,651,428	5%	19%	210
Jun-11	4,401,576	4,219,240	-4%	175	23,020,015	24,837,727	7%	15%	179
May-11	3,983,624	4,073,265	2%	169	18,618,439	20,618,487	10%	13%	148
Apr-11	3,560,241	3,620,790	2%	150	14,634,815	16,545,222	12%	10%	118
Mar-11	3,528,047	3,817,990	8%	158	11,074,574	12,924,432	14%	8%	89
Feb-11	3,851,796	4,702,646	18%	195	7,546,527	9,106,442	17%	6%	59
Jan-11	3,694,731	4,403,796	16%	183	3,694,731	4,403,796	16%	3%	28
Dec-10	3,957,937	3,440,565	-15%		52,496,114	60,373,004	13%	37%	360
Nov-10	3,512,077	3,255,670	-33%		48,538,177	56,932,439	15%	35%	326
Oct-10	3,593,744	3,605,710	0%		45,026,100	53,676,769	16%	33%	298
Sep-10	5,668,860	5,644,560	0%		41,432,356	50,071,059	17%	31%	268
Aug-10	7,455,922	6,208,120	-20%		35,763,496	44,426,499	19%	27%	237
Jul-10	6,145,583	6,935,660	11%		28,307,574	38,218,379	26%	24%	210
Jun-10	4,160,383	5,789,662	28%		22,161,991	31,282,719	29%	19%	179
May-10	3,725,040	5,075,226	14%		18,001,608	25,493,057	29%	16%	148
Apr-10	3,806,819	5,173,902	26%		14,276,568	20,417,831	30%	13%	120
Mar-10	3,414,807	4,386,064	22%		10,469,749	15,243,929	31%	9%	87
Feb-10	3,458,932	5,642,494	39%		7,054,942	10,857,865	35%	7%	57
Jan-10	3,596,010	5,215,371	31%		3,596,010	5,215,371	31%	3%	29
Dec-09	4,292,002	6,325,208	32%		63,361,840	82,920,980	24%	51%	363
Nov-09	3,643,628	5,260,822	17%		59,069,838	76,595,772	23%	47%	330
Oct-09	4,119,430	5,594,090	26%		55,426,210	71,334,950	22%	44%	302
Sep-09	5,650,190	7,377,241	23%		51,306,780	65,740,860	22%	41%	272
Aug-09	8,294,565	9,896,009	16%		45,656,590	58,363,619	22%	36%	241
Jul-09	9,099,682	9,746,930	7%		37,362,025	48,467,610	23%	30%	211
Jun-09	7,859,550	10,111,189	22%		28,262,343	38,720,680	27%	24%	183
May-09	4,130,621	5,747,111	28%		20,402,793	28,609,491	29%	18%	151
Apr-09	4,073,167	6,229,342	29%		16,272,172	22,862,380	29%	14%	122
Mar-09	3,886,241	5,159,764	25%		12,199,005	16,633,038	27%	10%	94
Feb-09	3,900,162	5,363,728	27%		8,312,764	11,473,274	28%	7%	61
Jan-09	4,412,602	6,109,546	28%		4,412,602	6,109,546	28%	4%	32
Dec-08	3,614,314	5,174,300	30%		61,161,043	81,537,830	25%	50%	360
Nov-08	4,068,783	5,800,990	30%		57,546,729	76,363,530	25%	47%	332
Oct-08	4,823,179	6,696,700	15%		53,477,946	70,562,540	24%	43%	302
Sep-08	6,047,258	6,643,020	9%		48,654,767	63,865,840	24%	39%	270
Aug-08	7,481,690	9,111,520	18%		42,607,509	57,222,820	26%	35%	240
Jul-08	9,292,142	10,878,920	15%		35,125,819	48,111,300	27%	30%	213
Jun-08	5,389,168	6,220,660	13%		25,833,677	37,232,380	31%	23%	181
May-08	4,386,826	5,321,874	18%		20,444,509	31,011,720	34%	19%	152
Apr-08	4,062,590	5,783,261	30%		16,057,683	25,689,846	37%	16%	123
Mar-08	3,767,220	5,973,015	37%		11,995,093	19,906,585	40%	12%	92
Feb-08	3,828,795	6,630,940	42%		8,227,873	13,933,570	41%	9%	63
Jan-08	4,399,078	7,302,630	40%		4,399,078	7,302,630	40%	5%	33

2016 Irrigation Meter Readings - Meadows Water System

location name	meter_no	location name	meter_no	location name	meter_no	location name	meter_no
SO. OF LOT 70 IRRIGAT	10316655 (cubic feet)	PINEDROP & SUMMERFIELD	15823137 (cubic feet)	IRR ALPINE MEADOWS COMM.	386455550 (cubic feet)	833 MANDEE STREET (Steilacoom Ridge)	1014872 (cubic feet)
cur_date	**cur_read**	**cur_date**	**cur_read**	**cur_date**	**cur_read**	**cur_date**	**cur_read**
12/17/2015	176266	12/17/2015	521,471	12/18/2015	5,248,200		
1/19/2016	176266	1/18/2016	521,471	1/20/2016	5,248,200		
2/22/2016	176266	2/19/2016	521,471	2/23/2016	5,248,200		
3/22/2016	176266	3/21/2016	521,471	3/23/2016	5,248,200		
4/19/2016	176266	4/18/2016	521,471	4/20/2016	5,248,200	4/21/2016	0
5/20/2016	176266	5/23/2016	526,065	5/23/2016	5,248,200	5/23/2016	0
6/21/2016	176266	6/23/2016	535,827	6/21/2016	5,248,200	6/22/2016	4,227
7/20/2016	176849	7/20/2016	544,658	7/20/2016	5,248,200	7/22/2016	42,600
8/22/2016	184534	8/22/2016	555,122	8/23/2016	5,248,200	8/24/2016	91,889
9/22/2016	187803	9/21/2016	562,070	9/22/2016	5,248,200	9/23/2016	116,979
10/20/2016	187803	10/19/2016	565,381	10/21/2016	5,248,200	10/19/2016	118,559
11/21/2016	187803	11/18/2016	565,381	11/21/2016	5,248,200	11/22/2016	118,559
12/20/2016	187803	12/21/2016	565381	12/21/2016	5248200	12/21/2016	118,559
Annual Usage	11537		43910		0		118559
ERU (225 gpd)	1.1		4.0		0.0		10.8

Total All Meters 15.8

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

Date Submitted: 6/19/2017

Water Use Efficiency
Annual Performance Report - 2016

WS Name: MEADOWS LLC Water System ID# : 87784 WS County: THURSTON

Report submitted by: *Erica Schilt*

Meter Installation Information:

Estimate the percentage of metered connections: *100%*

If not fully metered - Current status of meter installation:

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: *12/17/2015* To *12/21/2016*

Incomplete or missing data for the year? *No*

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	*67,157,168* gallons
Authorized Consumption (AC) – Annual Volume	*53,525,108* gallons
Distribution System Leakage – Annual Volume TP – AC	*13,632,060* gallons
Distribution System Leakage – Percent DSL = [(TP – AC) / TP] x 100	*20.3 %*
3-year annual average	*20.7 %*

Goal-Setting Information:

Date of Most Recent Public Forum: *06/27/2015* Has goal been changed since last performance report? *Yes*

Note: Customer goal must be re-established every 6 years through a public process

WUE Goals:

Customer Goal (Demand Side):

Reduce the average annual water usage for all accounts by one percent each year through 2027 to a value of 300 gallons per day per connection (gpdpc).

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

HRWW implemented community discussions with customers of systems and neighborhoods on Conservation. HRWW had implemented a third tier in June 2008 to promote conservation and now, a new conservation fourth tier in May 2017 which only affects systems who have exceeded or are at or near 95% of their respective water right, as identified by the company.

Since implementation of our Water Use Efficiency Goals in 2009, our company has achieved a reduction in customer demand and is meeting its conservation goals, overall. While we focus on the 49 Group A systems we own and operate, we do also strive to accomplish conservation goals at the 92 Group B systems as well. As we work through the larger systems to the smaller systems we expect to achieve all of our conservation goals. In June and July of 2016 we reevaluated our conservation goals through multiple community planning meetings whose goals were to both educate our customers on our progress and to seek ideas on setting new goals.

In support of reaching our goals, HRWW 1) Makes available DOH informational brochures "Water Conservation Guidelines to being Waterwise" available to all customers; 2) Provides customer access to 36 months of usage history online, in addition to 13 months of usage history on each monthly bill which allows customers to compare their usage to the prior year; 3) Has product pricing which promotes conservation by imposing higher product cost as usage increases; 4) Has conservation tips available on website; 5) Uses new billing system to flag unusually high consumption so that we may contact customers for possible action on potential leaks; and 6.) Is installing cloud based water meters which will allow customers to access consumption tracking by use of its WaterScope program which will improve individual accountability; 7.) Promoting Xeriscape and Naturescape landscaping; installation of cloud based irrigation controllers (such as Rachio brand).

Additional Information Regarding Supply and Demand Side WUE Efforts

Include any other information that describes how you and your customers use water efficiently:

HRWW has established a goal for each part of the conservation equation; supply and demand. Our overall supply side goal is not more than 300 gpdpc by 2027. Our demand side goal is to reduce and maintain the distribution system leakage (DSL) to less than 10 percent in ten years.

Our supply side plan goal does take into consideration, for example, the difference in the average size of the lots in a particular water system when setting a goal for the necessary supply for that system. Some systems serve a 60 condominium community with virtually no yards while at other systems lot sizes range between .25 acres to 1.25 acre. Clearly, the supply side goal must accommodate these differences which occur as a result of different planning and zoning. Water budgeting per household is now possible with utility billing software. Budgeting should be based on parcel size and historical weather for our area.

Our water well supplies do not exceed current appropriations. We measure the efficiency of our supply side conservation activity through reductions we can achieve in supply production while adequately meeting customer needs. Additionally, we strive to reduce water loss by finding and fixing leaks in the various distribution systems. The conservation impact is measured by tracking Distribution System Leakage (DSL).

Our demand side conservation goal is being met as described above under "Progress in Reaching Goal" at many systems.
Water usage is influenced by our pricing structure. Leak detection at all systems is ongoing.
HRWW has created an extensive database which allows us to compare and contrast production and consumption data for each system. These readings allow us compare "sold" water with "production water" to determine if there is a looming problem.

Customer meter installation on all Group A systems was completed in December of 2016. There are Group B systems which should be completed by mid-2018.

Do not mail, fax, or email this report to DOH

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

Date Submitted: 6/30/2016

Water Use Efficiency
Annual Performance Report - 2015

WS Name: MEADOWS LLC Water System ID# : 87784 WS County: THURSTON

Report submitted by: *Erica Schilt*

Meter Installation Information:

Estimate the percentage of metered connections: *100%*

If not fully metered - Current status of meter installation:

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: *12/19/2014* To *12/17/2015*

Incomplete or missing data for the year? *No*

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	*70,125,216* gallons
Authorized Consumption (AC) – Annual Volume	*52,833,933* gallons
Distribution System Leakage – Annual Volume TP – AC	*17,291,283* gallons
Distribution System Leakage – Percent DSL = [(TP – AC) / TP] x 100	*24.7 %*
3-year annual average	*17.6 %*

Goal-Setting Information:

Date of Most Recent Public Forum: *06/27/2015* Has goal been changed since last performance report? *No*

Note: Customer goal must be re-established every 6 years through a public process

WUE Goals:

Customer Goal (Demand Side):

HRWW's companywide goal is a 5% reduction in peak demand and reducing system leakage to less than 10% in each system.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

HRWW's companywide goal is a 5% reduction in peak demand and reducing system leakage to less than 10% in each system. Our base year for purposes of measuring reduction in use is 2009.
Progress in Reaching Goals
Since implementation of our Water Use Efficiency Goals in 2009, our company has achieved a reduction in demand and is meeting its conservation goals. While we focus on the 48 Group A systems we operate, we do also strive to accomplish conservation goals at the 90 Group B systems as well. As we work through the larger systems to the smaller systems we expect to achieve all of our conservation goals. In June and July of 2015 we reevaluated our conservation goals through several community planning meetings to both educate our customers on our progress and to seek ideas on setting new goals.
In support of reaching our goals, HRWW 1) Makes available DOH informational brochures "Water Conservation Guidelines to being Waterwise" available to all customers; 2) Provides customer access to 24 months of usage history online, in addition to 13 months of usage history on each monthly bill which allows customers to compare their usage to the prior year; 3) Has product pricing which promotes conservation by imposing higher product cost as usage increases; 4) Has conservation tips available on website; and 5) Uses billing system to flag unusually high consumption so that we may contact customers for possible action on potential leaks.

Additional Information Regarding Supply and Demand Side WUE Efforts

Include any other information that describes how you and your customers use water efficiently:

HRWW has established a goal for each part of the conservation equation; supply and demand. Our supply side plan goal takes into consideration, for example, the difference in the average size of the lots in a particular water system when setting a goal for the necessary supply for that system. Some systems serve a 60 condominium community with virtually no yards while at other systems the lot sizes may range between .25 acres to 1 acre. Clearly, the supply side goal must accommodate these differences which occur as a result of different planning and zoning. Our water well supplies do not exceed current appropriations. We measure the efficiency of our supply side conservation activity through reductions we can achieve in supply production while adequately meeting customer needs. Initially using formulas based on use we can estimate changes in peak demand. Ultimately we plan to track peak use and demand in real time through use of our proprietary MobileWaterCo software and hardware, in the cloud and in the field. Additionally, we strive to reduce water loss by finding and fixing leaks in the various distribution systems. The conservation impact is measured by tracking Distribution System Leakage (DSL). Our goal in this metric is <10% DSL in each system. Our current three year average DSL scores range from 0% to 28.9%. The average DSL rate over all 48 Group A systems is 6%.
Our demand side conservation goal is being met as described above under "Progress in Reaching Goal". Water usage is relative to the economy and is somewhat influenced by our pricing structure. HRWW has created an extensive database which allows us to compare and contrast production and consumption data for each system. In addition, HRWW employs a cloud based reporting system to enter source meter readings to register current readings as well as taking readings at each meter reading cycle. These readings allow us compare "sold" water with "production water" to determine if there is a problem.
Leak detection at all systems is ongoing.

Do not mail, fax, or email this report to DOH

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

Date Submitted: 6/29/2015

Water Use Efficiency
Annual Performance Report - 2014

WS Name: MEADOWS LLC Water System ID# : 87784 WS County: THURSTON

Report submitted by: *Erica Schilt*

Meter Installation Information:

Estimate the percentage of metered connections: *100%*

If not fully metered - Current status of meter installation:

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: *12/17/2013* To *12/19/2014*

Incomplete or missing data for the year? *No*

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	*64,235,696* gallons
Authorized Consumption (AC) – Annual Volume	*53,242,034* gallons
Distribution System Leakage – Annual Volume TP – AC	*10,993,662* gallons
Distribution System Leakage – Percent DSL = [(TP – AC) / TP] x 100	*17.1 %*
3-year annual average	*13.7 %*

Goal-Setting Information:

Date of Most Recent Public Forum: *06/27/2015* Has goal been changed since last performance report? *No*

Note: Customer goal must be re-established every 6 years through a public process

WUE Goals:

Customer Goal (Demand Side):

HRWW's companywide goal is a 5% reduction in peak demand and reducing system leakage to less than 10% in each system.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

Since implementation of our Water Use Efficiency Goals in 2009, our company has achieved a reduction in demand and is meeting its conservation goals. While we focus on the 48 Group A systems we operate, we do also strive to accomplish conservation goals at the 90 Group B systems as well. As we work through the larger systems to the smaller systems we expect to achieve all of our conservation goals. In June and July of 2015 we will reassess our conservation goals through several community planning meetings to both educate our customers on our progress and to seek ideas on setting new goals.
In support of reaching our goals, HRWW 1) Makes available DOH informational brochures "Water Conservation Guidelines to being Waterwise" available to all customers; 2) Provides customer access to 24 months of usage history online, in addition to 13 months of usage history on each monthly bill which allows customers to compare their usage to the prior year; 3) Has product pricing which promotes conservation by imposing higher product cost as usage increases; 4) Has conservation tips available on its website; and 5) Uses its billing system to flag unusually high consumption so that we may contact customers for possible action on potential leaks.

Additional Information Regarding Supply and Demand Side WUE Efforts

Include any other information that describes how you and your customers use water efficiently:

HRWW has established a goal for each part of the conservation equation; supply and demand. Our supply side plan goal takes into consideration, for example, the difference in the average size of the lots in a particular water system when setting a goal for the necessary supply for that system. Some systems serve a 60 condominium community with virtually no yards while at other systems the lot sizes may range between .25 acres to 1 acre. Clearly, the supply side goal must accommodate these differences which occur as a result of different planning and zoning. Our water well supplies do not exceed current appropriations. We measure the efficiency of our supply side conservation activity through reductions we can achieve in supply production while adequately meeting customer needs. Initially using formulas based on use we can estimate changes in peak demand. Ultimately we plan to track peak use and demand in real time through use of our proprietary MobileWaterCo software and hardware, in the cloud and in the field. Additionally, we strive to reduce water loss by finding and fixing leaks in the various distribution systems. The conservation impact is measured by tracking Distribution System Leakage (DSL). Our goal in this metric is <10% DSL in each system. Our current three year average DSL scores range from 0% to 28.9%. The average DSL rate over all 48 Group A systems is 5.31%
Our demand side conservation goal is being met as described above under "Progress in Reaching Goal". Water usage is relative to the economy and is somewhat influenced by our pricing structure. HRWW has created an extensive database which allows us to compare and contrast production and consumption data for each system. In addition, HRWW employs a cloud based reporting system to enter source meter readings to register current readings as well as taking readings at each meter reading cycle. These readings allow us compare "sold" water with "production water" to determine if there is a problem.
HRWW will install approximately 635 meters on existing flat rate customers over two plus years. All systems will be completely metered by early 2017. Capital to be provided by owner.
Source meters which under record production are removed for calibration or replacement.
Leak detection at all systems is ongoing.

Do not mail, fax, or email this report to DOH

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

Date Submitted: 6/30/2014

Water Use Efficiency
Annual Performance Report - 2013

WS Name: MEADOWS LLC Water System ID# : 87784 WS County: THURSTON

Report submitted by: *Erica Schilt*

Meter Installation Information:

Estimate the percentage of metered connections: *100%*

If not fully metered - Current status of meter installation:

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: *12/20/1912* To *12/17/2013*

Incomplete or missing data for the year? *No*

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	*58,139,290* gallons
Authorized Consumption (AC) – Annual Volume	*51,811,497* gallons
Distribution System Leakage – Annual Volume TP – AC	*6,327,793* gallons
Distribution System Leakage – Percent DSL = [(TP – AC) / TP] x 100	*10.9 %*
3-year annual average	*%*

Goal-Setting Information:

Date of Most Recent Public Forum: *12/09/2008* Has goal been changed since last performance report? *No*

Note: Customer goal must be re-established every 6 years through a public process

WUE Goals:

Customer Goal (Demand Side):

HRWW's companywide goal is a 5% reduction in peak demand and reducing system leakage to less than 10% in each system.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

In support of reaching our goals, HRWW 1) Makes available DOH informational brochures "Water Conservation Guidelines to being Waterwise" available to all customers; 2) Provides customer access to 24 months of usage history online, in addition to 13 months of usage history on each monthly bill which allows customers to compare their usage to the prior year; 3) Has pricing which promotes conservation by imposing higher product cost as usage increases; 4) Has conservation tips available on its website; and 5) Uses its billing system to flag unusually high consumption so that we may contact customers for possible action.

Since implementation of our WUE Goals in 2009, for the period 2010 through 2013 our metered customers have achieved an overall reduction measured at metered systems only, of 7.11%, exceeding our goal of 5%. While we focus on the 43 Group A systems we operate, we do also strive to accomplish consumer conservation goals at the 92 Group B systems as well. As we work our way through the factors which impact water use efficiency and consumer use reduction at the larger systems to the smaller systems we expect to continue meeting our conservation goals. In 2014 we will reassess our conservation goals through community planning meetings to both educate our customers on our mutual progress toward efficiency, update plans and adjust goals.

Additional Information Regarding Supply and Demand Side WUE Efforts

Include any other information that describes how you and your customers use water efficiently:

HRWW has established a goal for each part of the conservation equation; supply and demand. Our supply side plan goal takes into consideration the difference in the average size of the lots in a particular water system when setting a goal for the necessary supply for that system. Clearly, the supply side goal must accommodate the differences which occur as a result of different planning and zoning decisions of the past. Our water well supplies must not exceed current appropriations. We measure the efficiency of our supply side conservation activity through reductions we can achieve in supply production while meeting customer needs. Initially using formulas based on use we can estimate changes in peak demand. Ultimately we will be tracking peak use and demand in real time. Additionally, we strive to reduce water loss by fixing leaks in the various distribution systems. This conservation impact is measured by tracking Distribution System Leakage (DSL). Our goal in this metric is <10% DSL in each system. We have put in place action plans to insure all residential services are metered at all systems not completely metered by 2017. These plans call for continued calibration or replacement of source meters

Our demand side conservation goal is being met as described above under "Customer (Demand Side) Goal Progress". Customer water usage is impacted by the economy and our pricing structure.

HRWW has created and maintains an extensive database which allows us to compare and contrast production and consumption data. In addition, HRWW employs a cloud based data reporting system to field enter source meter readings at service visits in addition to taking readings at each customer meter reading cycle. These readings allow us compare the authorized consumption with total water produced to determine more immediately if there is unaccounted for loss/use.

Do not mail, fax, or email this report to DOH

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

Date Submitted: 1/18/2013

Water Use Efficiency
Annual Performance Report - 2012

WS Name: MEADOWS LLC Water System ID# : 87784 WS County: THURSTON

Report submitted by: *Vicki Thompson*

Meter Installation Information:

Estimate the percentage of metered connections: *100%*

If not fully metered - Current status of meter installation:

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: *12/21/2011* To *12/20/2012*

Incomplete or missing data for the year? *No*

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	*52,794,776* gallons
Authorized Consumption (AC) – Annual Volume	*52,953,606* gallons
Distribution System Leakage – Annual Volume TP – AC	*-158,830* gallons
Distribution System Leakage – Percent DSL = [(TP – AC) / TP] x 100	*-0.3 %*
3-year annual average	*%*

Goal-Setting Information:

Date of Most Recent Public Forum: *12/09/2008* Has goal been changed since last performance report? *No*

Note: Customer goal must be re-established every 6 years through a public process

WUE Goals:

Customer Goal (Demand Side):

HRWW's companywide goal is a 5% reduction in peak demand and reducing system leakage to less than 10% in each system.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

Since implementation of our Water Use Efficiency Goals in 2009, our company has achieved its goal each year and continues to meet the current goals. While we focus on the 41 Group A systems we operate, we do also strive to accomplish conservation goals at the 90 Group B systems as well. As we work through the larger systems to the smaller systems we expect to continue meeting our conservation goals. In 2014 – 2015 we will reassess our conservation goals through community planning meetings to both educate our customers on our progress and set new goals.
In support of reaching our goals, HRWW 1.) makes available DOH informational brochures on Water Conservation Guidelines to be WaterWise, 2.) provides customers with usage history on each monthly bill which allows customers to compare their usage to the prior year; 3.) has pricing which promotes conservation by imposing higher product cost as usage increases; 4.) has Conservation Tips available on its website; and 5.) uses its billing system to flag unusually high consumption so that we may contact customers for possible action.

Additional Information Regarding Supply and Demand Side WUE Efforts

Include any other information that describes how you and your customers use water efficiently:

HRWW has established a goal for each part of the conservation equation; supply and demand. Our supply side plan goal takes into consideration, for example, the difference in the average size of the lots in a particular water system when setting a goal for the necessary supply for that system. Some systems serve a 60 condominium community with virtually no yards while at other systems the lot sizes may range between .25 acres to 1 acre. Clearly, the supply side goal must accommodate these differences which occur as a result of different planning and zoning. Our water well supplies must not exceed current appropriations. We measure the efficiency of our supply side conservation activity through reductions we can achieve in supply production while meeting customer needs. Initially using formulas based on use we can estimate changes in peak demand. Ultimately we will be tracking peak use and demand in real time. Additionally, we strive to reduce water loss by fixing leaks in the various distribution systems. The conservation impact is measured by tracking Distribution System Leakage (DSL). Our goal in this metric is <10% DSL in each system.
Our demand side conservation goal is being met as described above under "Progress in Reaching Goal". Water usage is relatively easy to control especially in light of the economy and our pricing structure.
HRWW has created an extensive database which allows us to compare and contrast production and consumption data. In addition, HRWW employs a cloud based reporting system to enter source meter readings to register current readings as well as taking readings at each meter reading cycle. These readings allow us compare "sold" water with "production water" to determine if there is a problem.

Do not mail, fax, or email this report to DOH

APPENDIX I – Water Right Assessment and Water Right Certificate and Permits