



## **SEPA ENVIRONMENTAL CHECKLIST**

### **A. Background [\[HELP\]](#)**

1. Name of proposed project, if applicable:  
**Thurston PUD Consolidation of Hawley Hills - 686 (AB037F), Marvin Gardens - 688 (366997), Deerfield Park 1 – 681 (005582), and Deerfield Park 2 – 682 (03681J) into one water system.**
2. Name of applicant:  
**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:  
**9/9/20**
5. Agency requesting checklist:  
**Thurston PUD and the Washington State Department of Health.**
6. Proposed timing or schedule (including phasing, if applicable):
  - **Construction will begin approximately Spring 2021.**
  - **Construction expected to be completed approximately Winter 2021.**
  - **Work hours will be Monday – Friday, 8:00a – 4:30p.**
  - **The only expected partial road closure will be along Marvin Rd should be no full closures of any roadways. Mainline replacement will require the closure of one lane and all Thurston County requirement will be followed. Work will be completed during normal working hours**
  - **Demolition and removal of existing booster pump station will begin in approximately Summer 2021. The PUD expects to add a project timeline to our website when a contractor has been hired, expected in the Spring of 2021.**
7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.  
**No, there are no current plans for future additions, expansion, or further activity related to this proposal.**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

- **Soil Testing - A Geotechnical Engineer will be hired to complete soil testing for the proposed reservoir location.**
- **Cultural Review - A consultant will conduct and provide a report that includes an Inadvertent Discovery Plan (IDP).**
- **Stormwater Plan and Erosion Control – An Engineer will be hired to complete a Stormwater Pollution Prevention Plan (SWPPP) and shall be implemented beginning with initial land disturbance and until final stabilization. The SWPPP shall be prepared in accordance with the requirements in *Thurston County Drainage Design and Erosion Control Manual Volume II* and Sediment and Erosion control Best Management Practices (BMPs) shall be consistent with the BMPs contained in Volume II.**

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, the PUD is not aware of other proposals that directly affect the property covered under this proposal.**

10. List any government approvals or permits that will be needed for your proposal, if known.

- **Thurston County Special Use Permit will be required.**
- **This project is funded by a DWSRF loan, the Washington State Department of Health requires project approval process.**

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.)

- **Project Description Type: This project will combine four adjacent water systems into one consolidated Group A water system. In doing so, Thurston PUD will install approximately 2,100 feet of additional water main, a 100,000 gallon reservoir, and a new booster pump station with four booster pumps.**
- **Actions: Installation of the water main includes pipes, valves, blowoffs, backfill, bedding, surface restoration, traffic control, and other appurtenances. Installation of the reservoir includes surveying, site preparation, reservoir materials, reservoir installation, controls, telemetry, storm drainage improvements, security fencing, landscaping and on-site piping. Installation of the new booster pump station includes the demolition and removal of the existing pump station, as well as installing new pumps, controls, electrical, telemetry, piping, pressure reducing valves in the distribution systems, and a backup generator.**

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.

- **Address: The reservoir and booster pump station will be built at 4623 Marvin Rd at the corner of 47th and Deerfield Park. The 2,100 feet of water main to be installed will occur mostly along Marvin Rd NE between 47th and Deerfield Park Dr., connecting on feeder streets to the current main at three separate locations.**
- **Parcel: 52970100000**
- **Legal: Section S27, Township 19, Range 1W Quarter S2 SE**
- **Latitude: -122.785139, Longitude: 47.100695**

**B. Environmental Elements** [\[HELP\]](#)

**1. Earth** [\[help\]](#)

a. General description of the site:

(circle one): Flat, rolling, hilly, steep slopes, mountainous, other \_\_\_\_\_  
**Flat.**

b. What is the steepest slope on the site (approximate percent slope)?  
**Approximately 3%**

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.

- **Kapowsin silt loam**
- **Alderwood gravelly sandy loam**
- **Everett very gravelly sandy loam**

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 system.**

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.

- **Purpose of excavation: Excavation will take place to install approximately 2100 feet of new water main along Marvin Rd NE between 47<sup>th</sup> and Deerfield Park Dr., connecting on feeder streets to the current main at three separate locations.**
- **Total volume of excavation for water main: 2100 ft of main \* 3.5 ft depth \* 2.5 ft width = approximately 18,375 cubic feet**
- **Type of fill: Local soil or other impervious material will be used to back fill.**

- Total volume of fill around water main: 18,375 cubic feet – (3.14 \* .25 ft radius of pipe \* 2100 ft length of pipe) = approximately 17,963 cubic feet
- Purpose of grading: Grading will take place to level the ground where the foundation for the reservoir and booster pump station will be built.
- Total area of grading for reservoir: Circular design, radius 15 feet, equals approximately 707 sq ft of grading.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

**Yes, an Erosion Control BMPs will be prepared by an Engineer that will identify erosion concerns and best management practices to prevent it.**

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

**Less than 10%. The new reservoir (approximately 40 ft diameter) and booster pump station (approximately 240 sqft.) will be built on concrete.**

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

**The Erosion Control BMPs will detail site specific measures that may include removing unstable material, vegetation management, and silt curtains among others.**

## 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.

**Possible air emissions or odors include dust, automobile emissions, construction equipment, asphalt preparation, concrete batching, and painting or coating the reservoir. The quantity of emissions is unknown. The duration of dust, vehicle, and equipment emissions will be limited to Monday – Friday, 8a – 4:30p for the length of the project. The duration of asphalt preparation, concrete batching, and painting or coating the reservoir will be approximately one week.**

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

**No. Per the Thurston Regional Planning Council, “In the late 1980s...the Olympic Region Clean Air Agency launched an aggressive campaign to curb PM10 emissions through the use of more efficient wood stoves and restrictions on outdoor burning. As a result of these measures, the region experienced a steady decrease in PM10, falling below the national standard in 1990 and continuing well under the standard today. No pollutants pose persistent air quality problems subject to the Clean Air Act at this time.”**

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

**Watering prior to ground disturbing activities will help limit the impact of dust and debris being discharged into the air.**

### 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.

**No. There are no wetlands, streams, waterbodies, or wetland review areas within 1,300 feet of any ground disturbing activity or staging area. The project area is also not located within High Groundwater Hazard Areas or Flood Zones.**

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. There are no waterbodies within 200 feet of where work will occur or where equipment and supplies will be staged.**

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.

**Does not apply. No fill or dredge material will be placed in or removed from surface water or wetlands.**

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

**No. The proposal does not require surface water withdrawals or diversions.**

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

**No. The proposal does not lie within a 100-year floodplain.**

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. The proposal does not involve any discharges of waste materials to surface waters.**

#### 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, four wells will remain operational and continue to provide water service to the customers of the the newly formed water systems The additional piping being installed will improve redundancy in the the distribution system. The four wells are:**

- Hawley Hills S01, AKJ077, 80 gpm
- Hawley Hills S02, AKJ078, 80 gpm
- Deerfield Park 1, S01, AKB352, 53 gpm
- Deerfield Park 2, S01, AAE315, 120 gpm

Other than as described above, no additional groundwater will be withdrawn from a well for any purpose.

While no water will be discharged to groundwater, the proposal lies within multiple Wellhead Protection Areas (WPA). In addition to the WPA's for the four systems being consolidated, there's overlap from Nisqually Highlands 364 (ID# 00953) which is a Thurston PUD water system. In addition, the WPA for two non Thurston PUD systems, Coppermill (ID# AD478) and Silver Hawk (ID# AC166) overlap the proposal site as well. To keep these protected areas safe throughout the course of the project, a Stormwater Polution Prevention Plan (SWPPP) will be prepared.

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.).

**Does not apply. No waste material will be discharged into the ground.**

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.

**A Stormwater Polution Prevention Plan (SWPPP) will be prepared to address all questions in Section C, Water Runoff.**

2) Could waste materials enter ground or surface waters? If so, generally describe.

**A Stormwater Polution Prevention Plan (SWPPP) will be prepared to address all questions in Section C, Water Runoff.**

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

**A Stormwater Polution Prevention Plan (SWPPP) will be prepared to address all questions in Section C, Water Runoff.**

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

**A Stormwater Polution Prevention Plan (SWPPP) will be prepared to address this question.**

#### 4. *Plants* [\[help\]](#)

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

b. What kind and amount of vegetation will be removed or altered?

**Approximately 750 cubic feet of grass and shrubs will be removed from the reservoir site where the foundation of the new reservoir will be put in.**

c. List threatened and endangered species known to be on or near the site.

**There are no known threatened or endangered species on or near the site.**

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

**Grass will be replanted around reservoir as needed.**

e. List all noxious weeds and invasive species known to be on or near the site.

**Tansy Ragwort.**

#### 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.

**Little Brown Bats and Yuma Myotis are known to be in the area, but there is no indication of any being located near ground disturbing activities.**

b. List any threatened and endangered species known to be on or near the site.

**Little Brown Bats and Yuma Myotis.**

c. Is the site part of a migration route? If so, explain.

**Yes, the site is part of the Pacific Flyway.**

d. Proposed measures to preserve or enhance wildlife, if any:

**No measures are being proposed at this time.**

e. List any invasive animal species known to be on or near the site.

**No known invasive animals are on or near the site.**

## **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.

**The current electrical service will be used to power the water system.**

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

**Not likely. The proposed new reservoir will be located on a large parcel with only one home nearby, even at 25 feet high and 30 feet in diameter, the reservoir is not likely to interfere with any future solar energy projects.**

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 are planned at this time.**

## **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.

**Since the project site is within several Wellhead Protection Areas, all trucks, construction equipment, and gas powered tools will be checked for possible leaks. Although not likely, leaking brake fluid, engine oil, gasoline and other fluids that help the vehicles and equipment run pose a hazard if they were to seep into the ground. Routine checks should be sufficient to eliminate any exposure.**

1) Describe any known or possible contamination at the site from present or past uses.

**Per Department of Ecology's Facility/Site Database there is possible arsenic contamination, 20 – 40 ppm, from the Asarco Tacoma Smelter Plume. Soil samples and any necessary mitigation will be done in compliance with Department of Ecology's publication 19-09-101, 2019 Tacoma Smelter Plume Model Remedies Guidance.**

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.

**Per the National Pipeline Mapping System there are no hazardous liquid or gas transmission pipelines located within 660 feet of the project site. In addition, there is no history of pipeline failure in the area for companies regulated by the UTC.**



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.

**No toxic or hazardous chemicals will be used or stored on site during or after the project has been completed.**

4) Describe special emergency services that might be required.

- **In the event of a fire, call the fire department or attempt to extinguish the fire.**
- **In the event of a spill, contain the flow as possible, clean up the waste and any contaminated materials as soon as practicable, and call 1-800-SPILL-911.**
- **If a fire, explosion or other release could threaten human health or could reach state waters, call 1-800-SPILL-911 and the National Response Center at 1-800-424-8802.**
- **In the event of ground water contamination, the contractor will follow their ground water incident protocol.**

5) Proposed measures to reduce or control environmental health hazards, if any:

**As outlined in the previous questions in this section, proposed measures include checking tools and vehicles for leaks, sampling soil for arsenic, and using mitigation techniques recommended by the Department of Ecology.**

#### *b. Noise*

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

**Outside noises will have no impact on the 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.

**Equipment and tool noise is to be expected during excavation and construction. Work will take place Monday – Friday, 8:00a – 4:30p.**

3) Proposed measures to reduce or control noise impacts, if any:

**For people and animals in the area, limiting operational hours to Monday – Friday, 8:00a – 4:30p will help control noise impacts. For construction workers, wearing appropriate Personal Protection Equipment such as ear plugs will reduce the noise level.**

### **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.

**The project site currently houses the Hawley Hills water system and the adjacent properties are residential. The proposed project should not affect the current or nearby land uses.**

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, the site has not been used as working farmlands or working forest lands. No agricultural or forest land will be converted to other uses for this project.**

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:

**No, the proposal will not affect or be affected because there are not surrounding works farms or forest land operations in the surrounding area of the project.**

c. Describe any structures on the site.

**The reservoir site currently houses the pumphouse and a reservoir. The water main installation will take place in easements alongside the roads. The pumphouse is approximately 300 sqft.**

d. Will any structures be demolished? If so, what?

**Yes, current pumphouse will be demolished and rebuilt in another location on site.**

e. What is the current zoning classification of the site?

**Rural Residential/Resource 1/5. The allowable density of this classification is one dwelling unit per five acres.**

f. What is the current comprehensive plan designation of the site?

**Rural Resource and Residential (Residential Density 1 unit per 5 acres).**

g. If applicable, what is the current shoreline master program designation of the site?

**Not applicable.**

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

**Yes, the site is part of the Wellhead Protection Areas identified in section 3b, Groudwater. It's also part of the Critical Aquifer Recharge Areas as designated by Thurston County.**

i. Approximately how many people would reside or work in the completed project?

**On site there will be zero people who will reside and usually 1-4 workers will be coming and going a few times a week to manage the water system.**

j. Approximately how many people would the completed project displace?

**No one will be displaced by the completed project.**

k. Proposed measures to avoid or reduce displacement impacts, if any:

**Not applicable because no one will be displaced.**

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

**Special Use Permit will be required from Thurston County.**

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

**Not applicable because no agricultural and forest land of long-term commercial significance will be impacted by the project.**

**9. Housing** [\[help\]](#)

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

**Not applicable. No housing units will be provided as part of this project.**

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

**Not applicable. No housing units will be eliminated as part of this project.**

c. Proposed measures to reduce or control housing impacts, if any:

**Not applicable. No housing impacts are anticipated as part of this project.**

**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?

**The new reservoir will be approximately 20 feet tall and built from concrete. The exterior color of the building, fencing and reservoir has not been chosen at this time and the PUD is working with the community to pick the color that works best for the neighborhood.**

b. What views in the immediate vicinity would be altered or obstructed?

**The new reservoir will alter the view of the adjacent homes.**

Proposed measures to reduce or control aesthetic impacts, if any:

**Thurston PUD explored other parcels in the area to see if there was a more aesthetically pleasing location for the new reservoir, but the final location was the best option. Painting and landscaping the reservoir will increase the aesthetic appeal of the reservoir.**

**11. Light and Glare** [\[help\]](#)

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

**Security lighting may be added and will be motion detected around the pump house structure.**

b. Could light or glare from the finished project be a safety hazard or interfere with views?

**No light or glare will pose a safety hazard as part of the project.**

c. What existing off-site sources of light or glare may affect your proposal?

**None.**

d. Proposed measures to reduce or control light and glare impacts, if any:

**None.**

**12. Recreation** [\[help\]](#)

a. What designated and informal recreational opportunities are in the immediate vicinity?

**There are no recreational opportunities in the immediate vicinity. Tolmie State Park is approximately 1.5 miles to the north of the project site.**

b. Would the proposed project displace any existing recreational uses? If so, describe.

**No, the project would not displace any existing recreational uses.**

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

**Not applicable because there are no anticipated impacts on recreation.**

**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.

**No, there are no buildings, structures, or sites that are eligible for listing on preservation registers.**

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.

**A professional cultural review will be conducted. Per WISSARD's Predictive Model there is a moderate to moderately low risk. In addition, the project site is also an area of interest for the Confederated Tribes of the Chehalis Reservation, as well as the Nisqually, Puyallup, Cowlitz, Squaxin, and Samish tribes.**

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.

**Methods include a professional cultural review as well as GIS data from DAHP's WISAARD map. In addition, copies of this SEPA will be provided to interested tribes identified in the previous question during the public comment period.**

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.

**In the event that archaeological materials are encountered during the project, an archaeologist will immediately be notified, and work halted in the vicinity of the find until the materials can be inspected and assessed. At that time, the appropriate persons are to be notified of the exact nature and extent of the resource so that measures can be taken to secure them. In the event of inadvertently discovered human remains or indeterminate bones, pursuant to RCW**

**68.50.645, all work must stop immediately, and law enforcement should be contacted. Any remains should be covered and secured against further disturbance, and communication established with local police, the DAHP, and any concerned tribal agencies.**

**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.

**Marvin Rd NE is the main access road to all four systems and is a direct exit from Interstate 5.**

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?

**Yes, Lacey InterCity Transit bus route 65 has a stop approximately ¾ of a mile south of the project site.**

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

**Does not apply. No parking will be developed or eliminated as part of this project.**

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, the proposal does not require any new or improvements to existing roads, streets, pedestrian, bicycle, or state transportation facilities.**

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

**No, the proposal will not use water, rail, or air transportation.**

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?

**No new traffic will be generated. The PUD currently operates a water system on this site and will continue the periodic checks of the system system as normal.**

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.

**No, the proposal will not interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area.**

h. Proposed measures to reduce or control transportation impacts, if any:

**The onsite crew will comply with the Manual on Uniform Traffic Control Devices (MUTCD) to keep traffic moving as efficiently as possible while also ensuring worker safety.**

**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.

**No, the project will not result in an increased need for public services such as emergency services, school enrollment, police and law enforcement, or public transit.**

b. Proposed measures to reduce or control direct impacts on public services, if any.

**Does not apply. No impacts are anticipated.**

**16. Utilities** [\[help\]](#)

a. Circle utilities currently available at the site:

electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other \_\_\_\_\_

**Electricity and water.**

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.

**Currently there are no new utilities proposed for this project. Thurston PUD is upgrading and expanding the current water infrastructure to consolidate the previously mentioned water systems into one system. Electricity is provided by Puget Sound Energy (PSE).**

**C. Signature** [\[HELP\]](#)

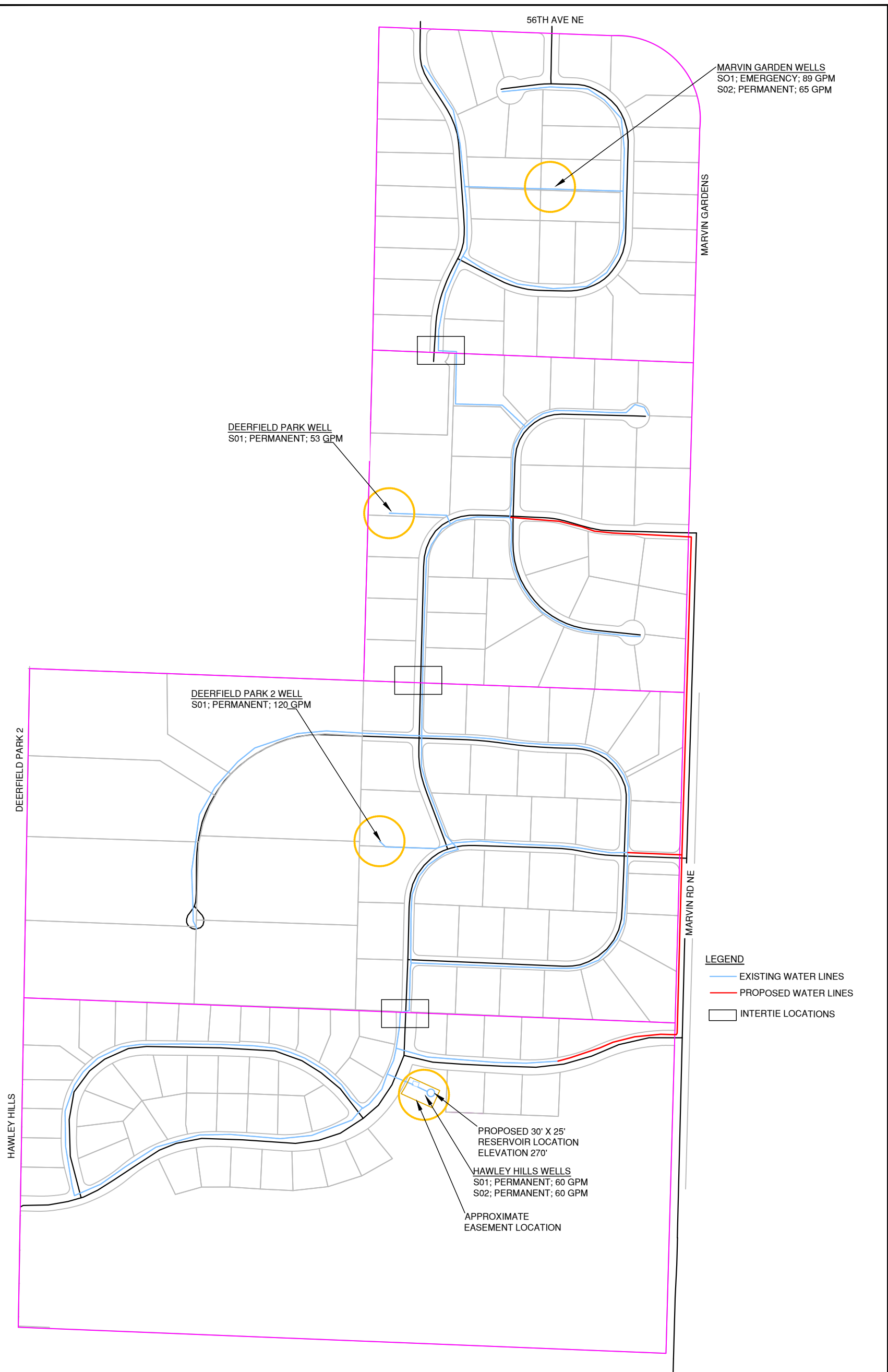
The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: \_\_\_\_\_

Name of signee: **Brian Wilson**

Position and Agency/Organization: **Operations Specialist II**

Date Submitted: **10/7/2020**



THIS IS NOT A SURVEY. PROPERTY LINES AND ELEVATIONS SHOWN ARE BASED UPON THE AVAILABLE INFORMATION (THURSTON COUNTY MAP) AND ARE APPROXIMATE ONLY. SITE INFORMATION PROVIDED BY: THE CLIENT

DISTURBANCE OF EXISTING SURVEY MONUMENTS IS A GROSS MISDEMEANOR UNDER RCW 58.04.015

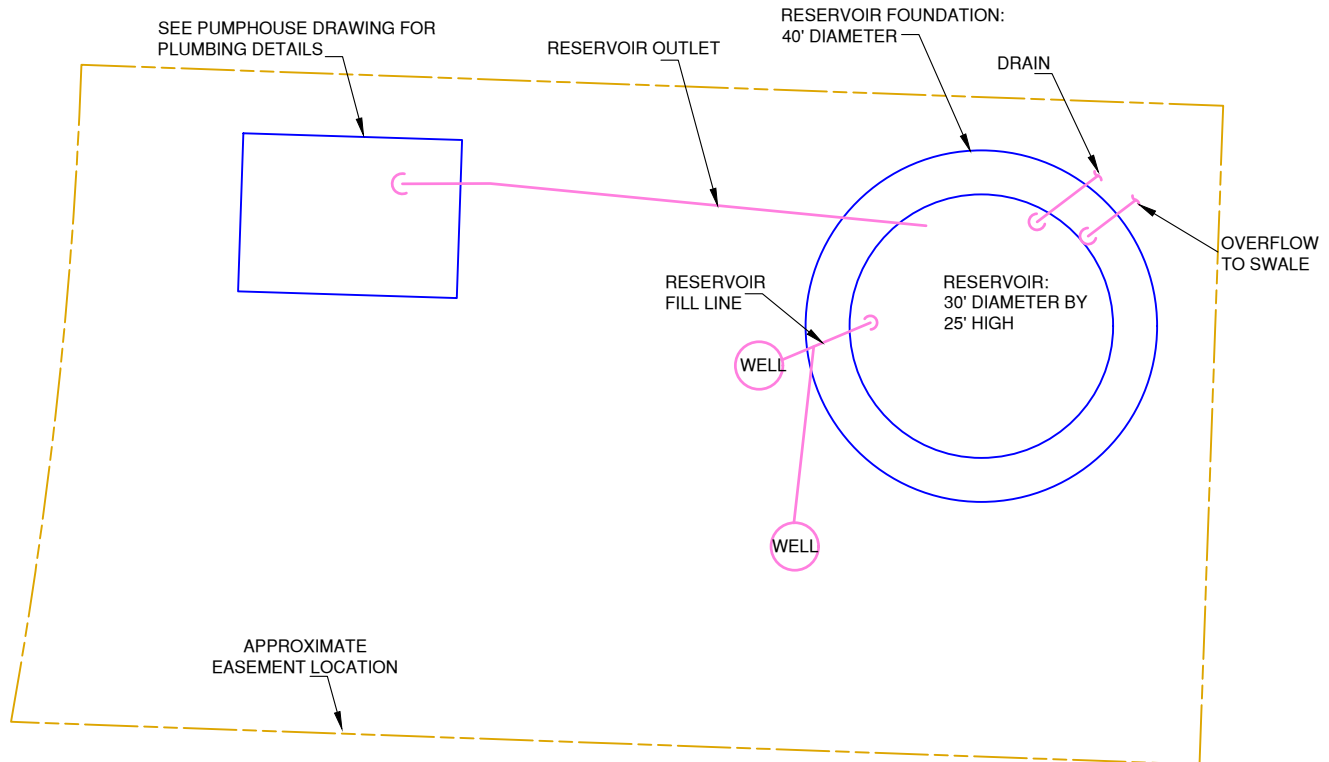
DRAWN BY: ANNA NELSON, EIT CHECKED BY: DOUG PIEHL, PE		SYSTEM <b>THURSTON COUNTY CONSOLIDATION</b>	OWNER THURSTON PUD
REVISION		FILE NO. 200304	FILE NAME SITE MAP
DATE MARCH 26, 2020		SCALE 1" = 400'	
DESCRIPTION PRELIMINARY	DATE 08/14/2020	<b>NORTHWEST WATER SYSTEMS, INC.</b> DESIGN - CONSULTING - MANAGEMENT P.O. BOX 123 PORT ORCHARD, WA 98366 (360) 876-0958	



DRAWN BY: Anna Nelson, EIT CHECKED BY: Doug Piehl, PE		SYSTEM THURSTON COUNTY CONSOLIDATION		OWNER THURSTON PUD						
FILE NO. 200304		FILE NAME RESERVOIR		SHEET NO.						
DATE AUGUST 7, 2020		SCALE NTS								
<table border="1"> <thead> <tr> <th colspan="2">REVISION</th> </tr> <tr> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>PRELIMINARY</td> <td>08/14/2020</td> </tr> </tbody> </table>		REVISION		DESCRIPTION	DATE	PRELIMINARY	08/14/2020	<b>NORTHWEST WATER SYSTEMS, INC.</b> DESIGN - CONSULTING - MANAGEMENT P.O. BOX 123 PORT ORCHARD, WA 98366 (360) 876-0958		
REVISION										
DESCRIPTION	DATE									
PRELIMINARY	08/14/2020									



47TH AVE NE

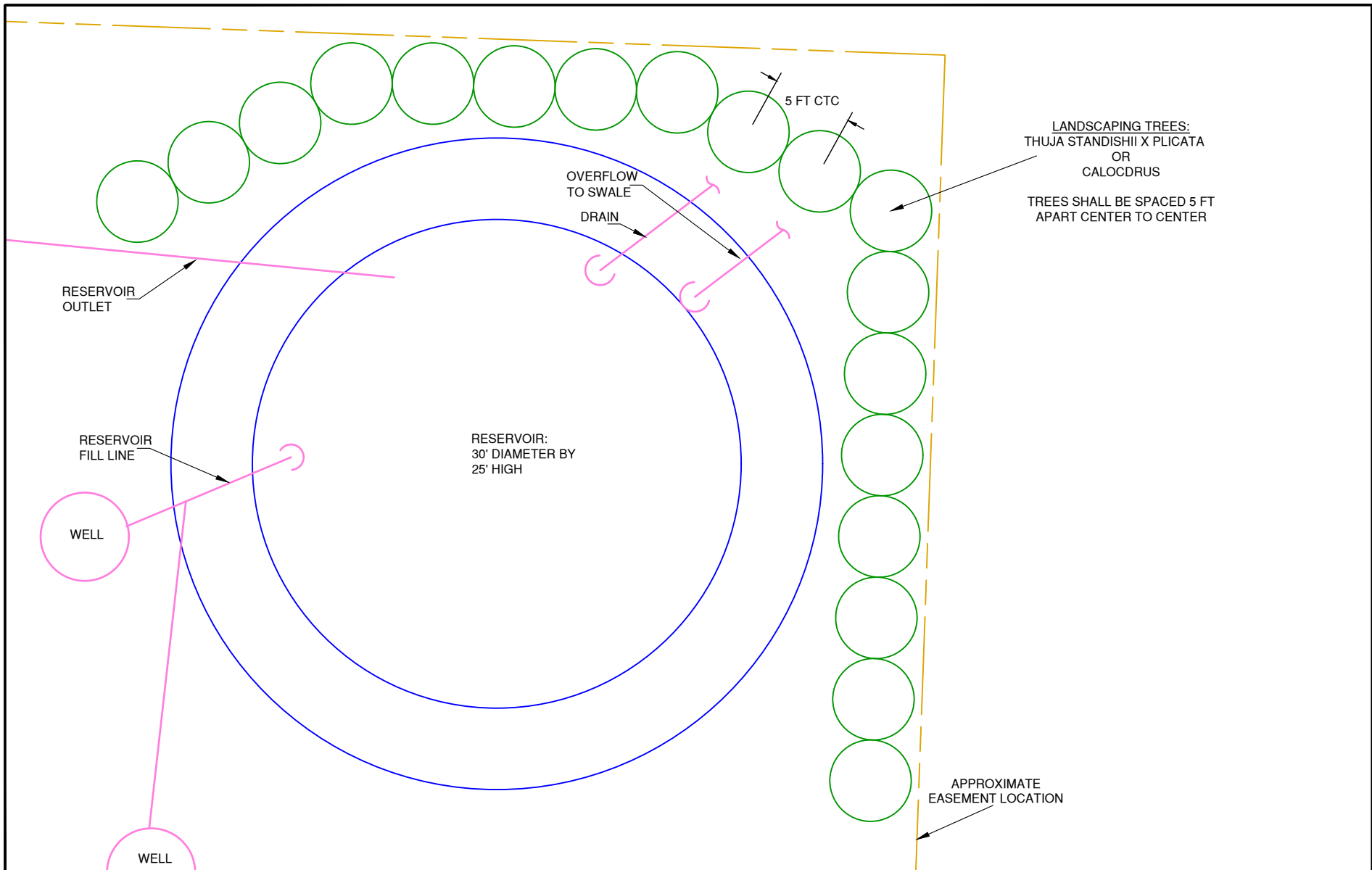


SITE INFORMATION PROVIDED BY: THE CLIENT AND THURSTON COUNTY

THIS IS NOT A SURVEY. PROPERTY LINES AND ELEVATIONS SHOWN ARE BASED UPON THE AVAILABLE INFORMATION AND ARE APPROXIMATE ONLY.

DISTURBANCE OF EXISTING SURVEY MONUMENTS IS A GROSS MISDEMEANOR UNDER RCW 58.04.015

DRAWN BY: Anna Nelson, EIT CHECKED BY: Doug Piehl, PE		SYSTEM <b>THURSTON COUNTY CONSOLIDATION</b>	OWNER <b>THURSTON PUD #1</b>
FILE NO. <b>200304</b>		FILE NAME	SHEET NO.
DATE <b>AUGUST 10, 2020</b>		SCALE <b>NTS</b>	
REVISION	DESCRIPTION	DATE	
	PRELIMINARY	08/14/2020	
<b>NORTHWEST WATER SYSTEMS, INC.</b> DESIGN - CONSULTING - MANAGEMENT P.O. BOX 123 PORT ORCHARD, WA 98366 (360) 876-0958			



LANDSCAPING TREES:  
 THUJA STANDISHII X PPLICATA  
 OR  
 CALOCDRUS  
 TREES SHALL BE SPACED 5 FT  
 APART CENTER TO CENTER

RESERVOIR:  
 30' DIAMETER BY  
 25' HIGH

RESERVOIR  
 OUTLET

RESERVOIR  
 FILL LINE

WELL

WELL

OVERFLOW  
 TO SWALE  
 DRAIN

5 FT CTC

APPROXIMATE  
 EASEMENT LOCATION

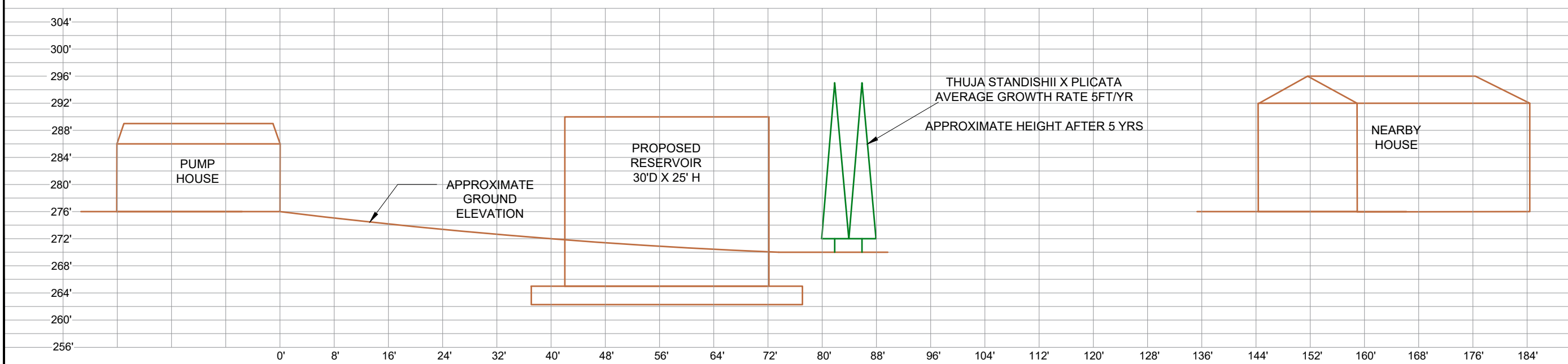


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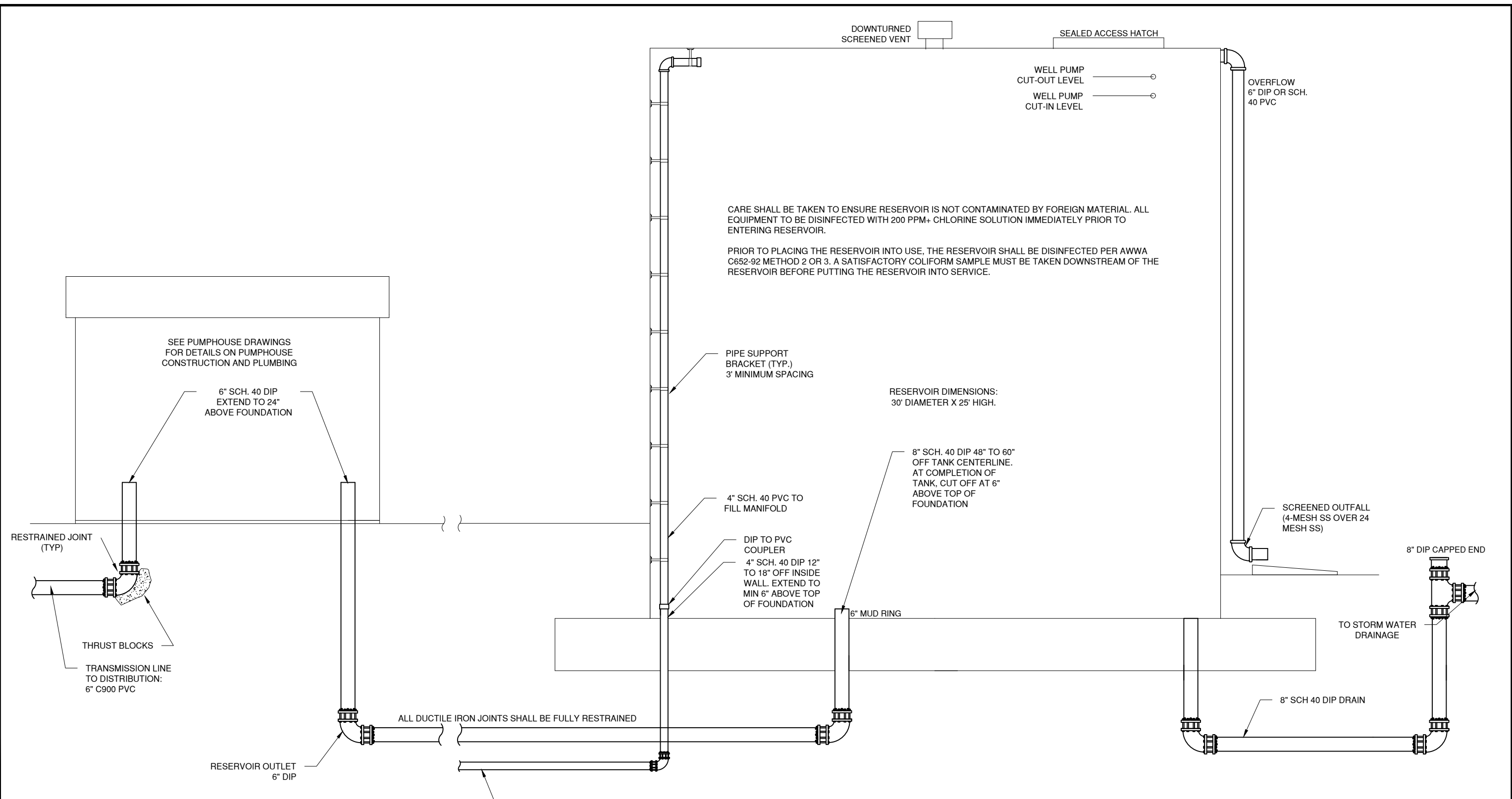


SYSTEM: THURSTON COUNTY CONSOLIDATION		FILE NAME: SITE MAP	
DRAWN BY: ANNA NELSON, EIT		FILE NO.: 190201	SCALE: NTS
CHECKED BY: DOUG PIEHL, PE		DATE: MAY 13, 2020	DATE: 8/14/2020
REVISION		DATE	
DESCRIPTION			
PRELIMINARY			
		NORTHWEST WATER SYSTEMS, INC. DESIGN - CONSULTING - MANAGEMENT P.O. BOX 123 PORT ORCHARD, WA 98366 (360) 876-0958	



ALL ELEVATION AND DISTANCES ARE APPROXIMATE

SCALE 1" = 16'



CARE SHALL BE TAKEN TO ENSURE RESERVOIR IS NOT CONTAMINATED BY FOREIGN MATERIAL. ALL EQUIPMENT TO BE DISINFECTED WITH 200 PPM+ CHLORINE SOLUTION IMMEDIATELY PRIOR TO ENTERING RESERVOIR.

PRIOR TO PLACING THE RESERVOIR INTO USE, THE RESERVOIR SHALL BE DISINFECTED PER AWWA C652-92 METHOD 2 OR 3. A SATISFACTORY COLIFORM SAMPLE MUST BE TAKEN DOWNSTREAM OF THE RESERVOIR BEFORE PUTTING THE RESERVOIR INTO SERVICE.

RESERVOIR DIMENSIONS:  
30' DIAMETER X 25' HIGH.

REVISION		TITLE		
DESCRIPTION	DATE	THURSTON COUNTY CONSOLIDATION		
PRELIMINARY	08/14/2020	FILE NO.	200304	FILE NAME
		DATE	AUGUST 10, 2020	RESERVOIR PROFILE
		SCALE	1" = 5'	SHEET NO.
				1 OF 1
<b>NORTHWEST WATER SYSTEMS</b> DESIGN-CONSULTING-MANAGEMENT P.O. BOX 123 PORT ORCHARD, WA 98366 (360) 876-0958				

## Arsenic and Lead Sampling Program – Hawley Hills Consolidation

Use Table 1 to find the number of sample locations you need. The number of sample locations will depend on:

- Land use – What is the intended use? **Reservoir and pump house for water service.**
  - Location – Is the property in an area where arsenic has been found in soils from 20 -100 ppm or over 100 ppm (see map on inside cover)? **20 – 100 ppm.**
  - Size – How big is the decision unit? **Less than .25 acres.**
  - Quantity – How many decision units are there? **2.**
  - Mark each decision unit with significant forest duff (decomposed leaves, needle, and other plant material that has gathered on the soil surface). **There is no forest duff.**
- 

### DECISION UNIT 1 (DU1)

- 8 Samples, 0 – 6 inches below ground surface (bgs)
- 2 samples, 6 – 12 inches bgs (taken at DU1-4 and DU1-8)
- Sample Label Nomenclature: DU1-1 = Decision Unit 1, Sample 1



## DECISION UNIT 2 (DU2)

- 8 samples, 0 – 6 inches bgs
- 2 samples, 6 – 12 inches bgs (taken at DU2-4 and DU2-8)
- Sample Label Nomenclature: DU2-1 = Decision Unit 2, Sample 1



## Equipment needed

- Stainless steel tools to dig holes and remove soil (trowel and small shovel)
- Stainless steel or glass bowl for mixing
- Clean glass containers from the lab or zip-top plastic bags
- Permanent marking pen to record sample locations on the jar or bag
- Wash bucket, soap, scrub brush, and rinse water (distilled or deionized)
- Gloves and dust mask
- Paper towels
- Property diagrams with sampling grids
- Map or aerial photo of decision unit
- Cooler with ice to keep the samples cool
- Chain of custody forms



## Soil: Sampling steps

Take one sample from each depth range you need, at each sampling location marked on your decision unit diagrams (Figure 5). These should be collected as separate samples. **Do not** mix soil samples from different sampling locations or depth ranges.

1. Before taking any samples, contact an Ecology accredited lab (see Help Desk on page 73). The lab may have special instructions about labeling and delivering the samples.

2. Label each sampling location, in each decision unit, with a unique name or number. For better accuracy in recording your sample locations, use a Geographic Positioning System (GPS). Mark them on an aerial photo, if you can.
3. Using a permanent marker, label your glass jars or zip-top plastic bags with:
  - The unique name or number for the sampling location
  - Your name
  - The date the sample is being taken
  - “Arsenic and lead”
4. Clear away grass, leaves, gravel, or debris from the soil surface to ensure your sample is all soil. Dig a six-inch hole with the stainless steel trowel, shovel, or hand auger.
5. Using a clean trowel or spoon for each depth, scrape soil from the sides of the hole and put it in the mixing bowl. Avoid or discard pebbles, rocks, leaves, roots, and stems. Collect soil evenly from throughout the depth of the hole. It is important to mix the soil well. If you mix the soil in a Ziploc bag or sampling container, shake the container or the bag well or use a clean spoon.
6. Fill up the glass jar or plastic bag with the mixed soil and seal it securely. Discard any extra soil back into the hole. Do not composite (mix) samples from different locations (unless it is forest duff).
7. Between each sample, scrub the sampling tool and mixing bowl clean in the wash bucket, rinse, and pour the dirty water down a sanitary sewer or in a place where it can soak into the ground. Do not pour it down the storm drain.
8. For the 6 to 12 inch samples, dig additional six inches deeper at the same location. This is a separate sample,



#### Healthy Sampling Steps

Limit dust by dampening soil before sampling or wear a dust mask.

Wear gloves. Wash hands, arms, and face after sampling.

Wash work clothing separately from other laundry.

**Figure 5. Example of soil sampling**



so repeat steps 4 through 6, but only scrape the side of the hole where it is 6 to 12 inches deep.

9. Immediately after collecting each sample, fill out the laboratory chain of custody form with the required information.

### **Lab analysis**

See the Help Desk section (page 73) of this guidance for how to select a lab. The lab must use EPA methods 6010, 6020, or 6200 for arsenic and lead.

Keep the samples in a cool, dry place until their analysis. Bring the samples to the lab or follow its instructions for shipping. Include a copy of the sample inventory sheet (Form 2) and the chain of custody form provided by the lab. Keep copies for yourself.

The lab report should include a list or separate pages of results for each sampling location. It should have results for quality control samples done at the lab. This is standard practice for all metals analysis. You will receive back the chain of custody form, which keeps track of the samples. Keep everything you receive from the lab.