

SNOHOMISH COUNTY PUD  
**2021 Water System Plan**  
**Volume 2 of 16 -**  
**Chapter 1 Appendices**

December 2022  
+ final review & approval documents



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# Appendices

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## **Appendix 0-1**

### Submittal and Consistency Checklists

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Drinking Water

# Project Approval Application (PAA) Form

331-149 F • Revised 1/10/2022

Please complete all appropriate sections of this application form and include it with your project.

## WATER SYSTEM Information

<u>SnoPUD 1 (All)</u>	<u>809071</u>
Water System Name	PWS ID #
<u>Water System Plan 2021</u>	<u>United States</u>
Submittal Description	County
<u>A-Community</u>	<u>20972</u>
Classification	# of Service Connections

## OWNER Information

<u>Snohomish Public Utility District No. 1</u>	<u>809071</u>
Name	Owner ID #
<u>bewood@snopud.com</u>	<u>425-397-3003</u>
E-mail address	Phone
	<u>982</u>
<u>PO Box 1107</u>	<u>Everett</u>
Mailing address	City
	<u>WA</u>
	State
	<u>06</u>
	Zip

## PROJECT CONTACT Information

<u>Brant Wood</u>	<u>AGM Water Utility</u>
Name/Position	
<u>bewood@snopud.com</u>	<u>425-397-3003</u>
E-mail address	Phone
<u>See above</u>	<u>Everett</u>
Mailing address	City
	<u>WA</u>
	State
	<u>98206</u>
	Zip

## CONSULTING/DESIGN ENGINEER Information

<u>Elisheva Walters</u>	<u>Murraysmith, Inc.</u>
Name/Firm	
<u>Elisheva.walters@murraysmith.us</u>	<u>509-321-6010</u>
E-mail address	Phone
<u>421 W Riverside Ave, Suite 762</u>	<u>Spokane</u>
Mailing address	City
	<u>WA</u>
	State
	<u>99201</u>
	Zip

## SMA Information

<u>Enter text</u>	<u>Enter text</u>
Name/SMA	SMA #
<u>Enter text</u>	<u>Enter text</u>
E-mail address	Phone
<u>Enter text</u>	<u>Enter text</u>
Mailing address	City
	State
	Zip

## BILLING Information\*

<u>See above</u>	
Name	
<u>Enter text</u>	<u>Enter text</u>
E-mail address	Phone
<u>Enter text</u>	<u>Enter text</u>
Mailing address	City
	State
	Zip

## GENERAL Submittal Information

- Check here if you need a Box.com folder set up for transferring your project to us electronically. (You will receive an invite by email after we have received the PAA form.)
- Do you have projects currently under review by us?  Yes  No
- This is a new water system (if so, include a completed Water Facilities Inventory Report Form with your project).
- DWSRF Loan  
 Application # Enter Number  
 Loan # Enter Number
- Water System Plan (complete Planning Information)
- Engineering (complete Engineering Information)
- Satellite Management Agency Plan (complete SMA Information)
- Enforcement  
 Docket # Enter Number  
 Type Enter Text
- Small Water System Management Program (complete Planning Information)
- Group B (complete Engineering Information)

## ENGINEERING Information

<u>Choose Project Report</u>
Project Report Type
<u>Choose Predesign Study</u>
Predesign Study
<u>Choose Construction Documents</u>
Construction Documents
<u>Choose Other</u>
Other

<u>Choose Special Report or Plans</u>
Special Report or Plans
<u>Choose Existing System Approval</u>
Existing System Approval
<u>Choose Waiver</u>
Waiver

**PLANNING Information**

How many connections does system currently have? ..... 20972

If system is private-for-profit, is it regulated by UTC? .....  Yes  No

Is system expanding? .....  Yes  No

    Expanding service area? .....  Yes  No

    Increasing number of approved connections?.....  Yes  No

If the number of connections is expected to increase, how many *new* connections are proposed in the next ten (10) years? ..... Approx. 11,000

Is your system pursuing additional water rights from Department of Ecology in the next 20 Years? .....  Yes  No

Is a new intertie proposed?.....  Yes  No

Is the system located in a Critical Water Supply Service Area (is there a Coordinated Water System Plan)?.....  Yes  No

    If yes, have you sent a copy of the plan to the county or responsible agency for the CWSP? .....  Yes  No

Are you requesting distribution main project report and construction document submittal exception?.  Yes  No

    If so, does the WSP contain standard construction specifications for distribution mains? .....  Yes  No

The water system/purveyor is responsible for sending a copy of the plan to:

- Adjacent utilities for review or a letter notifying them that a copy is available for their review and where it is located. ....  Yes  No
- All local governments within the service area.....  Yes  No
- County and city planning departments, one or both if applicable, adjacent water systems, etc..  Yes  No

List who have you sent the WSP to for review other than ODW?..... [See attached list](#)

Are you proposing a change in the place of use of your water right?.....  Yes  No

    If "yes," the purveyor must send a copy of the WSP or SWSMP to all local governments within the service area (county and city planning departments) for a local consistency determination. Has this been completed?.....  Yes  No

What are the years of the requested plan approval period (for example 2022 to 2032)? ..... 2021 to 2031

Does your plan follow your preplan checklist?.....  Yes  No

**SMA Information**

Ownership only       Management and Operations only       Ownership, Management & Operations

Where can we find the [SMA Notice of Intent 331-590](#), in your plan..... [Enter Text](#)

Please submit all documents electronically. We request one paper copy of planning documents be submitted to the address for your regional office below.

<input type="checkbox"/> <b>Eastern Regional Office</b> Department of Health 16201 E Indiana Ave, Suite 1500 Spokane Valley, WA 99216 <a href="mailto:roadmin@doh.wa.gov">roadmin@doh.wa.gov</a> Phone: 509-329-2100 Fax: 509-329-2104	<input checked="" type="checkbox"/> <b>Northwest Regional Office</b> Department of Health 20425 72 <sup>nd</sup> Ave S, Suite 310 Kent, WA 98032-2388 <a href="mailto:dwnwro.projects@doh.wa.gov">dwnwro.projects@doh.wa.gov</a> Phone: 253-395-6750 Fax: 253-395-6760	<input type="checkbox"/> <b>Southwest Regional Office</b> Department of Health PO Box 47823 Olympia, WA 98504-7823 <a href="mailto:swro.admin@doh.wa.gov">swro.admin@doh.wa.gov</a> Phone: 360-236-3030 Fax: 360-664-8058
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To request this document in another format, call 1-800-525-0127. Deaf or hard of hearing customers, please call 711 (Washington Relay) or email [civil.rights@doh.wa.gov](mailto:civil.rights@doh.wa.gov).

# Local Government Consistency Determination Form

Water System Name: Snohomish County Public Utility District #1 PWS ID: 809071

Planning/Engineering Document Title: 2021 Water System Plan Plan Date: February 2022


Local Government with Jurisdiction Conducting Review: City of Granite Falls

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.	Sections 2.3, 3.2.2	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.	Sections 5.4, 5.5	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> .	N/A	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.	Section 2.4 App 1-1	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.	Sections 2.1.2, 3.2.2, 3.2.4, 8.1	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

BRENT KIRK CITY MGR CITY OF GRANITE FALLS

Printed Name, Title, & Jurisdiction

3/28/22

Date

**RECEIVED**

APR 01 2022

WATER DEPT.



24602 Old Owen Road - P.O. BOX 158, Monroe, WA. 98272-0158

Phone: (360) 794-6900 Fax: (360) 805-0616

**Wednesday, April 6, 2022**

**Brant E. Wood, PE,  
Assistant General Manager, Water Utility  
Snohomish County PUD #1**

**Re: SnoCo PUD Draft 2021 Water System Plan Request for Review**

**Dear Brant Wood/ Elisheva Walters**

**I have read the *Snohomish County PUD #1's 2021 Water System Plan (Draft)* and I don't see any issue that I or Highland Water District would be concerned about. In fact, I found your WSP was very detailed and informational. Thanks, you for let me read your WSP Draft.**

**Sincerely,**

A handwritten signature in blue ink, appearing to read 'Ray Phelps', with a large, stylized flourish extending to the right.

**Ray Phelps, Field Supervisor  
Highland Water District**



# Local Government Consistency Determination Form

Water System Name: Snohomish County Public Utility District #1 PWS ID: 809071

Planning/Engineering Document Title: 2021 Water System Plan Plan Date: February 2022

Local Government with Jurisdiction Conducting Review: City of Snohomish

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.	Sections 2.3, 3.2.2	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.	Sections 5.4, 5.5	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> .	N/A	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.	Section 2.4 App 1-1	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.	Sections 2.1.2, 3.2.2, 3.2.4, 8.1	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

4.13.22  
 Date

YOSHITIRO MONZAKI, CITY ENGINEER  
 Printed Name, Title, & Jurisdiction CITY OF SNOHOMISH

**Local Government Consistency Determination Form**

Water System Name: Snohomish County Public Utility District #1 PWS ID: 809071

Planning/Engineering Document Title: 2021 Water System Plan Plan Date: February 2022

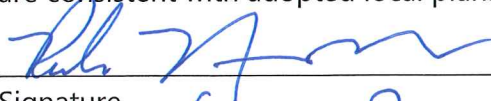
Local Government with Jurisdiction Conducting Review: City of Gold Bar

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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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> .	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.	Section 2.4 App 1-1	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.	Sections 2.1.2, 3.2.2, 3.2.4, 8.1	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 RICH NORRIS, PUBLIC WORKS DIRECTOR, GOLD BAR

5-2-2022

Date

Printed Name, Title, & Jurisdiction



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**From:** Strandberg, Terri <terri.strandberg@co.snohomish.wa.us>  
**Sent:** Friday, June 10, 2022 3:14 PM  
**To:** Wood, Brant <BEWood@snopud.com>  
**Subject:** Draft PUD water system plan

**CAUTION: THIS EMAIL IS FROM AN EXTERNAL SENDER.**  
**Do not click on links or open attachments if the sender is unknown or the email is suspect.**

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Hi Brant –

The county has reviewed the Draft PUD water system plan for consistency (land use, population growth forecasts, service area policies) and for franchise agreement status. The draft plan appears to meet all the county's criteria. Attached is the signed consistency statement.

We did find a few minor details during demographic review that may be helpful for the final plan:

1. On page 5-32, it says PUD used growth projections from the PSRC's VISION 2020 analysis as a source for their projection analysis. It would be helpful to document that data source more completely (name of forecast product, date produced by PSRC).
2. If you have the FAZ map described as Appendix 5-2 on page 5-32, it would be helpful to see that now for reference.
3. There is a typo for the Arlington UGA for its "Target 2035 Population" shown on page 3-5. Also, the column heading currently labeled 2016 looks like it actually shows 2011 population.

Thanks for the opportunity to comment.

Terri

Terri Strandberg, Principal Planner  
Snohomish County Planning and Development Services

## Local Government Consistency Determination Form

Water System Name: Snohomish County Public Utility District #1 PWS ID: 809071

Planning/Engineering Document Title: 2021 Water System Plan Date: February 2022

Local Government with Jurisdiction Conducting Review: Snohomish County PDS

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 the **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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	Identify the page(s) in submittal	Yes or Not Applicable
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c) For cities and towns that provide water service: All water service area policies of the city or town described in the plan conform to all relevant <u>utility service extension ordinances</u> .	N/A	N/A
d) Service area policies 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.	Sections 2.4, App 1-1	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.	Sections 2.1.2, 3.2.2, 3.2.4, 8.1	Yes

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with the adopted local plans and development regulations.

  
Signature

Date: 06-10-2022

Terri Strandberg, Principal Planner, Snohomish County Planning and Development Services  
Printed Name, Title, & Jurisdiction

## **Appendix 0-2**

SEPA Documentation

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**DETERMINATION OF NONSIGNIFICANCE (DNS)  
(WAC 197-11-970)**

**Name of Proposal:** 2021 Water System Plan Update

**Description of Proposal:** The adoption of the 2021 Comprehensive Water System Plan by Public Utility District No. 1 of Snohomish County, which updates the 2010 Water Plan. This non-project action documents planning activities for water system upgrades and improvements anticipated over the next 20 years within Snohomish PUD water service areas.

**Proponent:** Public Utility District No. 1 of Snohomish County

**Location of Proposal:** The 2021 Comprehensive Water System Plan identifies and characterizes the existing and future service areas within the PUD's water system service area. These areas include the integrated system area, remote service areas, and satellite service areas within Snohomish County and Camano Island.

**Lead Agency:** Public Utility District No. 1 of Snohomish County

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 43.21.030(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 upon request.

There is no comment period for this DNS.

This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date below. Submit comments by: April 18, 2022.

**Contact Person:**

Responsible Official: Keith Binkley

Signature: Keith Binkley Date: April 1, 2022

Position/title: Manager, Natural Resources

Telephone 425-783-1769 or 1-877-783-1000 extension 1769

**The threshold determination includes reference to and review of the following environmental information concerning the project:**

1. Environmental Checklist, Public Utility District No. 1 of Snohomish County, February 18, 2022
2. 2021 Water System Plan Update (Draft), Murraysmith, February 2022

**Reviewing Agencies:**

- Washington Department of Health
- Washington Department of Ecology
- Snohomish County Department of Planning and Development Services
- Snohomish County Department of Parks
- Snohomish County Department of Public Works
- Snohomish Health District
- City of Arlington
- City of Everett
- City of Gold Bar
- City of Granite Falls
- City of Lake Stevens
- City of Marysville
- City of Snohomish
- City of Stanwood
- City of Sultan
- City of Monroe
- Startup Water District
- Cross Valley Water District
- Shoreline Water District
- Highland Water District
- Tulalip Utilities Authority
- Tulalip Tribes
- Twin Falls Water Association
- Three Lakes Water Association
- Roosevelt Water Association
- Warm Beach Water Association
- Tatoosh Water Company
- Seven Lakes Water Association
- Sudden View Water System
- Wilderness Ridge Community Club






# WSP SEPA DNS

Final Audit Report

2022-03-31

Created:	2022-03-31
By:	Jessica Spahr (JLSpahr@SNOPUD.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAXEntv5nNJSNso8OkcOom8MHE-MRgqVm

## "WSP SEPA DNS" History

-  Document created by Jessica Spahr (JLSpahr@SNOPUD.com)  
2022-03-31 - 7:29:31 PM GMT- IP address: 139.138.102.11
-  Document emailed to Keith Binkley (kmbinkley@snopud.com) for signature  
2022-03-31 - 7:29:52 PM GMT
-  Email viewed by Keith Binkley (kmbinkley@snopud.com)  
2022-03-31 - 7:31:45 PM GMT- IP address: 104.47.55.126
-  Document e-signed by Keith Binkley (kmbinkley@snopud.com)  
Signature Date: 2022-03-31 - 7:32:13 PM GMT - Time Source: server- IP address: 139.138.102.10
-  Agreement completed.  
2022-03-31 - 7:32:13 PM GMT

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# SEPA ENVIRONMENTAL CHECKLIST

## ***Purpose of checklist:***

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

## ***Instructions for applicants:***

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

## ***Instructions for Lead Agencies:***

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

## ***Use of checklist for nonproject proposals:***

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the [SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS \(part D\)](#). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

## **A. Background**

**1. Name of proposed project, if applicable:**

Public Utility District No. 1 of Snohomish County 2021  
Comprehensive Water System Plan. This proposal updates the  
2010 Plan and is a non-project action.

**2. Name of applicant:**

Public Utility District No. 1 of Snohomish County

**3. Address and phone number of applicant and contact person:**

Public Utility District No. 1 of Snohomish County  
P. O. Box 1107  
2320 California St  
Everett, WA 98206

**CONTACT PERSON:**

Brant E. Wood, P.E.  
Assistant General Manager, Water Utility  
(425) 397-3003

**4. Date checklist prepared:**

02/18/2022

**5. Agency requesting checklist:**

Public Utility District No. 1 of Snohomish County (Snohomish PUD)

**6. Proposed timing or schedule (including phasing, if applicable):**

The Comprehensive Water System Plan (also referred to in this document as the Water Plan) details a program of system upgrades and improvements phased over the next 20 years to ensure continued safe and reliable drinking water services throughout the Snohomish PUD water system service area.

**7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**

The Water Plan identifies specific system capital improvements which are scheduled for implementation within the next 6 years. Additional capital projects within the subsequent 6 to 20-year planning horizon are also identified. Project-specific SEPA review will be conducted for identified capital projects to account for the full range of environmental issues associated with these actions and to adequately condition proposed projects.

The Water Plan itself may be updated within the next several years to address any newly identified system deficiencies or to accommodate new growth projections in the service area. Changes in the levels or locations of projected population growth will be

reflected in future updates of the Plan and corresponding adjustments will be made to the capital improvement program (CIP). Future plan updates will be subject to SEPA review.

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

Previous studies, reports, and other documents which contain related environmental information include:

- a. Snohomish PUD Comprehensive Water System Plan, Snohomish PUD 1995
- b. Snohomish PUD Comprehensive Water System Plan, Snohomish PUD 2002
- c. Snohomish PUD Comprehensive Water System Plan, Snohomish PUD 2012
- d. North Snohomish County Coordinated Water System Plan, Snohomish County Water Utility Coordinating Committee 1991 (amended 2001)
- e. North Snohomish County Coordinated Water System Plan, Snohomish County Water Utility Coordinating Committee 2011 (amended 2018)
- f. Granite Falls area Water Supply Project draft and final EIS, Snohomish PUD with Gary Harshman, Environmental Consultant, July 1993

**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.**

The Water Plan update recognizes water system projects in the early planning and design stages of development which will require conditional use, shoreline substantial development, land disturbing activity, and other permit applications and approvals. Additional projects and proposals identified by the Water System Plan for future development and resulting in project actions will undergo SEPA review as necessary once each project is defined in sufficient detail.

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

Approval of the Draft Plan by the Washington State Department of Health (DOH) and adoption of the Final Water System Plan by the Snohomish PUD Board of Commissioners is required for this proposal.

**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 proposed action is the adoption of an updated Comprehensive Water System Plan by Snohomish PUD. As a provider of many Snohomish County residents' water supply, Snohomish PUD is required by the DOH to periodically update its comprehensive Water System Plan to reflect reasonably foreseeable system needs and plan for the development of a safe and reliable drinking water supply. The proposal fulfills Washington State Department of Health requirements by updating the previous plan adopted by the Snohomish PUD Board of Commissioners and the DOH in 2012. The new Water Plan also incorporates elements developed in the North Snohomish County Coordinated Water System Plan, adopted in 2011 and amended in 2018.

In addition to meeting DOH requirements this plan addresses the predicted growth detailed in local, county and municipal Growth Management Act (GMA) Comprehensive Plans. Under the GMA, it is the responsibility of the PUD, as a major water supplier in the area, to develop water system plans (consistent with other local land use plans) for providing an appropriate level of water supply services concurrent with the progress of planned growth and development. The proposed Water Plan anticipates the need for service throughout the Snohomish PUD coverage area, by detailing current and anticipated future system needs in these areas of identified growth. A capital improvement plan (CIP) is developed for meeting these system needs. A six-year finance plan is also presented which identifies water system improvement costs, anticipated revenues and other potential funding sources for needed improvements.

Capital improvements to Snohomish PUD's water transmission and distribution infrastructure, collection and treatment facilities, and operations and maintenance systems are identified in the Plan. Major improvements planned within the next six years include:

- a. Approximately 52,000 linear feet of transmission and replaced distribution main, 8 to 16 inch diameter
- b. Two new reservoirs totaling 4.1 million gallons
- c. A remodeled booster pump station adding approximately 1,000 gpm capacity
- d. A water treatment decant facility
- e. Conversion of water meters to AMI

**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.**

The Water Plan identifies and characterizes the existing and future service areas within Snohomish PUD's water system service area; the service area is entirely within Snohomish County, though there are other overlapping local jurisdictions. Current and future service areas described in the Water Plan are depicted on the map following this page.

Detailed plans for the specific capital improvements anticipated within these water service areas are described in chapter 11 of the Plan. The Lake Stevens Integrated service area (the most significant Snohomish PUD service area and includes the Creswell and Storm Lake Ridge satellite systems) is generally located in east Snohomish County and is bordered on the south by SR-2, on the north by the North Fork of the Stillaguamish River, on the east by the foothills of the Cascade Mountains, and on the west by SR-2, the Snohomish River flood plain, the City of Marysville's service area and the City of Arlington's service area. Chapter 2 details this area together with the proposed service areas of the following satellite and remote system areas:

- a. Sunday Lake Service Area
- b. 212 Market Service Area
- c. Otis Service Area

- d. Warm Beach Service Area (includes former Kayak Service Area)
- e. May Creek Service Area
- f. Skylite Service Area

## **B. Environmental Elements**

### **1. Earth**

#### **a. General description of the site:**

The area covered by the Water Plan includes flat, gently rolling and hilly terrain, with some steep slopes.

#### **b. What is the steepest slope on the site (approximate percent slope)?**

Some areas in the region exceed 33 percent slope and are identified by Snohomish County as geologically hazardous critical areas.

#### **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.**

The U.S. Soil Conservation Service lists about 40 different soil types for the areas covered by the Water Plan. Most of these soil types are characteristic of alluvial deposits along major river valleys, glacial till plains, outwash plains, and foothill regions of the western Cascades. Peats, mucks and other organic and hydric soils are also within the Water Plan service area. Sensitive soils and their functions will be addressed under the SEPA process for each capital project proposed within the Water Plan as they are developed.

#### **d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.**

Unstable conditions are evident at a number of sites throughout the area. Because the Water Plan describes and plans for critical service infrastructure, unstable soils are usually avoided when planning and siting capital projects. Unstable soils will be addressed under the SEPA process for each capital project as these are implemented.

#### **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.**

Grading and filling requirements will be assessed on an individual project basis through the SEPA review process and through the local grading permit process as each capital project is developed.

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

Erosion would not occur as a result of the adoption of the Water Plan.

Capital projects proposed under the Water Plan may potentially cause some limited erosion during construction. This potential is intensified on steeper embankments and slopes. Timing and phasing of construction, the amount of vegetation removed, the effectiveness of erosion control measures, and weather conditions will be evaluated during planning and permitting for each capital project, and will be addressed on a per-project basis under SEPA review as well.

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

Impervious surfaces will not result from the adoption of the Water Plan, though capital projects proposed within the plan would result in small quantities of increased impervious surface. Increased impervious surfaces associated with the Water Plan will be limited to the roofs of new reservoirs, and adjacent paved staging areas and access driveways. Over the next twenty years, four new reservoir facilities are planned. The impervious surfaces associated with these reservoirs may range between 0.2 to 0.5 acres per facility.

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

As each capital project is planned, a temporary erosion and sedimentation control plan would be developed as part of the construction plans to minimize erosion and contain sediment during construction. Erosion and sedimentation control measures may include vegetation retention, temporary and permanent seeding, erosion control fabrics, fabric filter fences, gravel berms, and other BMPs as described in the Snohomish County Drainage Manual, Vol. II (Snohomish County 2021) and the Stormwater Management manual for Western Washington (Ecology 2019). Monitoring and maintenance of such control measures would be conducted throughout construction to ensure proper performance.

## **2. Air**

- 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.**

Adoption of the Water Plan would not result in emissions to air, except for those negligible emissions due to paper production and energy use associated with development and dissemination of the Water Plan.

Development of the proposed capital projections described within the Water Plan will require an analysis of emissions on a per-project basis. These emissions will be quantified during the planning and permitting stages of each capital project.

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

No off-site sources of emissions or odor are expected to affect this non-project action.

Implementation of the Water Plan may be affected by changes in hydroperiod, water source basin hydrology, temperature and rainfall pattern changes resulting from increased greenhouse gases and regional climate change; however, the Water Plan has projected sufficient water supplies to meet demand through 2040.

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

No emissions control provisions are proposed for this non-project action.

As capital projects are planned, appropriate emission control measures will be implemented to reduce dust, greenhouse gas emissions and any other identified emissions. Using relatively new, well-maintained equipment would also help reduce emissions generated during construction.

### **3. Water**

**a. Surface Water:**

**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.**

Although adoption of the Water Plan is a non-project action, the plan directly affects the continued use of surface and groundwater throughout the county where they are used as a drinking water source.

The Water Plan service area includes a large portion of Snohomish County, and the infrastructure of the water system is adjacent to or crosses many of the large water bodies in the county, in addition to numerous smaller ones. Most notable among these water bodies are the Snohomish, Pilchuck, and Stillaguamish Rivers, and Lake Stevens, Lake Roesiger, and Lake Bosworth.

**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.**

Adoption of the Water Plan will not require work near or in water.

The Water Plan proposes capital projects and system improvements which may be located within 200 feet of the waters described above. However, specific plans for these and other proposed improvements have yet to be developed. A project-specific SEPA review and any necessary Critical Areas, Floodplains or Shoreline Management permitting will precede construction of each project action described in the Water Plan.

- 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 to the non-project adoption of the Water Plan.

For capital projects proposed within the Water Plan, there are anticipated to be no fill or dredge activities associated with any proposed system upgrades or operations in surface waters or wetlands.

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

The water system improvements proposed by the Water Plan will for the most part be supplied through the purchase of water from the City of Everett, the ultimate source of which is Spada Lake and the Sultan River. Withdrawals will increase with demand. Over the next 20 years, average daily water usage is projected to increase approximately one to two percent annually, depending on the water service area.

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

Does not apply to this non-project adoption of the Water Plan.

However, portions of proposed future improvements may lie within the 100-year floodplain. A definitive determination of floodplain proximity, together with a project-specific SEPA determination, will be developed prior to implementation of all capital projects and proposed water system improvements.

- 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.**

Does not apply to this non-project adoption of the Water Plan.

No discharge of waste materials to surface waters are anticipated due to any of the proposed capital projects within the Water Plan. Waters used to sanitize water mains would be dechlorinated or flushed into tanker trucks and disposed of into a suitable sanitary sewer system as required in the construction specifications. No water containing elevated levels of chlorine (above standard drinking water levels) would be discharged to the environment.

**b. Ground Water:**

- 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.**

The Water Plan does not anticipate the development of any additional groundwater sources to supplement water purchased from the City of Everett. Any expected water



discharge that comes up during project design will be permitted and conditioned under a project-specific SEPA review.

- 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.**

Waste material will not be discharged as a result of this non-project action.

Although the project does not directly include development of onsite wastewater treatment systems, the water supply it makes available will facilitate the installation of systems in some areas of new development beyond the service areas of wastewater treatment utilities. The newer treatment technologies and regular operations and maintenance measures currently required for these systems prevent pollutants from entering groundwater.

**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.**

This non-project proposal would not result in runoff.

Capital projects proposed within the Water Plan would result in construction runoff as well as runoff from the roofs of completed reservoirs and other structures. Each project action proposed within the Water Plan will require runoff controls prescribed by local permit requirements and project-specific SEPA review.

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

Not applicable

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

This non-project proposal would not alter or affect drainage patterns. Each project action proposed within the Water Plan will be evaluated for any effects to site drainage during predesign and permitting.

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

Project actions as proposed within the Water Plan will adhere to standard Construction practices (temporary erosion and sedimentation controls) as required by Snohomish County and local cities to minimize impacts.

#### 4. Plants

**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

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

Not applicable to this non-project action.

As a result of proposed capital projects and system improvements proposed in the Water Plan, grasses, native shrubs, and some trees in the vicinity of facility construction activities and other land disturbing work would be disrupted or removed.

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

Not applicable to this non-project action.

Threatened and endangered species and their habitats will be protected as each project is planned and permitted under individual SEPA review and local permitting processes for each capital improvement project proposal and system improvement project.

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

Erosion control in areas of disrupted vegetation will be provided during construction. Revegetation will take place following construction.

#### 5. Animals

**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.**

Not applicable to this non-project action.

Examples of animals found in Snohomish County include:

- birds: hawk, heron, eagle, songbirds, other:
- mammals: deer, bear, elk, beaver, other:
- fish: bass, salmon, trout, herring, shellfish

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

Threatened and endangered species and their habitats will be protected as each project is planned and permitted under individual SEPA review and local permitting processes for each capital improvement project proposal and system improvement project.

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

Not applicable to this non-project action.

The capital projects and system improvement proposed within the Water Plan could result in impacts to various sites throughout the service area where those projects are proposed. The Snohomish, Pilchuck, and Stillaguamish Rivers are part of the Puget Sound Basin, all of which is included in the Pacific flyway. Larger mammals migrate between higher and lower elevations, seasonally, through portions of this Water Plan service area. Most of the rivers and streams in the area are conduits for the migration of a number of anadromous fish species.

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

Although significant wildlife and habitat impacts are not anticipated, specific mitigation measures will be developed within the early design and planning stages for each proposed capital project and in response to resource agency concerns associated with the implementation of each capital project and system improvement proposed within the Water Plan. These measures will be implemented during the project-specific SEPA review and permitting phases for those projects.

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

Not applicable to this non-project action.

The capital projects and system improvement proposed within the Water Plan could result in impacts to various sites throughout the service area where those projects are proposed. Any invasive species discovered during pre-design or surveying for projects included in the Water Plan will be included in the project SEPA application.

## ***6. Energy and Natural Resources***

**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.**

Not applicable to this non-project action.

Energy would be required for the construction of any proposed system improvement or capital project, and would principally include diesel and gasoline fuel used by construction vehicles and equipment, and by workers accessing construction sites. Pump station facilities and improvements will require increased electricity, and possibly other energy sources, for operation.

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

Not applicable

- 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:**

Not Applicable.

Energy conservation features including the use of high-efficiency pumps will be incorporated into the detailed design of all facility improvements.

## **7. Environmental Health**

- 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.**

Not applicable to this non-project action.

Implementation of the proposed projects within the Water Plan could result in some environmental health hazards common to construction projects, wells, and water treatment facilities. The potential for spills of fuel, oil, lubricants, solvents, disinfecting agents or concrete additives used during construction has the potential to impact human health and damage natural resources. In addition, water treatment chemicals stored at some pump stations for water treatment could pose a hazard if leaks or other releases develop. Best Management Practices (BMPs) will be followed in all cases, and appropriate hazard plans and chemical handling procedures specific to each site, compound and project will be followed.

Service interruptions are possible due to system failures or natural disasters. However, Snohomish PUD has developed a number of contingency plans and procedures, required and described within the Water Plan, which are sufficient to handle such emergencies.

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

Not applicable to this non-project action.

- 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.**

Not applicable to this non-project action.

**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.**

Not applicable to this non-project action.

Any chemicals used for water treatment for specific projects will be included in the project-specific SEPA.

**4) Describe special emergency services that might be required.**

No special emergency services would be required.

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

State regulations regarding safety and the handling of hazardous materials would be enforced during each construction process proposed. Equipment refueling areas would be located in areas where a spill could be quickly contained and where the risks of the hazardous material entering surface water would be minimized. Adherence to BMPs and Snohomish PUD's established emergency response procedures would be followed, and are designed to provide sufficient safeguards against environmental health hazards.

***b. Noise***

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

Not applicable to this non-project action.

**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.**

Adoption of the Water Plan would not result in noise.

Construction activities associated with the implementation of the Water System Plan would generate short-term noise during the construction period. Potential impacts from project specific noise would be evaluated and mitigated with appropriate BMPs during the SEPA review and permitting processes for each project.

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

Adequate noise abatement measures would be incorporated into planning and contract documents at the time of specific project development. Where feasible, construction specifications would include noise restrictions on construction equipment and hours of operation.

## **8. Land and Shoreline Use**

- 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 land uses which exist in the project area include a broad range of residential, commercial, industrial, agricultural, open space, and public uses. The Water Plan ensures that properties within its service area have access to water service but does not change or otherwise affect the use of the land.

- 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?**

Extensive lands within the service areas covered by the Water Plan have been used for agriculture. There are no working forest lands within the PUD service areas. No agriculture or forest land is to be converted to other uses as a result of this proposal.

- c. 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:**

Not applicable

- d. Describe any structures on the site.**

Industrial, commercial, residential, and agricultural structures exist throughout the Water Plan service areas.

- e. Will any structures be demolished? If so, what?**

Not applicable to this non-project action.

Some capital projects proposed within the Water Plan may require the demolition of existing utility structures or facilities. Each project action proposed within the Water Plan will require review and approval by the local jurisdiction in which the individual projects are located to ensure all permitting requirements are met including the need for project-specific SEPA review, if needed.

- f. What is the current zoning classification of the site?**

Please refer to the zoning codes of the individual jurisdictions.

- g. What is the current comprehensive plan designation of the site?**

Please refer to the current Snohomish County Comprehensive Plan.

- h. If applicable, what is the current shoreline master program designation of the site?**

Please refer to the Snohomish County Shoreline Master Program.

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

Critical areas occur throughout the Water Plan service area. Critical areas that intersect Water Plan infrastructure projects will be described in detail when those projects are planned and permitted.

- j. Approximately how many people would reside or work in the completed project?**

Not applicable to this non-project action.

- k. Approximately how many people would the completed project displace?**

Not applicable to this non-project action.

- l. Proposed measures to avoid or reduce displacement impacts, if any:**

Not applicable to this non-project action.

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

This plan is required by law to be consistent with local growth management planning efforts. Information from this Plan will be incorporated into current or updated Capital Facilities and Utilities Elements of the local GMA Comprehensive Plans. The draft plan is also subject to review by the Department of Health, Snohomish County, and affected local jurisdictions, before final adoption.

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

Not applicable

## **9. Housing**

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

No housing will be provided by the project.

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

No housing units would be eliminated by the project.

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

None are necessary.

**10. Aesthetics**

**a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?**

The tallest structures proposed would be water reservoirs. Over the next twenty years, four reservoirs are proposed with heights ranging from 40' to 126'. Exterior building materials for the proposed reservoirs would be steel, painted to achieve an aesthetic blend with the surrounding. Project specific SEPA determinations will be made for each of these proposals.

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

No views would be altered or obstructed by the proposed action. Portions of new reservoir facilities not shielded from view by surrounding trees and other vegetation may be visible to nearby residents and passersby but will not adversely affect existing view corridors.

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

None are necessary.

**11. Light and Glare**

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

The project may include some low-level security lighting at some facility locations.

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

Light or glare generated by the project will be adequately shielded to prevent any safety hazard or interference with views.

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

Off-site sources of light and glare would not affect the proposal.

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

No measures would be required.



## **12. Recreation**

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

Many forms of designated and informal recreation activities take place throughout the area. No recreational facilities are located at the sites of anticipated improvements.

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

It is unlikely that proposed improvements would displace 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:**

None are necessary.

## **13. Historic and cultural preservation**

- 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 impacts to historic or cultural resources would occur from this non-project action.

No historical or cultural resources are known to exist on or next to the sites of proposed system improvements or capital projects. Prior to any construction, inquiries will be made into County records and to the Washington State Office of Archaeology and Historic Preservation (OAHP) regarding the presence of any known cultural resources.

- 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 are known to exist at the sites of potential improvements. Appropriate records searches and surveys will be made before earth moving equipment is engaged. In addition Snohmish PUD incorporates requirements in all of its construction projects related to its Inadvertant Discovery Plan to address construction activities that may uncover potential evidence, artifacts, or areas of cultural importance.

- 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.**

During pre-design for each project, efforts will include consultation with tribes and the department of archeology and historic preservation, review of historic maps and GIS data, and site surveying.

- 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.**

If any evidence of historic or cultural resources is encountered during construction or installation of any work proposed within the Water Plan, all work would be halted in the area and a state-approved archaeologist/historian would be engaged to investigate, evaluate and/or move or curate such resources, as appropriate.

#### **14. Transportation**

- 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.**

Not applicable

- 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?**

Not applicable

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

Not applicable

- 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).**

Not applicable

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

Not applicable

- 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?**

Not applicable

**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.**

Not applicable

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

Not applicable

**15. Public Services**

**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.**

New components and extensions of existing water systems will require periodic maintenance by Snohomish PUD staff.

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

None are necessary.

**16. Utilities**

**a. Circle utilities currently available at the site:**

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

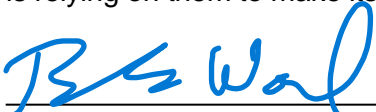
All the above utilities exist within portions of the Snohomish PUD service area.

**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.**

Not applicable

**C. Signature**

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: Brant E. Wood, P.E.

Position and Agency/Organization: AGM, Water Utility

Date Submitted: March 8, 2022

## ***D. Supplemental sheet for nonproject actions***

(IT IS NOT NECESSARY to use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

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?**

As previously discussed, an indirect effect of this proposal would be discharges of water to the ground following onsite wastewater treatment. Also, limited quantities of treatment chemical solutions would be stored at some pump station facilities.

Potential impacts are anticipated to be minimal, however, and sufficient system control exist to mitigate any adverse effects of system construction and operation. As a result, no adverse emissions or discharges to the environment are anticipated from implementation of any of the capital improvements identified in this Comprehensive Water System Plan.

**Proposed measures to avoid or reduce such increases are:**

No measures are proposed.

**2. How would the proposal be likely to affect plants, animals, fish, or marine life?**

Some existing vegetation, and fish and wildlife habitat by extension, could be disturbed or eliminated due to clearing, grading, and construction activities associated with facility improvements. Construction noise may cause wildlife to avoid the area temporarily.

**Proposed measures to protect or conserve plants, animals, fish, or marine life are:**

Prompt re-vegetation and habitat restoration would minimize adverse impacts associated with temporary vegetation removal, and noise abatement BMPs would minimize the effects of construction noise. Areas of permanent vegetation removal will be kept to a minimum, amounting to a few acres collectively over the totality of proposed capital projects and system improvements.

**3. How would the proposal be likely to deplete energy or natural resources?**

Water usage is the main natural resource consumed as a result of the proposed Water Plan.

Energy and other natural resource depletions are not a major impact issue associated with this action. Some electrical energy resources will be consumed in operating new pumps and associated system equipment. However, proposed system improvements will increase the flexibility of the overall system to respond to episodes of peak demand with expanded storage capacity rather than direct pumping. The system improvements will, on balance, result in only minimal increases in electrical energy requirements system-wide.

**Proposed measures to protect or conserve energy and natural resources are:**

Energy-efficient electrical pumps and other system components will be used for all planned water system improvements.

**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?**

The Water Plan aims mainly to provide drinking water services to residents within the described service areas. Water resources are necessarily used in an ongoing basis, however all other natural resource use, including use of environmentally sensitive and protected areas, is expected to be negligible and unavoidable. The detailed design of individual capital projects and facility improvements described within the Water Plan would be subject to project-specific SEPA review and local permitting processes, and designed or conditioned to avoid adverse impacts to identified sensitive or protected areas.

Proposed measures to protect such resources or to avoid or reduce impacts are:\n\nThe need for any additional mitigation with regard to environmentally sensitive areas would be identified through SEPA and local critical areas permitting requirements. Mitigation and project conditions would be developed on a project-specific basis as part of the detailed site design.

**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?**

Comprehensive water system plans are required by the State Growth Management Act (GMA) to be consistent with local comprehensive plans and growth management projections. This Comprehensive Water System Plan recognizes local GMA planning efforts, and fulfills the PUD's responsibility to plan for the concurrent development of water supply facilities and services to meet the needs of projected population growth.

Proposed measures to avoid or reduce shoreline and land use impacts are:

No measures proposed.

**6. How would the proposal be likely to increase demands on transportation or public services and utilities?**

Impacts on local transportation systems, public services, and utilities will result from the growth in residences and businesses that is anticipated for the area. Some additional

Snohomish PUD staff may ultimately be required to maintain and operate the new water facilities developed in response to this growth.

**Proposed measures to reduce or respond to such demand(s) are:**

No measures proposed, other than to adequately meet demand with appropriate staff and facilities to deliver water.

**7. Identify if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.**

This action has been planned in full compliance with local, state, and federal environmental protection laws and requirements.

## **Appendix 0-3**

### Comments and Response

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Document Title:

**Snohomish County PUD No. 1 Water System Plan**

Reviewer:

Department of Health, Snohomish County PDS

Responder: Snohomish PUD and Consor (formerly known as Murraysmith)

Comments submitted to:

Brant Wood, AGM

Task #

Reviewer	Item No.	Chapter No.	Chapter Description	Dwg/Fig No. or Section	Reviewer's Comments	Response Code	Designer's Response
<b>Washington Department of Health (DOH) - 8-24-2022 review letter (response provided 2-13-23)</b>							
Richard Rodriguez, DOH	1	n/a	Description of Water System	n/a	Provide a Statement of Local Government Consistency from the Snohomish County Planning Dept.	1	Now included in Appendix 0-1. See Snohomish County PDS comments below in this comment response table.
Richard Rodriguez, DOH	2	3	Basic Planning Data	Table 3-4	Table 3-4 shows the Arlington UGA 2035 target population as 233,000. Is this a typo?	1	Typo, changed to 24,000 to match Arlington WSP
Richard Rodriguez, DOH	3	7	System Analysis	Table ES-1	Please include an ERU capacity summary which includes the following for each water system: a. Existing capacity in ERUs b. Limiting capacity factor (e.g. storage, source, water rights, etc.) and the number of ERUs that the factor can support c. The year that the limiting factor becomes the limiting factor (if prior to the end of the WSP approval period) d. Identify project from CIP that will address the limiting factor within the approval period. e. This may be best placed in the Executive Summary.	1	See new Table ES-1, page ES-5  (Also see further response on last page of this table.)
Richard Rodriguez, DOH	4	7	System Analysis	7.7.3, 7.7.2	Sections 7.7.2 and 7.7.3. Table 7-25 indicates there is no fire flow required for the Skylite system, yet the first sentence of Section 7.7.3 says the system does provide fire flow. Please clarify.	1	Typo; Section 7.7.3 should say "does not".
Richard Rodriguez, DOH	5	7	System Analysis	7.7.2	Section 7.7.2. The "minor deficiency" as described in the footnote of Table 7-25 is roughly 30% of the listed PHD. Is this a significant reliability issue? What procedures are in place for low or no pressure events (see the comment in the O&M section)?	1	The District evaluated BPSs against a criterion that is more conservative than The DOH requirement, PHD firm capacity instead of MDD + FF firm capacity. Since The pumps meet MDD and there is no fire flow service in The system, The system is considered reliable. Also, the pump curves are able to operate at a slightly lower pressure to provide additional flow during high demands. See Comment Item 7 for a response regarding low pressure events.
Richard Rodriguez, DOH	6	8	Water Quality	n/a	Respond to Dept. of Ecology's review letter of May 23, 2022.	1	Response letter included as an attachment to this appendix.
Richard Rodriguez, DOH, 8/24/22	7	9	Operations & Maintenance	n/a	Please include your procedures for localized pressure loss events in the distribution system. What health advisory and customer notification criteria are used? See DOH Publication #331-583, "Water Main Break Response Protocol for Chlorinated Systems" as a reference.	1	The DOH Publication #331-583 is now included as part of the Emergency Response Plan in the Continuity of Operations Plan, Appendix 9-2.
Richard Rodriguez, DOH	8	11	Improvement Program	n/a	Table 11-1. What do the different cell shading colors indicate?	1	They are not pertinent; shading removed.

Reviewer	Item No.	Chapter No.	Chapter Description	Dwg/Fig No. or Section	Reviewer's Comments	Response Code	Designer's Response
Richard Rodriguez, DOH	9	11	Improvement Program	n/a	Section 7.3.4.2 shows the proposed storage improvements for the Lake Stevens Integrated System for deficiencies listed in Tables 7-12 and 7-13. These tables show an appreciably larger deficiency in the Lake Stevens service (LSSA) area than the Granite Falls service area (GFSA). However, Table 11-1 shows the North LS Tank (CIP Project 200 in the LSSA) scheduled for completion in 2039. Table 11-1 also shows the Burn Road 726 Reservoir (CIP Project in the GFSA) scheduled for completion in 2024. Given the differences in the magnitude of storage deficiencies please clarify the reasoning behind these proposed schedules.	4	The existing Granite Falls tank requires rehabilitation and recoating, so a new Granite Falls tank is required (Burn Road 726) for system redundancy so that the original tank can be taken offline.  (Also see further response on last page of this table.)
Richard Rodriguez, DOH	10	Misc	n/a	n/a	Provide signed PE stamp with the final WSP submittal.	1	Included.
Richard Rodriguez, DOH	11	Misc	n/a	Appendix 0-3	The water system must meet the consumer input process outlined in WAC 246-290-100(8). Please include documentation of a consumer meeting discussing the WSP, prior to DOH approval of the WSP.	1	Now included in Appendix 0-3.
Richard Rodriguez, DOH	12	Misc	n/a	n/a	Prior to DOH approval, the City's governing body must approve and adopt the WSP.	1	Approval resolution now included in Appendix 02-2
<b>Snohomish County Planning &amp; Development Services (PDS) - 6-10-22 email with Consistency Checklist (response provided 2-13-23)</b>							
Terri Strandberg, Snohomish Co PDS, 6/10/22	13	5	Land Use	5.4.1	1. On page 5-32, it says PUD used growth projections from the PSRC's VISION 2040 analysis as a source for their projection analysis. It would be helpful to document that data source more completely (name of forecast product, date produced by PSRC).	1	Data from the PSRC Vision 2040 file "Land Use Vision version 2 (LUV.2) Dataset" was used for the projections, last updated April 2017. This has been clarified in the text.
Terri Strandberg, Snohomish Co PDS, 6/10/22	14	5	Land Use	Appendix 05-2	If you have the FAZ map described as Appendix 5-2 on page 5-32, it would be helpful to see that now for reference.	1	Included as Appendix 05-2.
Terri Strandberg, Snohomish Co PDS, 6/10/22	15	3	Land Use	3.2.2	1. There is a typo for the Arlington UGA for its "Target 2035 Population" shown on page 3-5. Also, the column heading currently labeled 2016 looks like it actually shows 2011 population.	1	Corrected based on Table P-4 of Snohomish County Tomorrow 2016 Growth Monitoring Report.

Reviewer	Item No.	Chapter No.	Chapter Description	Dwg/Fig No. or Section	Reviewer's Comments	Response Code	Designer's Response
<b>Department of Ecology (ECY) - 5-23-22 review letter (response letter 2-9-23)</b>							
Andrea Lauden, ECY	16	8	Source of Supply	n/a	Per Superseding Certificate G1-GWC7295, Sunday Lake Water System is required to record water use data weekly and report the annual maximum rate of withdrawal and the annual total volume to Ecology by January 31 of each year. Ecology has not received metering data since the change was approved in 2008.	1	On 1-13-23, a Water Use Data Collection Form for G1-GWC7295 (CG1-*09636) was emailed to Jess Yates at ECY, covering available data back to 2008.
Andrea Lauden, ECY	17	8	Source of Supply	n/a	The maximum annual instantaneous rate of withdrawal and the annual total volume of withdrawal from the May Creek Well Field must be reported annually to Ecology. These data have not been submitted since the water right changes were approved.	1	On 1-13-23, a Water Use Data Collection Form for G1-*09360 (Cert #6488-A) and G1-20625 was emailed to Jess Yates at ECY, covering available data back to 2004.
Andrea Lauden, ECY	18	8	Source of Supply	n/a	Measurements of chloride and conductivity from Warm Beach Well 4 (ABR309) each April and August have not been received by Ecology since May 2020.	1	Ecology later found an internal issue that data submitted since May 2020 had not been entered in their records. PUD 2/9/23 response letter also clarified this requirement is for chloride and static water level (not conductivity).
Andrea Lauden, ECY	19	8	Source of Supply	n/a	Please ensure that the regularity of data recording meet the requirements listed in Table 1 of ECY's 5/23/22 letter.	1	For the wells listed in Table 1, level probes and source meters are installed and integrated into the PUD's SCADA system and data is recorded more frequently than the requirements. Additionally, all source meters are read manually as close as possible to the last working day of each month.
Andrea Lauden, ECY	20	8	Source of Supply	8.5 & Appendix 8-2	No reference was made to Groundwater Certificate 7293 (G1-*10429) for the Skylite water system.	1	The omission was inadvertent and corrected in Section 8.5 and the Water Right Self-Assessment (WRSAs) form.
Andrea Lauden, ECY	21	8	Source of Supply	n/a	Ecology recommends determining future plans for the Pilchuck 10 water right before the temporary donation expires on January 10, 2023.	1	In September 2022, PUD secured an extension of the voluntary temporary trust donation for this water right to January 7, 2033.
Andrea Lauden, ECY	22	8	Source of Supply	8.4.2 & Appendix 8-2	The 2020 Warm Beach and Kayak Water Systems Consolidation describes plans to change the point of withdrawal of G1-23278 to Kayak Wells 2 and 3, or to drill a replacement well. Ecology has not received a request to change the point of withdrawal for this certificate either in the form of a change application for the use of Wells 2 and 3 or a showing of compliance form for the use of a replacement well.	1	The water right was included in the WRSAs, but omission of discussion in the text of the plan was inadvertent. Added a paragraph to Section 8.4.2.
Andrea Lauden, ECY	23	8	Source of Supply	8.1.1, Table 8-3 & Appendix 8-2	Surface Water Certificates 328 (S1-*02303) and SWC 11576 (S1-*22545), both associated with the Lake Martha diversion for Warm Beach water system, were omitted from the District's Water Right Self-Assessment.	1	The omissions were inadvertent. Added surface water certificates to the Warm Beach WSRA and Table 8-3. Also added text to Section 8.1.1.
Andrea Lauden, ECY	24	8	Source of Supply	8.1.1, 8.4.1 & Appendix 8-2	The District should determine the present and future need for Warm Beach Well 1 water right G1-00718 and Lake Stevens SWC 4648 (S1-*07584), which are listed in the WRSAs but indicated as inactive, to ensure they are protected from potential abandonment.	1	Described how PUD's use of the word "inactive" does not indicate intent to abandon. Added notes to the WRSAs. Pointed out text in 8.1.1 regarding Lake Stevens and added text to 8.4.1 regarding Warm Beach Wells 1 & 3.

Reviewer	Item No.	Chapter No.	Chapter Description	Dwg/Fig No. or Section	Reviewer's Comments	Response Code	Designer's Response
Andrea Lauden, ECY	25	8	Source of Supply	n/a	Ecology's review of the District's sources suggests potential for a number of inactive wells. Any well the District is not using and has no plans to use must be decommissioned.	1	Provided example of wells PUD has properly abandoned and stated reasons that PUD has no intent at this time to abandon any other wells.
Andrea Lauden, ECY	26	8	Source of Supply	8.1.1 & Appendix 8-2	Note Warm Beach/Kayak water system water rights summarized in Table 6 of ECY letter do not agree with the District Water Right Self-Assessment (Appendix 8-2), and Section 8.1.1. of the WSP, dated February 2022.	1	Pointed out this was addressed in above responses.
Andrea Lauden, ECY	27	8	Source of Supply	8.1.1 & Appendix 8-2	Ecology also notes that the annual quantity authorized by the Lake Stevens Surface Water Certificate 4648 (S1-*07584) does not appear to be quantified, per Ecology's records.	1	RESPONSE: "It has been common practice for municipal systems to self-quantify the Qa of surface water rights issued prior to 1964 and for DOE to accept those Qa estimates for planning purposes. The calculation of 362 afy (Qa) was based on .5 cfs x 24 hours x 365 days – standard calculation approach. DOE did not assign Qa's to surface water rights until after 1965."  (Also see further response on last page of this table.)
Andrea Lauden, ECY	28	8	Source of Supply	8.5 & Appendix 8-2	No reference to total withdrawal of 37 afy authorization for the combined Skylite certificates G1-22033 and GWC 7293-A was made in the District WSP, and this inconsistency should be addressed. Please also be advised that the District should determine the present and future needs for this water right to ensure that it is protected from potential abandonment. Should GWC 7293-A continue to not be included in the Water Right Self-Assessment by the District, then the total instantaneous rate and annual quantity under all water rights is limited to 100 gpm and 29.7 ac-ft/yr respectively.	1	Addressed in prior/above text and response. Both water rights now reflected in revised self-assessment as showing the total Qi for system is 150 gpm and total Qa is 37 afy.
Andrea Lauden, ECY	29	8	Source of Supply	Appendix 8-2	The following inconsistencies must be addressed: <ul style="list-style-type: none"> <li>• SWC 328, SWC 11576, G1-00718, and G1-24690 were omitted from the Water Right Self-Assessment.</li> <li>• Certificate G1-25989 authorizes the use of 243 gpm and 114 ac-ft/yr additive, not 300 gpm and 362 ac-ft/yr additive as was stated in the Water Rights Self-Assessment. This certificate also authorizes the use of Kayak Well 3, not Kayak Wells 2 and 3 as was stated in the Water Rights Self-Assessment. All sources must be recognized under a water right.</li> </ul>	1	Comments noted and appropriate revisions made to self-assessment forms.

Reviewer	Item No.	Chapter No.	Chapter Description	Dwg/Fig No. or Section	Reviewer's Comments	Response Code	Designer's Response
<b>Department of Ecology (ECY) - 2-16-23 email (3-7-23 email response)</b>							
Andrea Lauden, ECY	See prev. Item No. 27	8	Source of Supply	8.1.1 & Appendix 8-2	2/16/23 email stated disagreement with response to Item No. 27 above.	4	<p>Reiterated the PUD's Qa calculation/estimate of the Lake Stevens Water Right represents only that, a calculation estimate or self quantification of the water right, intended strictly for planning purposes and not intended to represent a legal quantification or an assertion of adjudicated water right.</p> <p>Provided a copy of the WRSA accepted in PUD's previous 2011 WSP that also included the calculated Qa.</p> <p>To clarify for the current WSP, footnote (*) was added to the Lake Stevens WRSA stating "PUD estimate. Not a legal quantification," in regard to the Lake Stevens Surface Water Qa calculation.</p>
<b>Washington Department of Health (DOH) - 4-5-23 email (4-14-23 email response)</b>							
PJ Wilkerson, DOH	See prev. Item No. 3	7	System Analysis	Table ES-1	Table ES-1 shows Warm Beach's ERU capacity to be 827. Does this number reflect the merge with the Kayak system?	4	<p>Yes, Table ES-1 reflects the combined capacity of the newly merged Kayak and Warm Beach systems. The storage deficiency is primarily due to the District taking a more conservative approach to standby storage for the combined system than has been historically used. Design &amp; permitting of the new tank is underway.</p>
PJ Wilkerson, DOH	See prev. Item No. 9	11	Improvement Program	Table ES-1	Lake Stevens' Capacity Limiting Year is 2030 according to table ES-1. However, according to Table 11-1, the necessary capital improvement project (North LS Tank) is not scheduled until 2038. We are also wondering how 2030 was chosen as the limiting year, as opposed to a sooner year (e.g., 2027).	4	<p>Because water can be transferred between tanks in the various pressure zones, the total system deficit of 1.01 MG by 2030 and 3.19 MG by 2040 are the values to be considered when determining timing and size of the storage improvements.</p> <p>The Burn Road tank that is in process of design and permitting with 2.3 MG of available storage will resolve the storage deficiency in advance of 2030.</p> <p>The 3.9 MG North Lake Stevens tank will address the 2040 deficit.</p> <p>This is a conservative analysis that does not include expected conservation savings. Actual water demands and growth patterns will be periodically reviewed in comparison to estimates in the WSP to adjust the timeline of improvements as warranted.</p>

RESPONSE CODES 1. Will Comply, Incorporation planned, 2. Clarification Required. 3. N/A 4. No action required. 5. Input required by others.

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## **DOH Comment & Response**

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STATE OF WASHINGTON  
DEPARTMENT OF HEALTH  
*NORTHWEST DRINKING WATER REGIONAL OPERATIONS*  
*PO BOX 47800 ATTN: MS K17-12 OLYMPIA, WA 98504-7800*

May 16, 2023

BRETT GEHRKE  
SNO PUD 1 - LAKE STEVENS  
[bagehrke@snopud.com](mailto:bagehrke@snopud.com)

Subject: SNOHOMISH COUNTY PUD 1  
SNO PUD 1 - LAKE STEVENS, ID #80907  
212<sup>th</sup> MARKET & DELI, ID #04515  
CRESWELL, ID #06325  
KAYAK ESTATES, ID#23111  
MAY CREEK, ID #52105  
OTIS, ID #06956  
SKYLITE TRACTS, ID #80220  
STORM LAKE RIDGE, ID #44431  
SUNDAY LAKE, ID #85205  
WARM BEACH, ID #93000  
SNOHOMISH COUNTY  
WATER SYSTEM PLAN - **APPROVAL**  
SUBMITTAL #**22-0302A-J**

Dear Mr. Gehrke:

The Snohomish PUD 1 (the PUD) Water System Plan (WSP), originally received on March 8, 2022, and resubmitted on April 18, 2023, has been reviewed, and in accordance with the provisions of WAC 246-290-100, is **APPROVED**.

Approval of the plan is valid as it relates to current standards outlined in Chapter 246-290 WAC, revised January 2022, Chapter 246-293 WAC, revised September 1997, Chapter 70.116 RCW, and is subject to the qualifications herein.

#### **APPROVED NUMBER OF CONNECTIONS**

The analysis provided in the WSP supports that the water systems can support an “**unspecified**” designation for their approved number of connections. A specific number of approved connections will not be applied at this time. Development may occur in compliance with the schedule and information provided in this WSP. This designation may be rescinded (and replaced with a specified number of approved connections) if ODW determines that the WSP is no longer representative of system activities.

An approved update of this plan is required on April 19, 2033, unless ODW requests an update or plan amendment pursuant to WAC 246-290-100(9).

## **LOCAL GOVERNMENT CONSISTENCY**

This document meets local government consistency requirements for WSP approval pursuant to RCW 90.03.386 and RCW 43.20.

## **SERVICE AREA AND DUTY TO SERVE**

Pursuant to RCW 90.03.386(2), the service areas identified in this WSP service area map may now represent an expanded “place of use” for this system’s water rights. Changes in service area should be made through a WSP amendment.

The PUD has a duty to provide new water service within its identified retail service areas. This WSP includes service policies to describe how your system plans to provide new service within your retail service area.

## **CONSTRUCTION WAIVERS**

*Standard Construction Specifications* were approved. Consistent with WAC 246-290-125 (2), the water system may proceed with the installation of distribution main extensions ***provided the water system completes and keeps on file, the enclosed construction completion report form*** in accordance with WAC 246-290-125 (2) and WAC 246-290-120 (5) and makes them available for review upon request by the department.

## **WATER RESOURCES**

Below is the general regulatory language that applies to all water system approvals:

The department’s review of your water system plan will not confer or guarantee any right to a specific quantity of water. The approved number of service connections is based on your representation of available water quantity. If the Washington Department of Ecology, a local planning agency, or other authority responsible for determining water rights and water system adequacy determines that you have use of less water than you represented, the number of approved connections may be reduced commensurate with the actual amount of water and your legal right to use it.

Thank you for your cooperation. Snohomish County is being notified of the terms and requirements of this approval and the determination of the approved number of connections. If you have any questions or wish to check our records, you may contact either of us at the numbers listed below.

Snohomish County PUD 1

May 16, 2023

Page 3

Sincerely,



Richard Rodriguez  
Regional Planner  
(253) 395-6771



John Ryding, P.E.  
Assistant Regional Manager  
(253) 395-6757

Enclosure – Construction Completion Report form

ecc: Kasey Cykler, DOE-NWRO  
Andrea Pellham, Snohomish County Health District  
Snohomish County Planning Dept.  
Tom Mortimer, Attorney at Law  
PJ Wilkerson, DOH

# CONSTRUCTION COMPLETION REPORT FOR DISTRIBUTION MAIN PROJECTS

In accordance with WAC 246-290-120(5), a **Construction Completion Report** is required for all construction projects. Under the submittal exception process for distribution main projects, designed by a professional engineer but not submitted to DOH for approval, the report does not need to be submitted. **However, the purveyor must keep the Construction Completion Report on file and make it available for review upon request by DOH in accordance with WAC 246-290-125 (2)(b).** Furthermore:

- (1) The report form **must** bear the seal, date and signature of a professional engineer (PE) licensed in the state of Washington; and
- (2) Per WAC 246-290-120(5)(c), the amount of change in the physical capacity of a system must be documented, if the project results in a change in physical capacity.

---

_____	DOH System ID No.: _____	
Name of Water System		
_____	Date Water System Plan that includes	
Name of Purveyor (Owner or System Contact)	Standard Construction Specifications	
_____	Date Standard Specifications	
Mailing Address	Approved by DOH: _____	
_____		
City	State	Zip
PROJECT NAME AND DESCRIPTIVE TITLE:		
(Include the name of any development project and number of services.)		
_____		Date Project or Portions Thereof Completed
_____		_____

## Professional Engineer's Acknowledgment

The undersigned professional engineer (PE), or his/her authorized agent, has inspected the above-described project that, as to layout, size and type of pipe, valves and materials, and other designed physical facilities, has been constructed and is substantially completed in accordance with construction documents reviewed by the purveyor's engineer. In the opinion of the undersigned engineer, the installation, physical testing procedures, water quality tests, and disinfection practices were carried out in accordance with state regulations and principles of standard engineering practice.

I have reviewed the disinfection procedures, pressure test results, and results of the bacteriological test(s) for this project and certify that they comply with the requirements of the construction standards/specifications approved by DOH.

**Engineer's Seal**

\_\_\_\_\_  
Engineer's Signature

Date \_\_\_\_\_

- 
- |   |  |   |
|---|--|---|
| <input checked="" type="checkbox"/> <b>NWRO Drinking Water</b><br>Department of Health<br>PO Box 47800 MS: K17-12<br>Olympia, WA 98504<br>(253)395-6750 | <input type="checkbox"/> <b>SWRO Drinking Water</b><br>Department of Health<br>PO Box 47823<br>Olympia, WA 98504-7823<br>(360)664-0768 | <input type="checkbox"/> <b>ERO Drinking Water</b><br>Department of Health<br>1500 W. Fourth Ave, Suite 305<br>Spokane, WA 99204<br>(509)456-2997 |
|---|--|---|

---

**From:** Wilkerson, PJ (DOH) <PJ.Wilkerson@doh.wa.gov>  
**Sent:** Tuesday, April 18, 2023 10:21 AM  
**To:** Wood, Brant; Ryding, John (DOH)  
**Cc:** Rodriguez, Richard (DOH); Joe Foote (Joe.Foote@murraysmith.us); Heneghan, Karen; Latimer, Karen; Selin, Max; Elisheva Walters; Tom Mortimer (mortwater@earthlink.net)  
**Subject:** RE: [External Sender] Snohomish PUD - Water System Plan Review

Hi Brant,

Thank you for meeting with us last week and following up, the explanations provided have resolved our remaining questions. We will keep a record of this email correspondence with the water system plan submittal. I'll reach out if anything new comes up, in the meantime we will be finishing some remaining items on our side.

Best,

**PJ Wilkerson, EIT**

Regional Engineering Staff  
Office of Drinking Water-Northwest Regional Office  
Environmental Public Health  
Washington State Department of Health  
[pj.wilkerson@doh.wa.gov](mailto:pj.wilkerson@doh.wa.gov)  
360-764-9218 | [www.doh.wa.gov](http://www.doh.wa.gov)



---

**From:** Wood, Brant <BEWood@snopud.com>  
**Sent:** Friday, April 14, 2023 4:14 PM  
**To:** Wilkerson, PJ (DOH) <PJ.Wilkerson@doh.wa.gov>; Ryding, John (DOH) <John.Ryding@DOH.WA.GOV>  
**Cc:** Rodriguez, Richard (DOH) <Richard.Rodriguez@DOH.WA.GOV>; Joe Foote (Joe.Foote@murraysmith.us) <Joe.Foote@murraysmith.us>; Heneghan, Karen <KSHeneghan@SNOPUD.com>; Latimer, Karen <KJLatimer@Snopud.com>; Selin, Max <MMSelin@Snopud.com>; Elisheva Walters <Elisheva.Walters@consoreng.com>; Tom Mortimer (mortwater@earthlink.net) <mortwater@earthlink.net>  
**Subject:** RE: [External Sender] Snohomish PUD - Water System Plan Review

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External Email

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PJ and John,

Thank you for meeting with us on Tuesday to discuss the final concerns related to the District's 2021 Water System Plan. Per our conversation I've done my best to address your concerns in this email. I really appreciate your willingness to allow us to address the remaining issues in writing versus modification of the actual plan as even minor changes in our very large plan create a lot of work pulling everything back into a cohesive linked document.

- 1.) Table ES-1 shows Warm Beach's ERU capacity to be 827. Does this number reflect the merge with the Kayak system?

Yes. Table ES-1 reflects the combined capacity of the newly merged Kayak and Warm Beach systems. As discussed further in section 7.9 the limiting capacity factor for the combined Warm Beach system is storage. This existing and future deficiency in storage shown in Table 7-34 is primarily due to the District taking a more conservative approach to standby storage for the combined system than has been historically used.

Also per our discussion the tables shown in Chapter 7 (Facility Analysis) reflect the surplus or deficit of the water system's capacity without factoring in the improvements discussed in the chapter and specifically identified by year in Chapter 11 (Improvement Program).

The District is currently working on the design and permitting of a new 0.5 MG reservoir (Kayak Reservoir 2) that will address the storage deficiency discussed in Chapter 7 for the combined Warm Beach system. We expect construction of this reservoir to be completed by the summer of 2024.

- 2.) Lake Stevens' Capacity Limiting Year is 2030 according to table ES-1. However, according to Table 11-1, the necessary capital improvement project (North LS Tank) is not scheduled until 2038. We are also wondering how 2030 was chosen as the limiting year, as opposed to a sooner year (e.g., 2027).

Per Section 7.3.4 of the WSP storage is the limiting capacity factor for the Lake Stevens Integrated system. As shown in Table 7-12 (2030 Storage Analysis) the total system deficiency in storage by 2030 is 1.01 MG and per Table 7-13 the total system deficiency in storage by 2040 is expected to be approximately 3.19 MG. Storage from tanks in the higher elevation areas is available to the lower elevation areas. Also, stored water in the lower zones can be pumped to the higher areas and emergency backup power is available for the pumps; therefore, the total system deficit is what was considered when determining the timing and size of the recommended improvements. As mentioned above the tables shown in Chapter 7 reflect the anticipated surplus or deficit of the water system's capacity without factoring in the improvements shown further in the chapter and identified more specifically by year Chapter 11.

In the specific example of the Lake Stevens Integrated system the District has budgeted and is the process of designing and permitting for the construction of a new 3.6 MG storage tank (Burn Road Tank). 2.3 MG of the new storage would be available for equalizing and standby storage for the Integrated system, which is greater than the deficiency that should be addressed before 2030. Although the Burn Road Tank is located in the 726 zone, water from the tank can feed back to the Lake Stevens 500 zone as needed based on system demands. The primary reason for moving forward with the construction of this tank in advance of our North Lake Stevens tank is that it will allow the District the necessary operational flexibility and redundancy to take its existing Granite Falls 726 zone tank, which was constructed in 1995, out of service for a needed full painting recoat. We anticipate that the design and permitting for this new tank will be completed by the end of 2024 with construction of the new tank slated for 2025. The 2040 Storage Analysis deficit will be met by design (2038) and construction (2039) of the 3.9 MG North Lake Stevens tank as shown in Table 11-1.

It should also be noted that the consultant analyzed and created tables showing the capacity related impacts associated with each of the District's major water systems for 2020 (existing conditions), 2030 (10 year), and 2040 (20 year) timeframes. Although we did not specifically model the exact limiting year for each system deficiency, the District has planned and budgeted for the recommended improvements as shown in Chapter 7 and also by year in Chapter 11 to resolve those deficiencies well in advance of the limiting year shown in the tables. It should also be noted that this relatively conservative analysis used project demands that did not include expected water savings from conservation. The District will periodically review actual water demand and growth patterns in comparison to the estimates made in this WSP and adjust the timeline of the planned improvements as warranted.

I hope that this response fully answers your questions and provides the necessary backup to our conversation on Tuesday; however, please let me know if you need anything else. Thanks again for your help on reviewing and approving this very large and complex plan.

Brant

Brant E. Wood, PE  
AGM Water Utility  
Snohomish County PUD #1  
[bewood@snopud.com](mailto:bewood@snopud.com)  
(425) 397-3003

---

**From:** Wilkerson, PJ (DOH) <[PJ.Wilkerson@doh.wa.gov](mailto:PJ.Wilkerson@doh.wa.gov)>  
**Sent:** Wednesday, April 5, 2023 2:17 PM  
**To:** Heneghan, Karen <[KSHeneghan@SNOPUD.com](mailto:KSHeneghan@SNOPUD.com)>  
**Cc:** Ryding, John (DOH) <[John.Ryding@DOH.WA.GOV](mailto:John.Ryding@DOH.WA.GOV)>; Rodriguez, Richard (DOH) <[Richard.Rodriguez@DOH.WA.GOV](mailto:Richard.Rodriguez@DOH.WA.GOV)>; Wood, Brant <[BEWood@snopud.com](mailto:BEWood@snopud.com)>; Joe Foote ([Joe.Foote@murraysmith.us](mailto:Joe.Foote@murraysmith.us)) <[Joe.Foote@murraysmith.us](mailto:Joe.Foote@murraysmith.us)>  
**Subject:** RE: [External Sender] Snohomish PUD - Water System Plan Review

Hi Karen,

That all sounds good to me. Here are our remaining comments/questions.

- 1.) Table ES-1 shows Warm Beach's ERU capacity to be 827. Does this number reflect the merge with the Kayak system?
- 2.) Lake Stevens' Capacity Limiting Year is 2030 according to table ES-1. However, according to Table 11-1, the necessary capital improvement project (North LS Tank) is not scheduled until 2038. We are also wondering how 2030 was chosen as the limiting year, as opposed to a sooner year (e.g., 2027).

Further discussion, mainly on question 2, would help our understanding. I'm not available tomorrow, however we're free Friday, Monday, and Tuesday. I'll create a meeting for Tuesday so we can include Brant, but please reach out if you would like to meet earlier.

Thanks,

**PJ Wilkerson, EIT**  
Regional Engineering Staff  
Office of Drinking Water-Northwest Regional Office  
Environmental Public Health  
Washington State Department of Health  
[pj.wilkerson@doh.wa.gov](mailto:pj.wilkerson@doh.wa.gov)  
360-764-9218 | [www.doh.wa.gov](http://www.doh.wa.gov)



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**From:** Heneghan, Karen <[KSHeneghan@SNOPUD.com](mailto:KSHeneghan@SNOPUD.com)>  
**Sent:** Wednesday, April 5, 2023 1:32 PM  
**To:** Wilkerson, PJ (DOH) <[PJ.Wilkerson@doh.wa.gov](mailto:PJ.Wilkerson@doh.wa.gov)>  
**Cc:** Ryding, John (DOH) <[John.Ryding@DOH.WA.GOV](mailto:John.Ryding@DOH.WA.GOV)>; Rodriguez, Richard (DOH) <[Richard.Rodriguez@DOH.WA.GOV](mailto:Richard.Rodriguez@DOH.WA.GOV)>;

Wood, Brant <[BEWood@snopud.com](mailto:BEWood@snopud.com)>; Joe Foote ([Joe.Foote@murraysmith.us](mailto:Joe.Foote@murraysmith.us)) <[Joe.Foote@murraysmith.us](mailto:Joe.Foote@murraysmith.us)>

**Subject:** RE: [External Sender] Snohomish PUD - Water System Plan Review

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External Email

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Hi PJ. Our contract with Murraysmith (now known as Consor) ended on March 31. I believe I will be able to handle the questions when we know what they are. It would probably be easier if you could send them to me in writing/email, as I don't know if I will be able to answer on the spot in a Teams call, depending on what the questions are. But, if not during Teams, then I could follow-up after.

So, if you would like to talk through Teams, please make the invite to me and Brant Wood.

Tomorrow, Thurs 4/6, our calendars are open until 2 pm.

I'm available on Friday & Monday, but Brant is not. If those are the best days for you, then it might be possible to talk with just me.

Tuesday, we are open outside of 10-11.

Wednesday we have 8-9 and noon-3 open.

Thursday, April 13, we are available until 2.

Karen Heneghan  
Principal Engineer  
SnoPUD Water  
425-309-4901 (work cell)

---

**From:** Wilkerson, PJ (DOH) <[PJ.Wilkerson@doh.wa.gov](mailto:PJ.Wilkerson@doh.wa.gov)>

**Sent:** Wednesday, April 5, 2023 12:15 PM

**To:** Joe Foote ([Joe.Foote@murraysmith.us](mailto:Joe.Foote@murraysmith.us)) <[Joe.Foote@murraysmith.us](mailto:Joe.Foote@murraysmith.us)>; Heneghan, Karen <[KSHeneghan@SNOPUD.com](mailto:KSHeneghan@SNOPUD.com)>

**Cc:** Ryding, John (DOH) <[John.Ryding@DOH.WA.GOV](mailto:John.Ryding@DOH.WA.GOV)>; Rodriguez, Richard (DOH) <[Richard.Rodriguez@DOH.WA.GOV](mailto:Richard.Rodriguez@DOH.WA.GOV)>

**Subject:** [External Sender] Snohomish PUD - Water System Plan Review

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Hello Joe and Karen,

John Ryding and I are finishing the engineering component of the Snohomish County PUD Water System Plan review and we have two final questions we would like to cover over a Teams call. Both questions relate to the data presented in Tables ES-1 and 7-12. Let me know when you have time to meet in the coming days and please feel free to loop in anybody that would like to join the call.

Thanks,

**PJ Wilkerson, EIT**

Regional Engineering Staff

Office of Drinking Water-Northwest Regional Office

Environmental Public Health



## Heneghan, Karen

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**From:** Rodriguez, Richard (DOH) <Richard.Rodriguez@DOH.WA.GOV>  
**Sent:** Monday, March 06, 2023 8:47 AM  
**To:** Ryding, John (DOH)  
**Cc:** Wilkerson, PJ (DOH); Latta, Lauren (ECY); Heneghan, Karen; mortwater@earthlink.net  
**Subject:** [External Sender] Snoh. PUD WSP re-submittal

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John, I have reviewed the PUD's responses to our comments and find them to be adequate. I am ready to approve the document. Please advise after you have completed your review.

Thank you, Richard

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**From:** DOH EPH DW NWRO WS Projects <DW.NWRO.WSProjects@doh.wa.gov>  
**Sent:** Tuesday, February 21, 2023 1:48 PM  
**To:** Elisheva Walters <Elisheva.Walters@consoreng.com>  
**Subject:** RE: Snohomish PUD WSP Resubmittal

Good afternoon,

The electronic version is sufficient, we do not need a hard copy. We will have the acknowledgement letter sent out soon.

**Natalie Rucksdashel**

She/Her/Hers  
Office Assistant 3  
Office of Drinking Water  
Northwest Regional Office  
Washington State Department of Health  
[natalie.rucksdashel@doh.wa.gov](mailto:natalie.rucksdashel@doh.wa.gov)  
253-395-6750 | [www.doh.wa.gov](http://www.doh.wa.gov)



*As of August 2022, the Northwest Regional Office in Kent has closed, and staff are working remotely. We are currently in the process of scanning our water system files, so please be patient as we move into this new work environment. Our new mailing address is:*

**PO Box 47800 ATTN: MS K17-12  
Olympia, WA 98504-7800**

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**From:** Elisheva Walters <[Elisheva.Walters@consoreng.com](mailto:Elisheva.Walters@consoreng.com)>  
**Sent:** Monday, February 13, 2023 4:29 PM  
**To:** DOH EPH DW NWRO WS Projects <[DW.NWRO.WSProjects@doh.wa.gov](mailto:DW.NWRO.WSProjects@doh.wa.gov)>  
**Cc:** Heneghan, Karen <[ksheneghan@snopud.com](mailto:ksheneghan@snopud.com)>; Joe Foote <[Joe.Foote@consoreng.com](mailto:Joe.Foote@consoreng.com)>; Wood, Brant <[BEWood@snopud.com](mailto:BEWood@snopud.com)>  
**Subject:** Snohomish PUD WSP Resubmittal

External Email

Good afternoon,

Please visit the following link to access the Snohomish County PUD No. 1 (District)'s 2021 Water System Plan Resubmittal. Attached is the District's original submittal application, a cover letter, and the comment responses from the draft WSP review.

Can DOH confirm that we should send an additional hard copy in the mail for the final version, or is the electronic resubmittal sufficient?

<https://wadoh.box.com/s/hhpwnbftaztcmnpfxlvafk9uc4x1r7s>

Thank you!  
Elisheva Walters

**Elisheva Walters, PE**

**CIVIL ENGINEER**

o: +1.509.321.0340

d: +1.509.321.6010



[consoreng.com](http://consoreng.com)

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155 N. Wacker Drive, Suite 4150  
Chicago, IL 60606  
888.451.6822

February 13, 2023

**Richard Rodriguez**

DOH NW Drinking Water Office  
20435 72nd Ave S, Suite 200  
Kent, WA 98032-2358

**RE: Resubmittal of Snohomish PUD 2021 Water System Plan for Review**

Dear Richard,

Enclosed please find our revised 2021 Water System Plan (WSP) for your review. Our responses to review comments from DOH (received August 24, 2022) and Snohomish County PDS are included in Appendix 0 and attached to the submittal email. Appendix 0 also includes comment responses to the Department of Ecology's comments on the Draft WSP.

Sincerely,

Elisheva Walters, PE, *Civil Engineer*  
Consor Engineers, LLC (formerly Murraysmith, Inc.)  
(509) 321 6010 | [elisheva.walters@consoreng.com](mailto:elisheva.walters@consoreng.com)

Cc: Karen Heneghan, PE, Snohomish County PUD #1  
(425) 397 3037 | [ksheneghan@snopud.com](mailto:ksheneghan@snopud.com)

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STATE OF WASHINGTON  
DEPARTMENT OF HEALTH  
*NORTHWEST DRINKING WATER REGIONAL OPERATIONS*  
*PO BOX 47800 ATTN: MS K17-12 OLYMPIA, WA 98504-7800*

August 24, 2022

BRETT GEHRKE  
SNO PUD 1 - LAKE STEVENS  
PO BOX 1107  
EVERETT WA 98206

RE: SNO PUD 1 - LAKE STEVENS ID# 80907  
MARKET&DELI ID# 04515  
CRESWELL ID # 06325  
KAYAK ESTATES ID# 23111  
MAY CREEK ID# 52105  
OTIS ID# 06956  
SKYLITE TRACTS ID# 80220  
STORM LAKE RIDGE ID# 4443 I  
SUNDAY LAKE ID# 85205  
WARM BEACH ID# 93000  
SNOHOMISH COUNTY  
WATER SYSTEM PLAN  
SUBMITTAL #22-0302A-J

Dear Mr. Gehrke:

Thank you for submitting the Water System Planning document (WSP) for the Snohomish County PUD No. 1 (the PUD) which was received in this office on March 8, 2022. We have reviewed the plan and offer the following comments. These comments must be adequately addressed prior to approval of the WSP.

**Description of Water System**

Provide a Statement of Local Government Consistency from the Snohomish County Planning Dept.

**Basic Planning Data**

Table 3-4 shows the Arlington UGA 2035 target population as 233,000. Is this a typo?

**System Analysis**

1. Please include an ERU capacity summary which includes the following for each water system:
  - a. Existing capacity in ERUs
  - b. Limiting capacity factor (e.g. storage, source, water rights, etc.) and the number of ERUs that the factor can support
  - c. The year that the limiting factor becomes the limiting factor (if prior to the end of the WSP approval period)

- d. Identify project from CIP that will address the limiting factor within the approval period.
  - e. This may be best placed in the Executive Summary.
2. Sections 7.7.2 and 7.7.3. Table 7-25 indicates there is no fire flow required for the Skylite system, yet the first sentence of Section 7.7.3 says the system does provide fire flow. Please clarify.
  3. Section 7.7.2. The “minor deficiency” as described in the footnote of Table 7-25 is roughly 30% of the listed PHD. Is this a significant reliability issue? What procedures are in place for low or no pressure events (see the comment in the O&M section)?

### **Water Use Efficiency Program (WUE) and Water Rights Assessment**

Respond to Dept. of Ecology’s review letter of May 23, 2022.

#### **Water Quality**

No comment

#### **Operations & Maintenance**

Please include your procedures for localized pressure loss events in the distribution system. What health advisory and customer notification criteria are used? See DOH Publication #331-583, “*Water Main Break Response Protocol for Chlorinated Systems*” as a reference.

#### **Distribution Facilities Design and Construction Standards**

No comment

#### **Improvement Program**

1. Table 11-1. What do the different cell shading colors indicate?
2. Section 7.3.4.2 shows the proposed storage improvements for the Lake Stevens Integrated System for deficiencies listed in Tables 7-12 and 7-13. These tables show an appreciably larger deficiency in the Lake Stevens service (LSSA) area than the Granite Falls service area (GFSA). However, Table 11-1 shows the North LS Tank (CIP Project 200 in the LSSA) scheduled for completion in 2039. Table 11-1 also shows the Burn Road 726 Reservoir (CIP Project in the GFSA) scheduled for completion in 2024. Given the differences in the magnitude of storage deficiencies please clarify the reasoning behind these proposed schedules.

#### **Financial Planning**

No comment

#### **Miscellaneous**

Provide signed PE stamp with the final WSP submittal.

Provide a signed SEPA Checklist and SEPA Threshold Determination with the final WSP.

The water system must meet the consumer input process outlined in WAC 246-290-100(8). Please include documentation of a consumer meeting discussing the WSP, prior to DOH approval of the WSP.

Prior to DOH approval, the PUD's elected governing body must approve and adopt the WSP.

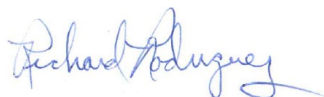
Please provide copies of any comments made by adjacent purveyors or other interested parties along with the PUD's response to those comments.

We hope that you have found these comments to be clear, constructive, and helpful in the development of your final draft WSP. We ask that you submit the revised WSP on or before **November 16, 2022**. In order to expedite the review of your revised submittal, please include a cover letter summarizing how each of the above comments was addressed in the revised WSP and where each response is located (i.e., page numbers, Appendices, etc.)

Regulations establishing a schedule for fees for review of planning, engineering and construction documents have been adopted (WAC 246-290-990). Please note that we have included an invoice in the amount of **\$ 5,700** for the review of the Water System Plan. This fee covers our cost for review of the initial submittal, plus the review of one revised document. Please remit your complete payment in the form of a check or money order within thirty days of the date of this letter to: **DOH, Revenue Section, and P.O. Box 1099, Olympia, WA 98507-1099.**

Thank you again for submitting your revised Water System Plan for our review. If you have any comments or questions concerning our review, please contact me at (253) 395-6771.

Sincerely,



Richard Rodriguez  
WSDOH Regional Planner

Cc: John Ryding, DOH  
PJ Wilkerson, DOH  
Snoh. County Health District  
Snoh. Co. Planning and Development  
Kasey Cykler, Dept. of Ecology, NWRO  
Brant Wood, Snoh PUD  
Thomas Mortimer, Attorney at Law

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## Ecology Comment & Response

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**From:** Thomas D. Mortimer, Jr. <mortwater@earthlink.net>  
**Sent:** Wednesday, March 08, 2023 11:05 AM  
**To:** 'Lauden, Andrea (ECY)'  
**Cc:** Heneghan, Karen  
**Subject:** [External Sender] RE: Snoh. PUD WSP re-submittal

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Andrea

Thank you for your time this morning and the email below. I understand your desire to perform your job in a thorough professional manner.

Best regards

Tom Mortimer  
Attorney at Law

---

**From:** Lauden, Andrea (ECY) [mailto:alau461@ECY.WA.GOV]  
**Sent:** Wednesday, March 8, 2023 10:50 AM  
**To:** Rodriguez, Richard (DOH)  
**Cc:** mortwater@earthlink.net  
**Subject:** RE: Snoh. PUD WSP re-submittal

Hi Richard,

I'm not sure if DOH is waiting for confirmation from Ecology to finish approval of the Snohomish PUD WSP, but I wanted to let you know that Ecology is satisfied with the responses from Snohomish PUD to our comments.

Thanks,  
Andrea

---

**From:** Rodriguez, Richard (DOH) <Richard.Rodriguez@DOH.WA.GOV>  
**Sent:** Monday, March 6, 2023 8:47 AM  
**To:** Ryding, John (DOH) <John.Ryding@DOH.WA.GOV>  
**Cc:** Wilkerson, PJ (DOH) <PJ.Wilkerson@doh.wa.gov>; Latta, Lauren (ECY) <LLAU461@ECY.WA.GOV>; Heneghan, Karen (KSHeneghan@SNOPUD.com) <KSHeneghan@SNOPUD.com>; mortwater@earthlink.net  
**Subject:** Snoh. PUD WSP re-submittal

John, I have reviewed the PUD's responses to our comments and find them to be adequate. I am ready to approve the document. Please advise after you have completed your review.

Thank you, Richard

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## Heneghan, Karen

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**From:** Lauden, Andrea (ECY) <alau461@ECY.WA.GOV>  
**Sent:** Wednesday, March 08, 2023 10:25 AM  
**To:** mortwater@earthlink.net; Lauden, Andrea (ECY); Heneghan, Karen  
**Cc:** Aronow, Shawn; Wood, Brant; Smith, Buck (ECY); Cykler, Kasey (ECY); Rodriguez, Richard (DOH)  
**Subject:** [External Sender] RE: Dept of Ecology Comment Letter - Snohomish County PUD No 1 WSP

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Good morning Mr. Mortimer,

Thank you for the response to my inquiry. Ecology stands by the position stated in Ecology's 2022 Snohomish PUD WSP comment letter and subsequent emails, and encourages the PUD not to rely on the estimated quantities of Surface Water Certificate 4648 (S1-\*07584) without further investigation.

I understand that you called our office earlier this week and my section manager, Kasey Cykler, would be happy to discuss this matter further if you would like. Her phone number is (360) 603-1037.

Best,

Andrea Lauden  
Water Resources Program  
Northwest Region Office  
Washington State Department of Ecology  
[andrea.lauden@ecy.wa.gov](mailto:andrea.lauden@ecy.wa.gov)  
425-495-5964

---

**From:** Thomas D. Mortimer, Jr. <mortwater@earthlink.net>  
**Sent:** Tuesday, March 7, 2023 10:52 AM  
**To:** Lauden, Andrea (ECY) <alau461@ECY.WA.GOV>; 'Heneghan, Karen' <KSHeneghan@SNOPUD.com>  
**Cc:** 'Aronow, Shawn' <SJAronow@snopud.com>; BEWood@snopud.com; Smith, Buck (ECY) <JSMI461@ECY.WA.GOV>  
**Subject:** FW: Dept of Ecology Comment Letter - Snohomish County PUD No 1 WSP

Dear Ms. Lauden

I am writing on behalf of Snohomish PUD, and to assist Karen Heneghan respond to your request to Richard R/DOH that the PUD provide a copy of the Water Right Self-Assessment (Appendix 8-2). Please be advised Karen advised me that the Water Right Self Assessments attached to our 2-9-23 Ecology response letter are exactly as they appear in Appendix 8-2 of the 2-13-23 that was re-submitted to DOH (3 days before your reply to our 2-9 letter). Because all related water right documents/files have now been attached to the WRSA file, Karen advised me It would be too big for her to send the entire Appendix 8-2 by email.. However, if you are looking for the

WRSAs (which you have with the 2-9 letter), those should be In your possession, along with a modified Lake Steven System WRSA (attached). If you need the WRSA's, or individual WRSA's resent again, please advise and we would be happy to do so.

On perhaps a related matter and as you will recall, on 2/16/23 you mailed Karen Heneghan (SnoPUD) with regard to the PUD's 2022 WSP in which you thanked her for "addressing all of Ecology's comments, making corrections to the Water Rights Self-Assessment, and providing additional information about the district's water rights and plans in the response below." In addition to that acknowledgement, you also made the comment below:

" However, Ecology respectfully disagrees with the assertion that it is common practice for Ecology to accept self-quantified annual volumes (Qa) for water rights issued prior to 1964 and that the Qa of Lake Stevens Surface Water Certificate 4648 (S1-\*07584) should therefore be quantified as 362 acre-feet/year. I am not aware of any records in which the Qa of Certificate 4648 was **previously quantified, nor has this water right been adjudicated**, and so Ecology maintains that the Qa is unquantified. Please let me know if you have any questions."

With regard to your comment above, and with all due respect, the PUD's Qa calculation/estimate of the Lake Stevens Water Right you cited represents only that, a calculation estimate or self quantification of the water right. And as clearly stated in the PUD response letter, the estimate was intended for strictly "planning purposes." It is not intended or represented as a legal quantification or an assertion of an adjudicated water right. As previously noted in our response letter, providing such "planning" calculations/estimates have been a common utility WSP practice for many years, both before and after the MWL involving pre-1965 water rights with no Qa cited in permits or certificates. It has also been a planning/WSP practice that has been accepted as simply that (i.e., an estimate) by DOE NWRO and other regional offices for years.

To illustrate this point, the PUD's WSP produced in 2011 cited the **calculated Qa estimate of S1-07584C** (362 afy) in its WRSA without comment, objection, or claim by DOE reviewers that such calculation represented an improper effort to effect "legal quantification" of the water right or intent to do so. It was understood at that time, as well as in the 2002 WSP, by DOE reviewing staff that the Qa calc was simply an estimate, and a common practice involving SW rights dated pre-1964 where, as noted, no Qa's for Surface Rights were assigned.

As a related point, it is worth noting that PUD and hundreds of other utility systems with legally unquantified or unadjudicated groundwater and surface water rights, but

with designated Qa's stated on their permits or certificates, commonly cite the legally unquantified/unadjudicated, but designated Qa's in their WSP WRSA and water right tables without DOE comment or objection in the review process. Put another way, despite the absence of **"previous" legal quantification or adjudication** of these rights, DOE has not considered their reference of designated Qi/Qa's in WRSA/WSP docs as inappropriate. Consequently, the fact that DOE records do not reflect a **"previous"** record indicating the Lake Stevens Qa estimate has been quantified or adjudicated, is simply not an appropriate condition to demand a Qa estimate's exclusion in the WSP/WRSA context, or to claim that it is intended to misrepresent a legal quantification. Again, the purpose in citing the Qa's and Qi's in WSPs whether designated or not, or legally quantified or not, is for planning purposes and to ensure a document exists that delineates to the best extent possible, the scope of water rights.

In summary, for purposes of the PUD's 2022 WSP, the Qa calculation as stated in the PUD 2022 WSP self-assessment is not intended or represented, not can it operate as a legal "quantification" that DOE is expected to "accept" as such. It remains now and as in the past, as a planning calculation to guide PUD staff as to the scope and limits of its water rights for strictly planning purposes. However, to assist your understanding in this regard and clarify, the self assessment form for the Lake Stevens SW water right has been modified to denote that the Qa calculation is simply an estimate, not a legal quantification.

If you have further questions, I would be happy to discuss at 206-399-3126. I have discussed this matter in detail with DOH.

Tom Mortimer  
Attorney at Law

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# Lake Stevens Integrated Water Right Self-Assessment Form for Water System Plan

Water Right Permit, Certificate, or Claim # <small>*If water right is interruptible, identify limitation in yellow section below</small>	WFI Source # <small>If a source has multiple water rights, list each water right on separate line</small>	Existing Water Rights				Current Source Production – Most Recent Calendar Year				10-Year Forecasted Source Production (determined from WSP)				20-Year Forecasted Source Production (determined from WSP)			
		<small>Qi= Instantaneous Flow Rate Allowed (GPM or CFS) Qa= Annual Volume Allowed (Acre-Feet/Year) This includes wholesale water sold</small>		<small>Qi = Max Instantaneous Flow Rate Withdrawn (GPM or CFS) Qa = Annual Volume Withdrawn (Acre-Feet/Year) This includes wholesale water sold</small>		<small>This includes wholesale water sold</small>		<small>This includes wholesale water sold</small>									
		Primary Qi <small>Maximum Rate Allowed</small>	Non-Additive Qi <small>Maximum Rate Allowed</small>	Primary Qa <small>Maximum Volume Allowed</small>	Non-Additive Qa <small>Maximum Volume Allowed</small>	Total Qi <small>Maximum Instantaneous Flow Rate Withdrawn</small>	Current Excess or (Deficiency) Qi	Total Qa <small>Maximum Annual Volume Withdrawn</small>	Current Excess or (Deficiency) Qa	Total Qi <small>Maximum Instantaneous Flow Rate in 10 Years</small>	10-Year Forecasted Excess or (Deficiency) Qi	Total Qa <small>Maximum Annual Volume in 10 Years</small>	10-Year Forecasted Excess or (Deficiency) Qa	Total Qi <small>Maximum Instantaneous Flow Rate in 20 Years</small>	20-Year Forecasted Excess or (Deficiency) Qi	Total Qa <small>Maximum Annual Volume in 20 Years</small>	20-Year Forecasted Excess or (Deficiency) Qa
1 G1-*00782C (Cert 168-A)	S05 AGB694 Lake Stevens Well 1	1,200	0	700	0	1200	0	609	92	1,200	-	700	-	1,200	-	700	-
2 G1-*00783C (Cert 169-A)	S06 AGB695 Lake Stevens Well 2	1,200	0	700	0	1200	0	609	92	1,200	-	700	-	1,200	-	700	-
3 S1-*07584C (Cert 04648)	Lake Stevens Surface Water	224	0	362*	0	0	224	-	362	-	224	-	362	-	224	-	362
<b>TOTALS =</b>		2,624		1,762		2400	224	1217	545	2400	224	1400	362	2400	224	1400	362

Column Identifiers for Calculations:      A                      B                      C                      =A-C                      D                      =B-D                      E                      = A-E                      F                      =B-F                      G                      =A-G                      H                      =B-H

PENDING WATER RIGHT APPLICATIONS: 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

Footnote (\*) added for clarification.

INTERTIES: 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				10-Year Forecasted Purchase				20-Year Forecasted Purchase			
	Current quantity purchased through intertie			Forecasted quantity purchased through intertie		Forecasted quantity purchased through intertie									
	Maximum Qi <small>Instantaneous Flow Rate</small>	Maximum Qa <small>Annual Volume</small>		Maximum Qi <small>Instantaneous Flow Rate</small>	Current Excess or (Deficiency) Qi	Maximum Qa <small>Annual Volume</small>	Current Excess or (Deficiency) Qa	Maximum Qi <small>10-Year Forecast</small>	Future Excess or (Deficiency) Qi	Maximum Qa <small>10-Year Forecast</small>	Future Excess or (Deficiency) Qa	Maximum Qi <small>20-Year Forecast</small>	Future Excess or (Deficiency) Qi	Maximum Qa <small>20-Year Forecast</small>	Future Excess or (Deficiency) Qa
1 City of Everett (See list on next page)	No Limit	No Limit		6,003	N/A	3,790	N/A	8,832	N/A	6,310	N/A	10,141	N/A	7,322	N/A
2															
<b>TOTALS =</b>				6,003	N/A	3,790	N/A	8,832	N/A	6,310	N/A	10,141	N/A	7,322	N/A

Column Identifiers for Calculations:      A                      B                      C                      =A-C                      D                      =B-D                      E                      =A-E                      F                      =B-F                      G                      =A-G                      H                      =B-H

INTERRUPTIBLE WATER RIGHTS: Identify limitations on any water rights listed above that are interruptible.		
Water Right #	Conditions of Interruption	Time Period of Interruption
1		
2		
3		

- | ADDITIONAL COMMENTS:   |
|--|
| * PUD estimate. Not a legal quantification.  |
| 1. The following page lists all interties that supply Everett water to the Lake Stevens Integrated water system.   |
| 2. The 10-year & 20-year Qi for interties are based on the Lake Stevens projected MDD in Table 5-9 (12,718,506 in 2030 & 14,603,199 gpd in 2040) converted to gpm continuously over 24 hours, considering the possibility that Lake Stevens wells could be off-line on a peak day. |
| 3. The 10- and 20-year Qa for interties is based on the Lake Stevens annual projection in Table 5-9 (7,710 acre-ft in 2030 & 8,722 acre-ft in 2040) minus the maximum allowed Qa from the Lake Stevens wells.  |

4. As stated in Section 8.1.1 of the WSP, PUD has an ongoing interest in retaining the municipal Lake Stevens surface water right to meet future demands within the Lake Stevens Integrated water system.

Purchased Water Connections for the Lake Stevens Integrated Water System:

<b>Name</b>	<b>Name of Purveyor Providing Water</b>	<b>Facility Description</b>
S01 – Everett (Glenwood)	Everett	Pumped supply, capacity = 3500 gpm (2000 gpm to 500 ft HGL and 1500 gpm to 580 ft HGL)
S02 – Everett (East Hewitt)	Everett	Pump station decommissioned. Scheduled for re-construction in 2029. See CIP 100, 3500 gpm future pump station capacity.
S03 – Everett (Soperwood Gravity)	Everett via Marysville JOA-line	Gravity supply. 500 gpm capacity reported on WFI.
S04 – Everett (Cavaleros)	Everett	Gravity supply. 1750 gpm capacity reported on WFI.
S08 – Everett (Machias)	Everett	Pumped supply, capacity = 3000 gpm
S10 – Everett (Soperwood Pumped)	Everett via Marysville JOA-line	Pumped supply, capacity = 1600 gpm
S11 – Everett (Roesiger)	Everett	Pumped supply, capacity = 700 gpm
S12 – Everett (Dutch Hill 1)	Everett	Gravity supply. 1250 gpm capacity reported on WFI.
S13 – Everett (Dutch Hill 2)	Everett	Gravity supply. 1250 gpm capacity reported on WFI.
S14 – Everett (157 <sup>th</sup> Ave SE)	Everett	Gravity + Pumped supply. 800 gpm reported capacity.

Other than the 3.42 mgd withdrawal limit from the Marysville JOA-line (S03 & S10 combined), there is no limit for withdrawals from the supply connections.

The following purchased water connections were abandoned and will not return to service:

<b>Name</b>	<b>Name of Purveyor Providing Water</b>	<b>Facility Description</b>
S07 – Everett (Williams Rd)	Everett	Abandoned
S09 – Everett (Marysville 44 <sup>th</sup> St NE)	Marysville/Everett	Abandoned Emergency Intertie
S15 – Everett (KlaHaYa )	Everett	Abandoned in November 2022

Table 1

from approved 2011 WSP

**LAKE STEVENS WATER SYSTEM PLAN**  
**WATER RIGHTS SELF ASSESSMENT – EXISTING STATUS**

PERMIT CERTIFICATE OR CLAIM #	NAME ON DOCUMENT	PRIORITY DATE (List oldest first)	SOURCE NAME/ NUMBER	ANY PORTION SUPPLEMENTAL? (If yes, explain in footnote)	EXISTING WATER RIGHTS		EXISTING CONSUMPTION		CURRENT WATER RIGHT STATUS (Excess/Deficiency)	
					Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)
Permits/ Certificates 1. S1-*07584C	Snohomish County Public Utilities District No 1	12/28/1946	Lake Stevens	No	224 gpm (0.5 cfs)	362	0	0	224 gpm	362 afy
2. G1-*00782C (Cert 168-A)	Snohomish County Public Utility District No 1	03/23/1948	Lake Stevens Well 1	No	1,200	700	0	0	1,200	700 afy
3. G1-*00783C (Cert 169-A)	Same as above.	03/23/1948	Lake Stevens Well 2	No	1,200	700	0	0	1,200	700 afy
4.										
Claims 1.										
2.										
3.										
4.										
<b>TOTAL</b>	*****	*****	*****	*****	<b>2,624 gpm</b>	<b>1,762 afy</b>	<b>0</b>	<b>0</b>	<b>2,624 gpm</b>	<b>1,762 afy</b>
INTERTIE NAME/ IDENTIFIER	NAME OF PURVEYOR PROVIDING WATER	EXISTING LIMITS ON INTERTIE USE		EXISTING CONSUMPTION THROUGH INTERTIE		CURRENT INTERTIE SUPPLY STATUS (Excess/Deficiency)				
		Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)			
1. See attached.	Everett									
2.										
3.										
4.										
<b>TOTAL</b>	*****	<b>no limit</b>	<b>no limit</b>	<b>6,900 gpm</b>	<b>5,113 afy</b>	<b>0</b>	<b>0</b>			
PENDING WATER RIGHT APPLICATION (New/Change)	NAME ON APPLICATION	DATE SUBMITTED	ANY PORTION SUPPLEMENTAL? (If yes, explain in footnote)	PENDING WATER RIGHTS						
				Maximum Instantaneous Flow Rate (Qi) Requested	Maximum Annual Volume (Qa) Requested					
1.										
2.										
3.										

List of Purchased Water Supply Connections for the Lake Stevens Water System (Existing Conditions)

<u>Name</u>	<u>Name of Purveyor Providing Water</u>	<u>Facility Description</u>
1. East Hewitt	Everett	Pumped supply, capacity = 2000 gpm
2. Soperwood	Everett via Marysville JOA-line	Combined pumped and gravity supply, limit = 3.42 mgd
3. Machias	Everett	Pumped supply, capacity = 3000 gpm
4. Glenwood	Everett	Pumped supply, capacity = 3500 gpm
5. Williams Road	Everett	Gravity supply
6. Cavaleros	Everett	Gravity supply
7. 44 <sup>th</sup> St NE (Emergency Intertie)	Marysville/Everett	Gravity supply

Other than the 3.42 mgd withdrawal limit from the Marysville JOA-line, there no limit for withdrawals from the supply connections.

Maximum instantaneous flow rate through the combined supply connections: about 90 percent of the maximum day demand is delivered through the pump stations over a 24 hour period, with peak hours supplemented from the storage tanks. About 10 percent of the peak hour demand is delivered directly through the gravity-flow taps.



Table 2

from approved 2011 WSP

**LAKE STEVENS WATER SYSTEM  
WATER RIGHTS SELF ASSESSMENT – 6 YEAR FORECAST**

PERMIT CERTIFICATE OR CLAIM #	NAME ON DOCUMENT	PRIORITY DATE (List oldest first)	SOURCE NAME/ NUMBER	ANY PORTION SUPPLEMENTAL? (If yes, explain in footnote)	EXISTING WATER RIGHTS		FORECASTED WATER USE FROM SOURCES (6-year Demand)		FORECASTED WATER RIGHT STATUS (Excess/Deficiency)	
					Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)
Permits/ Certificates 1. S1-*07584C	Snohomish County Public Utilities District No 1	12/28/1946	Lake Stevens	No	224 gpm (0.5 cfs)	362 afy	0	0	224 gpm	362 afy
2. G1-*00782C (Cert 168-A)	Snohomish County Public Utility District No 1	03/23/1948	Lake Stevens Well 1	No	1,200 gpm	700 afy	1,200 gpm (alternating with Well 2)	700 afy	0	0
3. G1-*00783C (Cert 169-A)	Same as above.	03/23/1948	Lake Stevens Well 2	No	1,200 gpm	700 afy	1,200 gpm (alternating with Well 1)	700 afy	0	0
4.										
Claims 1.										
2.										
<b>TOTAL</b>	*****	*****	*****	*****	<b>2,624 gpm</b>	<b>1,762 afy</b>	<b>2,400 gpm</b>	<b>1,400 afy</b>	<b>224 gpm</b>	<b>362 afy</b>
INTERTIE NAME/ IDENTIFIER	NAME OF PURVEYOR PROVIDING WATER	EXISTING LIMITS ON INTERTIE USE		FORECASTED CONSUMPTION THROUGH INTERTIE		FORECASTED INTERTIE SUPPLY STATUS (Excess/Deficiency)				
		Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)			
1. See attached list.	Everett									
2.										
3.						5350				
4.										
<b>TOTAL</b>	*****	<b>no limit</b>	<b>no limit</b>	<b>8,800 gpm</b>	<b>5,350 afy</b>	<b>0</b>	<b>0</b>			
PENDING WATER RIGHT APPLICATION (New/Change)	NAME ON APPLICATION	DATE SUBMITTED	ANY PORTION SUPPLEMENTAL? (If yes, explain in footnote)	PENDING WATER RIGHTS						
				Maximum Instantaneous Flow Rate (Qi) Requested	Maximum Annual Volume (Qa) Requested					
1.										
2.										

List of Purchased Water Supply Connections to the Lake Stevens Water System (6 Year Forecast)

**from approved 2011 WSP**

<u>Name</u>	<u>Name of Water Provider</u>	<u>Facility Description</u>
1. East Hewitt	Everett	Pumped supply capacity = 2000 gpm
2. Soperwood	Everett via Marysville JOA-line	Combined pumped and gravity supply limit = 3.42 mgd
3. Machias	Everett	Pumped supply capacity = 3000 gpm (with one pump as spare)
4. Glenwood	Everett	Pumped supply capacity = 3500 gpm
5. Williams Road	Everett	Gravity supply
6. Cavaleros	Everett	Gravity supply
7. Lake Roesiger	Everett	Pumped supply capacity = 450 gpm (with one pump as spare)
8. Dutch Hill Tap 1	Everett	Gravity supply
9. Dutch Hill Tap 1	Everett	Gravity supply
10. 157 <sup>th</sup> Ave SE (Machias Ridge East)	Everett	Gravity supply
11. 123 <sup>rd</sup> Ave SE (Kla-Ha-Ya)	Everett	Gravity supply (it is possible that this tap might be abandoned)
12. 44 <sup>th</sup> St NE (Emergency Intertie)	Marysville/Everett	Gravity supply

Other than the 3.42 mgd withdrawal limit from the Marysville JOA-line, there no contractual limit for withdrawals from the supply connections.

Method for estimating the total **maximum instantaneous flow** rate through the supply connections:

- 2015 base projection assumes that **90 percent of the 2015 Lake Stevens MDD (0.9 x 7,945 gpm)** is delivered from the Lake Stevens wells and supply pump stations to areas of the system that are supplemented by storage for the peak hour demand, and that the wells operate at 1200 gpm for 17 hours per day (**subtract 850 gpm as 24-hr avg**). In addition, 10 percent of the PHD (**0.1 x 12,630 gpm**) is estimated to be delivered directly through gravity-flow taps. The result is **7,563 gpm max instantaneous** delivered to Lake Stevens through the first six taps listed above.
- The **Lake Roesiger MDD demand of 150 gpm for 2015** is added to the instantaneous flow because the Lake Roesiger system is planned to be merged with Lake Stevens by this time. Peak hour flow is supplemented from the Lake Roesiger tanks.
- The **Dubuque PHD of 1,064 gpm for 2015** is added to the instantaneous flow determined above because the Dubuque system should also be merged with Lake Stevens by this time. Standby storage for the Dubuque zones will be provided from the Lake Stevens tanks, but peak instantaneous flow to Dubuque may exceed the 24-hour maximum day flow.
- The impact of merging the **Pilchuck 10** system with Lake Stevens and Lake Roesiger is considered insignificant.
- The resulting total maximum flow of  $7,563 + 150 + 1,064 = 8,777$  gpm is rounded up to **8,800 gpm**.

Method for estimating the combined **annual volume** through the supply connections:

- The 2015 (6 year) annual estimates for **Lake Stevens (6,249 afy)**, **Lake Roesiger (55 afy)**, and **Dubuque (446 afy)** are added together, and P10 is considered to have insignificant impact, for a total annual demand of **6,750 afy from the merged water systems**.
- **1400 afy is subtracted from the above** total, assuming that the Lake Stevens wells will be operated to maximize use of this annual water right limit, for a net annual volume of **5,350 afy delivered from the supply taps**.

Table 3

from approved 2011 WSP

**LAKE STEVENS WATER SYSTEM  
WATER RIGHTS SELF ASSESSMENT – 20 YEAR FORECAST**

PERMIT CERTIFICATE OR CLAIM #	NAME ON DOCUMENT	PRIORITY DATE (List oldest first)	SOURCE NAME/ NUMBER	ANY PORTION SUPPLEMENTAL? (If yes, explain in footnote)	EXISTING WATER RIGHTS		FORECASTED WATER USE FROM SOURCES (20-year Demand)		FORECASTED WATER RIGHT STATUS (Excess/Deficiency)	
					Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)
Permits/ Certificates 1. S1-*07584C	Snohomish County Public Utilities District No 1	12/28/1946	Lake Stevens	No	224 gpm (0.5 cfs)	362 afy	0	0	224 gpm	362 afy
2. G1-*00782C (Cert 168-A)	Snohomish County Public Utility District No 1	03/23/1948	Lake Stevens Well 1	No	1,200 gpm	700 afy	1,200 gpm (alternating with Well 2)	700 afy	0	0
3. G1-*00783C (Cert 169-A)	Same as above.	03/23/1948	Lake Stevens Well 2	No	1,200 gpm	700 afy	1,200 gpm (alternating with Well 1)	700 afy	0	0
4.										
Claims 1.										
2.										
<b>TOTAL</b>	*****	*****	*****	*****	<b>2,624 gpm</b>	<b>1,762 afy</b>	<b>2,400 gpm</b>	<b>1,400 afy</b>	<b>224 gpm</b>	<b>362 afy</b>
INTERTIE NAME/ IDENTIFIER	NAME OF PURVEYOR PROVIDING WATER	EXISTING LIMITS ON INTERTIE USE		FORECASTED CONSUMPTION THROUGH INTERTIE		FORECASTED INTERTIE SUPPLY STATUS (Excess/Deficiency)				
		Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)			
1. See attached list.	Everett									
2.										
3.										
4.										
<b>TOTAL</b>	*****				<b>no limit</b>	<b>no limit</b>	<b>14,200 gpm</b>	<b>9,269 afy</b>	<b>0</b>	<b>0</b>
PENDING WATER RIGHT APPLICATION (New/Change)	NAME ON APPLICATION	DATE SUBMITTED	ANY PORTION SUPPLEMENTAL? (If yes, explain in footnote)	PENDING WATER RIGHTS						
				Maximum Instantaneous Flow Rate (Qi) Requested	Maximum Annual Volume (Qa) Requested					
1.										
2.										

List of Purchased Water Supply Connections to the Lake Stevens Water System (20 Year Forecast)

**from approved 2011 WSP**

<u>Name</u>	<u>Name of Water Provider</u>	<u>Facility Description</u>
1. East Hewitt	Everett	Pumped supply capacity = 2000 gpm
2. Soperwood	Everett via Marysville JOA-line	Combined pumped and gravity supply limit = 3.42 mgd
3. Machias	Everett	Pumped supply capacity = 5500 gpm (with one pump as spare)
4. Glenwood	Everett	Pumped supply capacity = 3500 gpm
5. Williams Road	Everett	Gravity supply
6. Cavaleros	Everett	Gravity supply
7. Lake Roesiger	Everett	Pumped supply capacity = 450 gpm (with one pump as spare)
8. Dutch Hill Tap 1	Everett	Gravity supply
9. Dutch Hill Tap 1	Everett	Gravity supply
10. 157 <sup>th</sup> Ave SE (Machias Ridge East)	Everett	Gravity supply
11. 123 <sup>rd</sup> Ave SE (Kla-Ha-Ya)	Everett	Gravity supply (it is possible that this tap might be abandoned)
12. 44 <sup>th</sup> St NE (Emergency Intertie)	Marysville/Everett	Gravity supply

Other than the 3.42 mgd withdrawal limit from the Marysville JOA-line, there no contractual limit for withdrawals from the supply connections.

Method for estimating the total **maximum instantaneous flow** rate through the supply connections:

- 2029 base projection assumes that **90 percent of the 2029 Lake Stevens MDD (0.9 x 12,688 gpm)** is delivered from the Lake Stevens wells and supply pump stations to areas of the system that are supplemented by storage for the peak hour demand, and that the wells operate at 1200 gpm for 17 hours per day (**subtract 850 gpm as 24-hr avg**). In addition, 10 percent of the PHD (**0.1 x 20,121 gpm**) is estimated to be delivered directly through gravity-flow taps. The result is **12,581 gpm max instantaneous** delivered to Lake Stevens through the first six taps listed above.
- The **Lake Roesiger MDD demand of 186 gpm for 2029** is added to the instantaneous flow because the Lake Roesiger system is planned to be merged with Lake Stevens by this time. Peak hour flow is supplemented from the Lake Roesiger tanks.
- The **Dubuque PHD of 1,402 gpm for 2029** is added to the instantaneous flow determined above because the Dubuque system should also be merged with Lake Stevens by this time. Standby storage for the Dubuque zones will be provided from the Lake Stevens tanks, but peak instantaneous flow to Dubuque may exceed the 24-hour maximum day flow.
- The impact of merging the **Pilchuck 10** system with Lake Stevens and Lake Roesiger is considered insignificant.
- The resulting total maximum flow of  $12,581 + 186 + 1,402 = 14,169$  gpm is rounded up to **14,200 gpm**.

Method for estimating the combined **annual volume** through the supply connections:

- The 2029 (20 year) annual estimates for **Lake Stevens (9,980 afy)**, **Lake Roesiger (84 afy)**, and **Dubuque (605 afy)** are added together, and P10 is considered to have insignificant impact, for a total annual demand of **10,669 afy from the merged water systems**.
- **1400 afy is subtracted from the above** total, assuming that the Lake Stevens wells will be operated to maximize use of this annual water right limit, for a net annual volume of **9,269 afy delivered from the supply taps**.

## Heneghan, Karen

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**From:** Lauden, Andrea (ECY) <alau461@ECY.WA.GOV>  
**Sent:** Thursday, February 16, 2023 12:10 PM  
**To:** Heneghan, Karen  
**Cc:** Rodriguez, Richard (DOH); Latimer, Karen; Tom Mortimer (mortwater@earthlink.net); Elisheva Walters - (Elisheva.Walters@consoreng.com); Joe Foote (Joe.Foote@murraysmith.us); Aronow, Shawn; Selin, Max; Arndt, Christina; Cook, Jay (ECY)  
**Subject:** RE: Dept of Ecology Comment Letter - Snohomish County PUD No 1 WSP

Good afternoon,

Thank you for addressing all of Ecology's comments, making corrections to the Water Rights Self-Assessment, and providing additional information about the district's water rights and plans in the response below.

However, Ecology respectfully disagrees with the assertion that it is common practice for Ecology to accept self-quantified annual volumes (Qa) for water rights issued prior to 1964 and that the Qa of Lake Stevens Surface Water Certificate 4648 (S1-\*07584) should therefore be quantified as 362 acre-feet/year. I am not aware of any records in which the Qa of Certificate 4648 was previously quantified, nor has this water right been adjudicated, and so Ecology maintains that the Qa is unquantified. Please let me know if you have any questions.

Jess Yates, Ecology's regional metering coordinator, will also continue to work with Snohomish PUD on their meter reporting, as needed.

Thank you,

Andrea Lauden  
Water Resources Program  
Northwest Region Office  
Washington State Department of Ecology  
[andrea.lauden@ecy.wa.gov](mailto:andrea.lauden@ecy.wa.gov)  
425-495-5964

---

**From:** Heneghan, Karen <KSHeneghan@SNOPUD.com>  
**Sent:** Thursday, February 9, 2023 4:20 PM  
**To:** Lauden, Andrea (ECY) <alau461@ECY.WA.GOV>  
**Cc:** Philip, Noel (ECY) <NPHI461@ECY.WA.GOV>; Conner, Kevin (ECY) <keco461@ECY.WA.GOV>; Rodriguez, Richard (DOH) <Richard.Rodriguez@DOH.WA.GOV>; Latimer, Karen <KJLatimer@Snopud.com>; Tom Mortimer (mortwater@earthlink.net) <mortwater@earthlink.net>; Elisheva Walters - (Elisheva.Walters@consoreng.com) <Elisheva.Walters@consoreng.com>; Joe Foote (Joe.Foote@murraysmith.us) <Joe.Foote@murraysmith.us>; Aronow, Shawn <SAronow@SNOPUD.com>; Selin, Max <MMSelin@Snopud.com>; Arndt, Christina <CKArndt@snopud.com>  
**Subject:** RE: Dept of Ecology Comment Letter - Snohomish County PUD No 1 WSP

Andrea and everyone,

Attached is the response to Ecology's comment letter on Snohomish PUD's 2021 Water System Plan.

If there are any further questions, I can field them.

Thank you,

Karen Heneghan  
Principal Engineer  
SnoPUD Water  
[ksheneghan@snopud.com](mailto:ksheneghan@snopud.com)  
425-397-3037 desk  
425-309-4901 work cell

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**From:** Latta, Lauren (ECY) <[LLAU461@ECY.WA.GOV](mailto:LLAU461@ECY.WA.GOV)>  
**Sent:** Wednesday, February 08, 2023 1:53 PM  
**To:** Heneghan, Karen <[KSHeneghan@SNOPUD.com](mailto:KSHeneghan@SNOPUD.com)>  
**Subject:** RE: Dept of Ecology Comment Letter - Snohomish County PUD No 1 WSP

Hi Karen,

Thank you for checking. Please send your response letter to Andrea Lauden, Noel Philip and Richard Rodriguez. In place of myself, please include Kevin Conner ([kevin.conner@ecy.wa.gov](mailto:kevin.conner@ecy.wa.gov)). Kevin is our current Admin.

Thank you,

**Lauren Latta** (she/her) | Well Report Database Tracker  
Washington Department of Ecology  
Water Resources Program | Northwest Region Office  
PO Box 330316 | Shoreline, WA 98133-9716 (**New Mailing Address**)  
Desk Phone: 206-594-0210 | [www.ecology.wa.gov](http://www.ecology.wa.gov)  
Cell Phone: 425-229-3405  
24-hour reception line: 206-594-0000

Communications to and from this email address are a public record and may be subject to disclosure as per the Washington State Public Records Act, RCW 42.56

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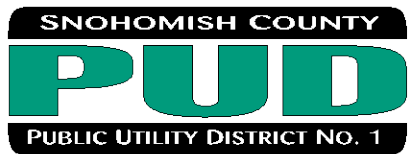
**From:** Heneghan, Karen <[KSHeneghan@SNOPUD.com](mailto:KSHeneghan@SNOPUD.com)>  
**Sent:** Wednesday, February 8, 2023 1:42 PM  
**To:** Latta, Lauren (ECY) <[LLAU461@ECY.WA.GOV](mailto:LLAU461@ECY.WA.GOV)>  
**Subject:** FW: Dept of Ecology Comment Letter - Snohomish County PUD No 1 WSP

Hi Lauren. I am getting ready to send the response to this review letter & I am wondering if you could confirm who all I should email it to.

I see the letter was signed by Andrea Lauden and I found her address on Ecology's directory as [alau461@ecy.wa.gov](mailto:alau461@ecy.wa.gov), but I don't see her in the email distribution from when you sent it to us.

Should I send it to Andrea Lauden with cc's to you, Noel Philip and Richard Rodriguez?

Karen Heneghan  
Principal Engineer  
SnoPUD Water  
425-397-3037 desk  
425-309-4901 work cell



*Energizing Life in Our Communities*

February 9, 2023

Andrea Lauden  
Dept of Ecology, Water Resources Program  
PO Box 330316  
Shoreline WA 98133-9716  
Delivered by email to [alau461@ecy.wa.gov](mailto:alau461@ecy.wa.gov)

RE: Snohomish County PUD No. 1 (Water Systems ID# 80907, 04515, 06325, 23111, 52105, 06956, 80220, 44431, 85205, 93000)  
2021 Water System Plan – Response to Comments

Dear Andrea Lauden:

Thank you for Department of Ecology's (Ecology) comments on Public Utility District No. 1 of Snohomish County (District) 2021 Water System Plan (WSP). The WSP was adopted by the District's Commissioners on January 10, 2023, and it will be submitted to Department of Health soon for final review and approval.

This letter describes the comments in Ecology's review letter dated May 23, 2022, and responses provided by the District. It follows the sequence of Ecology's letter, with comments underlined and the District's responses in bold font. The corrected water right self-assessment (WRSA) forms are attached to this letter.

### **Advisory Comments**

#### ***Provisions of Water Rights Not Met***

ECOLOGY STATEMENT: In reviewing water right files associated with the District, it appears that provisions described in Water Rights No. G1-GWC7295 (CG1-\*09636), G1-\*09360, and G1-25686 have not been followed as prescribed. Per Superseding Certificate G1-GWC7295, Sunday Lake Water System is required to record water use data weekly and report the annual maximum rate of withdrawal and the annual total volume to Ecology by January 31 of each year. Ecology has not received metering data since the change was approved in 2008.

**RESPONSE: On January 13, 2023, a completed Water Use Data Collection Form for G1-GWC7295 (CG1-\*09636) was emailed to Jess Yates, our currently assigned Metering Coordinator, who acknowledged its receipt on January 17, 2023. Total annual volumes were provided from 2008 through 2022. Annual maximum withdrawal rates were provided back to 2012. Because PUD activated a new SCADA system at the start of 2012, instantaneous flow data for 2008-2011 cannot easily be recovered. We will work with Jess to set up an account for online reporting for 2023 and beyond.**

ECOLOGY STATEMENT: A settlement agreement between the District and the Tulalip Tribes resulted in the approval of changes to Water Rights No. G1-\*09360 (Cert #6488-A) and G1-20625 for May Creek Water System contingent upon an augmentation plan and metering requirements. Karen Heneghan (District) noted in an email to Kellie Gillingham (Ecology) dated March 8, 2021, that the May Creek augmentation plan has not been utilized because the trigger (daily withdrawals of over 398,880 gallons) has never been reached. The maximum annual instantaneous rate of withdrawal and the annual total volume of withdrawal from the May Creek Well Field must be reported annually to Ecology. These data have not been submitted since the water right changes were approved.

**RESPONSE: (1) As noted above, May Creek flow augmentation has not occurred due to the fact the threshold withdrawal rate has not occurred. The 2015-2019 peak days for the May Creek system used for analysis in this WSP can be seen in Table 5-4. The District believes it has correctly interpreted the Settlement Agreement text to mean that monitoring and reporting of augmentation flows is not required absent conditions that actually require such flow augmentation. (2) On January 13, 2023, a Water Use Data Collection Form for G1-\*09360 (Cert #6488-A) and G1-20625 was emailed to Metering Coordinator, Jess Yates, who acknowledged its receipt on January 17, 2023. Like the report for the Sunday Lake water right, annual maximum withdrawal rates were entered back to 2012, and flow rate data prior to that is not easily accessible due to the replacement of the PUD’s SCADA system. The combined annual production for May Creek Wells 1 & 2 was entered back to 2004 from meter read logs. We are working with Jess to set up online reporting on these water rights for 2023 and beyond.**

ECOLOGY STATEMENT: Water Right No. G1-25686 requires measuring and reporting of chloride and conductivity measurements from Warm Beach Well 4 (ABR309) each April and August. These measurements have not been received by Ecology since May 2020.

**RESPONSE: The requirement stated in G1-25686 is to report the April and August chloride concentration and static water level (rather than conductivity). The table below summarizes reports submitted since being reminded by the July 9, 2019, letter that extended the deadline to perfect this water right permit. It was discovered that data reported in 2021 had not been entered into Ecology’s records, which we understand has been corrected. The most recent report was submitted on January 9, 2023, for August 2022. We will try to be more prompt with future reporting.**

Month	Date Emailed To Ecology	Chloride (mg/L)	Static Water Level (SWL) (ft)*
Aug 2019	03-19-20	18.0	broken sounding tube, could not measure
April 2020	05-03-20	17.4	broken sounding tube, could not measure
Aug 2020	10-28-21	16.7	265 (well off for extended time to replace pump)
April 2021	10-28-21	18.3	not yet recording in SCADA
Aug 2021	10-28-21	10.1	272.9
April 2022	05-31-22	10.6	267.6
Aug 2022	01-09-23	11.4	275.0

\* Note, the well does not recover completely between pump runs. The level when the pump was off for an extended time in August 2020 was very close to the level when the well was drilled in October 1990.



### ***Measuring and Reporting Requirements***

ECOLOGY STATEMENT: All monitoring and reporting provisions of water rights held by the District, including those named above, are listed in Table 1. The District notes in Section 9.4.1 of the WSP that “routine maintenance of wells includes monitoring production and regularly recording of depth to the water table.” Please ensure that the regularity of these recordings meet the following static water level recording requirements.

**RESPONSE: For the wells listed in Table 1 (May Creek Wells 1 & 2, Warm Beach Well 4, Kayak Well 3 and Sunday Lake Well 3), level probes and source meters are installed and integrated into the PUD’s SCADA system. Water levels and instantaneous and totalized flows are recorded more frequently than the required monthly and weekly data recording requirements. The data can be accessed through trends and reports. The PUD has an on-call contract with SCADA professionals that can help generate additional reports if needed. Additionally, all source meters are read manually as close as possible to the last working day of each month.**

### ***Potential for Abandonment***

ECOLOGY STATEMENT: Although active municipal rights are not subject to relinquishment, a municipal water right can be “abandoned” through intentional non-use. Examples of possible abandonment could be the decommissioning of the well(s) associated with the water right(s), or changes in property ownership and/or land use so that the well(s), diversions, or other infrastructure associated with the water right are no longer accessible or operable. Discussion and documentation of planned use of a water right in a WSP can be an indicator that a water system has no intent to abandon the water right. In addition, a water right may be temporarily donated to the State Trust Water Right Program in order to protect the right from relinquishment or abandonment.

Ecology records show Groundwater Certificate 7293 (G1-\*10429) authorizes the use of 50 gpm and 7.3 ac-ft/yr from a well within the Skylite water system service area for multiple-domestic water supply to Skylite Tracts. **No reference to this authorization was made in the District WSP, and this inconsistency should be addressed.**

**RESPONSE: The omission of Certificate G1-\*10429/7293 from the water right self-assessment was an inadvertent oversight which resulted in a drafting error relating to the supply insufficiency for the Skylite Tracts Water System. The Water System employs one well with two pumps originally intended to produce the 150-gpm pump-tested capacity of the well and the total authorized Qa of 37 afy.**

**Both Cert 7293 and G1-22033 have been relied upon by the District since its acquisition of the Skylite Tracts Water System to meet water demands and buildout projections. Further, District records indicate perfection of the authorized Qa of 37 afy (2007) through normal beneficial use.**

**The next table summarizes District water use records for the Skylite system. Annual production has not exceeded the authorized 37 afy for Skylite since 2008 and continued operational diligence will keep it that way.**

As can be seen in the right-hand column, controlling leakage in the Skylite system has been challenging, resulting in an unexpected excursion above 37 afy Qa in 2008. The District is finding more ways to be proactive in discovering earlier signs of leaks. Also, after the 2011 WSP, the District undertook conservation promotion targeted toward Skylite customers. This appeared to have good impact on the customer demands in 2013-2019. Skylite customer demand increased in 2020 & 2021 before coming back down in 2022, which might have been due to people staying home during the pandemic.

**Skylite Tracts Historical Annual Well Production, Customer Demand and Leakage:**

Year	Water Pumped (1000-gal)	Water Pumped (acre-feet)	Customer Demand (gpd/ERU)	Distribution System Leakage (DSL %)
2006	10,166	31.20	179	4.1 %
2007	11,991	36.80	186	14.2 %
2008	13,507	41.45	182	21.7 %
2009	10,937	33.57	197	0.6 %
2010	10,964	33.65	175	11.5 %
2011	11,752	36.06	196	6.7 %
2012	10,661	32.72	174	8.6 %
2013	10,821	33.21	158	17.9 %
2014	9,042	27.75	150	7.0 %
2015	9,453	29.01	145	14.0 %
2016	11,844	36.35	150	28.9 %
2017	10,437	32.03	155	16.8 %
2018	9,218	28.29	156	5.1 %
2019	8,924	27.39	149	5.6 %
2020	11,773	36.13	172	18.5 %
2021	9,797	30.07	174	1.05%
2022	9,798	30.07	158	9.87%

The inadvertent omission of GWC 7293 resulted in erroneous WSP text that the Skylite Tracts system would need to limit future connections per a 20-year demand horizon. Pursuant to correction of this information, the District requires no such limitation over its 20-year planning horizon. The water right self-assessment has been corrected and the text below provided in Section 8.5 of the WSP to provide more contextual background of system operations and water use.

**Skylite Tracts Water Right Summary/Water System Background**

The District holds two groundwater rights for the Skylite water system that were conveyed to the District in 1992 by the system’s prior developer/system operator – Skylite Tracts Inc. Groundwater Certificate 7293 was issued in May 1971 to Mr. H. Peter Beaupain and authorizes 50 gpm (Qi) and 7.3 afy (Qa) for community domestic supply. Groundwater Certificate G1-22033 was issued to Skylite Tracts, Inc., in 1978 for 100 gpm (Qi) and 29.3 afy (Qa), also for community domestic supply. The

report of examination associated with G1-22033 specifies that the total annual quantity (Qa) approved by that right and GWC 7293 shall not exceed 37 afy (Qa). The water rights are exercised concurrently subject to demand and peaking conditions.

Mr. R.O. Sawyer was the original developer of the Skylite Tracts property as a recreational/vacation area around 1962. Mr. Sawyer secured a water right permit (5962) in 1962 for 300 gpm (Qi) and 98 afy (Qa) to serve 109 lots. A well was developed for this purpose and pump tested at 150 gpm for four hours with 6 feet of drawdown that recovered within 15 seconds. However, the permit (5962) was cancelled in 1965 due to Mr. Sawyer's failure to submit a Proof of Appropriation.

In 1969, Mr. Beaupain acquired the Skylite Tracts property/water system and filed a new additive water right application (10429) to serve 175 recreational lots within the development from the well drilled for Mr. Sawyer. Shortly thereafter, Mr. Beaupain, also in 1969, formed Skylite Tracts, Inc., for the water system. In 1970, Mr. Beaupain received a water right permit in 1970 (GWC 7293), and a certificate for the same water right in 1971 (50 gpm/7.3 afy).

In 1974, Skylite Tracts Inc. legal counsel, Donald W. Waring, applied for a further additive water right (G1-22033) for the Skylite Tracts water system for 100 gpm. The proposed point of withdrawal was the existing well developed/authorized pursuant to GWC 7293. In 1976, a permit for G1-22033 was issued in the amount of 100 gpm/29.7 afy and a certificate for the same quantities was issued in 1978. As noted above, the certificate issued for G1-22033 specifies that the total annual quantity (Qa) approved by that right and GWC 7293 shall not exceed 37 afy (Qa).

In 1992, the District acquired the Skylite Tracts water system and all water rights that served the system. As noted above, both GWC 7293 and GWC 22033 are produced from the same well source which employed two pumps capable of producing 150 gpm and 37 afy which are required to achieve peaking demands and full build out.

District records reflect beneficial use of both water rights as evidenced by consistent Qa beneficial use of greater than 27 afy, including de facto perfection of the water right (i.e., 36.8 afy) in 2007. District leak detection and water use efficiency measures should enable the District to better meet water system peak demand and future build out conditions.

Both water rights also qualify as municipal purpose water rights under RCW 90.03.015 and are in good standing pursuant to RCW 90.03.330.

ECOLOGY STATEMENT: The WSP identifies the following sources as currently inactive: the Pilchuck 10 well, Kayak Well 1, Warm Beach Well 1, the Lake Stevens diversion, and the Lake Martha diversion. **Future plans for these sources are not discussed in the WSP and the following comments should be addressed:**

- The Pilchuck 10 water system (ID #03338F) was inactivated and service provided to Pilchuck 10 customers by the Lake Stevens water system following connection of the water system mains in 2012.

Water Right No. G1-26382 for the Pilchuck 10 well was temporarily donated to the State Trust Water Right Program on November 26, 2012. Ecology recommends determining future plans for the Pilchuck 10 water right before the temporary donation expires on January 10, 2023.

**RESPONSE: Comment noted. In September 2022, the PUD secured an extension of the voluntary temporary trust donation for this water right to January 7, 2033.**

- The point of withdrawal of Certificate No. G1-23278 is Kayak Well 1, which is not listed in Table 4-6: Inventory of Active Wells. The 2020 Warm Beach and Kayak Water Systems Consolidation describes plans to change the point of withdrawal of G1-23278 to Kayak Wells 2 and 3, or to drill a replacement well. Ecology has not received a request to change the point of withdrawal for this certificate either in the form of a change application for the use of Wells 2 and 3 or a showing of compliance form for the use of a replacement well.

**RESPONSE: G1-23728 is included in the WRSA. The omission of discussion of this water right and Kayak Well 1 was inadvertent. To further clarify this matter, a paragraph has been added to Section 8.4.2, stating “In the District’s 2011 WSP, a statement was made that the District intends to transfer the water right from Well 1 to Wells 2 & 3 in the future, which has the potential for increasing the allowable withdrawal rate to 370 gpm. The (District 2020) ALOP also states that the District anticipates that a water right transfer within the Kayak service area would be necessary to support full build-out in the Kayak area, but that the water rights for Wells 2 & 3 may be sufficient through 2040 if growth continues as projected.**

The District continues to evaluate the feasibility of drilling a replacement well for Kayak Well 1 subject to other capital project priorities and system demands. The water right remains in good standing and continues to be held by the PUD for standby/emergency supply and/or future growth purposes consistent with Pol-2030/Safe Harbor provision.” In addition, a statement has been added in the comments section of the WRSA. The PUD is fully aware of the water right change and showing of compliance processes.

- Surface Water Certificate 328 (S1-\*02303) and SWC 11576 (S1-\*22545), both associated with the Lake Martha diversion for Warm Beach water system, were omitted from the District’s Water Right Self-Assessment.

**RESPONSE: Omission of SW Cert 328 and SWC 11576 G1-23728 was inadvertent and they have been added to the water right self-assessment. Please note that these water rights were properly and fully documented in the WBWA/Kayak WSP amendment and water right self-assessment submitted in 2020. Also, these water rights have been added to Table 8-3 and the following words in italics were added to a paragraph in Section 8.1.1 to include Lake Martha in discussion of the District’s surface water rights: “The District also holds a certificated surface water right (S1-07584C) to divert water from Lake Stevens, which was the original water supply to the District’s Lake Stevens Integrated system *plus two certificated surface water rights (S1-\*02303 and S1-\*22545) to divert water from Lake Martha, which was the original water supply to the Warm Bench system.* These surface water**

**rights, which qualify as water rights for municipal purposes under RCW 90.03.015, are listed with the District's groundwater rights in Table 8-3, at the end of this chapter. The District has an ongoing interest in retaining these municipal water rights to meet future demands within Lake Stevens Integrated and Warm Beach."**

- Certificate No. G1-00718 and SWC 4648 (S1-\*07584), while listed in the Water Right Self-Assessment, both authorize sources that are named as inactive in the WSP (Warm Beach Well 1 and Lake Stevens, respectively). The District should determine the present and future need for these water rights to ensure they are protected from potential abandonment.

**RESPONSE:** The District's WSP text indicating a source/water right is inactive means that it is not currently operable due to well condition or other operational issues. Such text does not indicate District intent to abandon these water rights/sources (Certificate No. G1-00718/SWC 4648 (S1-\*07584)). Both water rights are considered by the District as rights in good standing that are not available for current use due to well performance, operation, and cost issues. Notes have been added to the comments sections of the Lake Stevens and Warm Beach WRSAs. The paragraph quoted above from Section 8.1.1 stated the District's ongoing interest in retaining the Lake Stevens surface water right to meet future demands. The following text has been added to a paragraph in Section 8.4.1 that mentioned WBWA Wells 1 and 3: "Well 1 is located near Warm Beach Well 2. Prior to the water system ownership transfer, WBWA had started investigating the possibility of reconditioning Well 1 to return it to service. The anecdotal history of Well 1 is that it was pumping sand or that the formation collapsed around the casing. For Well 3, a replacement Well 3R has been drilled and put into service under the water right with ion exchange treatment. However, Well 3R was placed into emergency status due to the difficulty of disposing the brine byproduct of the treatment. The District may consider rehabilitating or redrilling Well 1 and/or investigating other treatment options for Well 3R. However, these are not high priorities for the capital improvement plan in this planning period. Both water rights are considered by the District as rights in good standing that are not available for current use due to well performance, operation, and cost issues. The PUD retains these water rights for future growth/emergency standby purposes consistent with Pol-2030/Safe Harbor provision." The same applies to the Lake Stevens surface water rights.

### ***Decommissioning of Wells***

ECOLOGY STATEMENT: Please be advised that Washington Administrative Code 173-160-381 requires, "Any well which is unusable, abandoned, or whose use has been permanently discontinued, or which is in such disrepair that its continued use is impractical or is an environmental, safety or public health hazard shall be decommissioned. The decommissioning procedure (as prescribed by these regulations) must be recorded and reported as required by the department."

Ecology's review of the District's sources suggests potential for a number of inactive wells. Any well the District is not using and has no plans to use must be decommissioned. Noel Philip, Ecology's Well

Construction Coordinator, has been copied on this letter. If you have any questions regarding proper decommissioning of a well, please use this contact.

**RESPONSE:** For an example of wells the District has properly abandoned, 2012 Water Well Decommissioning Reports for the Pilchuck 10 wells can be found in Ecology's Well Report Search by entering Decommissioning Notice of Intent Numbers A105671, A105672 and A105673. We also abandoned dug wells following Ecology's procedures that existed on a property purchased by the District for a future tank site. We have no intent or plan at this time to abandon any of the District's other wells because of their potential future uses and/or because they can be helpful as observation wells near active wells.

***Water Right Summary***

ECOLOGY STATEMENT: ...Please see Table 1 below for a comprehensive list of the District water rights and their respective relationships and limitations as understood by Ecology...

**RESPONSE:** It is assumed that the above sentence meant to refer to Tables 2 through 7 in Ecology's letter.

ECOLOGY STATEMENT: Please note that the Warm Beach/Kayak water system water rights summarized here DO NOT AGREE with the District Water Right Self-Assessment (Appendix 8-2), and Section 8.1.1. of the WSP, dated February 2022.

**RESPONSE:** As described in above responses, the Warm Beach/Kayak water right self-assessments have been revised/corrected to identify all water rights inadvertently omitted, consistent with the 2020 WSP (ALOP) amendment.

ECOLOGY STATEMENT: Ecology also notes that the annual quantity authorized by the Lake Stevens Surface Water Certificate 4648 (S1-\*07584) does not appear to be quantified, per Ecology's records.

**RESPONSE:** It has been common practice for municipal systems to self-quantify the Qa of surface water rights issued prior to 1964 and for DOE to accept those Qa estimates for planning purposes. The calculation of 362 afy (Qa) was based on .5 cfs x 24 hours x 365 days – standard calculation approach. DOE did not assign Qa's to surface water rights until after 1965.

ECOLOGY STATEMENT: (below Table 4) The Report of Examination for Water Right Certificate No. G1-22033 contains the following provision: "Total withdrawal approved by this permit and GWC 7293-A shall not exceed 37 AFY." Groundwater Certificate 7293-A (G1-\*10429) authorizes the use of 50 gpm and 7.3 ac-ft/yr from a well for multiple-domestic water supply to Skylite Tracts. No reference to this authorization was made in the District WSP, and this inconsistency should be addressed. Please also be advised that the District should determine the present and future needs for this water right to ensure that it is protected from potential abandonment. Should GWC 7293-A continue to not be included in the Water Right Self-Assessment by the District, then the total instantaneous rate and annual quantity under all water rights is limited to 100 gpm and 29.7 ac-ft/yr respectively.

**RESPONSE: Addressed in prior/above text and response. Both water rights are now reflected in revised self-assessment as showing the total Qi for system is 150 gpm and total Qa is 37 afy.**

ECOLOGY STATEMENT: ***The following inconsistencies must be addressed:***

- SWC 328, SWC 11576, G1-00718, and G1-24690 were omitted from the Water Right Self-Assessment.
- Certificate G1-25989 authorizes the use of 243 gpm and 114 ac-ft/yr additive, not 300 gpm and 362 ac-ft/yr additive as was stated in the Water Rights Self-Assessment. This certificate also authorizes the use of Kayak Well 3, not Kayak Wells 2 and 3 as was stated in the Water Rights Self-Assessment. All sources must be recognized under a water right.

**RESPONSE: Comments noted and appropriate revisions made to self-assessment forms.**

We hope you find that this letter adequately addresses Department of Ecology's comments. For any questions, I can be reached at [ksheneghan@snopud.com](mailto:ksheneghan@snopud.com) or (425) 309-4901.

Sincerely,



Karen S. Heneghan, PE  
Principal Engineer  
Snohomish PUD Water Utility

Cc: Noel Philip, Department of Ecology [NPHI461@ECY.WA.GOV](mailto:NPHI461@ECY.WA.GOV)  
Kevin Conner, Department of Ecology [kevin.conner@ecy.wa.gov](mailto:kevin.conner@ecy.wa.gov)  
Richard Rodriguez, Department of Health [Richard.Rodriguez@DOH.WA.GOV](mailto:Richard.Rodriguez@DOH.WA.GOV)  
Karen Latimer, Snohomish PUD acting Water AGM [KJLatimer@Snopud.com](mailto:KJLatimer@Snopud.com)

Attachments: Corrected Water Right Self-Assessment Forms



The forms that were attached to this letter are located in Volume 13, Appendix 8-2.

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**STATE OF WASHINGTON**  
**DEPARTMENT OF ECOLOGY**

**Northwest Region Office**  
PO Box 330316, Shoreline, WA 98133-9716 • 206-594-0000

Sent via email

May 23, 2022

Snohomish County PUD No. 1  
c/o Brant Wood  
AGM Water Utility  
PO Box 1107  
Everett, WA 98206  
bewood@snopud.com

RE: Snohomish County PUD No. 1 (Water Systems ID# 80907, 04515, 06325, 23111, 52105, 06956, 80220, 44431, 85205, 93000)  
2021 Water System Plan Comment Letter

Dear Brant Wood:

Thank you for the opportunity to review the Snohomish County PUD No. 1 (District) Water System Plan (WSP), dated February 2022, and received on March 8, 2022. Consistent with the Memorandum of Understanding between the Department of Health (DOH) and Department of Ecology (Ecology), regarding joint review and approval of WSPs, this letter is being sent to your office with Ecology's comments. Specific elements of the WSP review included the Water Rights Self-Assessment as well as additional water rights documentation, including Ecology's water right files and previous District WSPs and project reports, as applicable.

The District purchases the majority of its supply from Everett and their water right authorizations are sufficient to meet Everett's wholesale customers' needs, including the District's, beyond this planning period. The Creswell (ID# 06325) and Storm Lake Ridge (ID# 44431) Water Systems are served solely by water purchased from Everett and are not discussed in these comments.

Ecology identified several issues during review of the WSP and supplemental documentation. The issues identified are listed below and discussed in the Advisory Comments. Please address the following items prior to finalizing the WSP.

- Provisions of Water Rights Not Met
- Measuring and Reporting Requirements
- Potential for Abandonment
- Decommissioning of Wells
- Water Right Summary

### **Advisory Comments**

#### ***Provisions of Water Rights Not Met***

In reviewing water right files associated with the District, it appears that provisions described in Water Rights No. G1-GWC7295 (CG1-\*09636), G1-\*09360, and G1-25686 have not been followed as prescribed. Per Superseding Certificate G1-GWC7295, Sunday Lake Water System is required to record water use data weekly and report the annual maximum rate of withdrawal and the annual total volume to Ecology by January 31 of each year. **Ecology has not received metering data since the change was approved in 2008.**

A settlement agreement between the District and the Tulalip Tribes resulted in the approval of changes to Water Rights No. G1-\*09360 (Cert #6488-A) and G1-20625 for May Creek Water System contingent upon an augmentation plan and metering requirements. Karen Heneghan (District) noted in an email to Kellie Gillingham (Ecology) dated March 8, 2021, that the May Creek augmentation plan has not been utilized because the trigger (daily withdrawals of over 398,880 gallons) has never been reached. The maximum annual instantaneous rate of withdrawal and the annual total volume of withdrawal from the May Creek Well Field must be reported annually to Ecology. **These data have not been submitted since the water right changes were approved.**

Water Right No. G1-25686 requires measuring and reporting of chloride and conductivity measurements from Warm Beach Well 4 (ABR309) each April and August. **These measurements have not been received by Ecology since May 2020.**

Please note that water rights are issued on the condition that provisions will be followed. As the metering coordinator who performs metering and provision tracking work in your area, I will reach out to you to offer technical assistance, as applicable, and setup a schedule for submitting metering records per your water right provisions.

#### ***Measuring and Reporting Requirements***

All monitoring and reporting provisions of water rights held by the District, including those named above, are listed in Table 1. The District notes in Section 9.4.1 of the WSP that “routine maintenance of wells includes monitoring production and regularly recording of depth to the water table.” Please ensure that the regularity of these recordings meet the following static water level recording requirements.

Table 1. Metering and Static Water Level Provisions

Water Right	Water System	Well(s)	Provisions
CG1-20625	May Creek	Wells within a wellfield (Wells 1 and 2)	Collect static water level measurement each month and make available upon request. Weekly water use data recording and maintenance in order to report to Ecology upon request.
G1-25686	Warm Beach/Kayak	Warm Beach Well 4 (ABR309)	Collect static water level measurement each month and make available upon request. Measure and report Chloride and Conductivity each April and August. Monthly water use data recording and maintenance in order to report to Ecology upon request.
G1-25989	Warm Beach/Kayak	Kayak Well 3 (BBF571)	Monthly water use data recording and maintenance in order to report to Ecology upon request.
G1-27418	Sunday Lake	Well 3 (ABG638)	Monthly water use data recording and maintenance in order to report to Ecology upon request.
G1-GWC7295 (CG1-*09636)	Sunday Lake	Well 3 (ABG638)	Record water use data weekly and report the annual maximum rate of withdrawal and the annual total volume to Ecology by January 31 of each year.

***Potential for Abandonment***

Although active municipal rights are not subject to relinquishment, a municipal water right can be “abandoned” through intentional non-use. Examples of possible abandonment could be the decommissioning of the well(s) associated with the water right(s), or changes in property ownership and/or land use so that the well(s), diversions, or other infrastructure associated with the water right are no longer accessible or operable. Discussion and documentation of planned use of a water right in a WSP can be an indicator that a water system has no intent to abandon the water right. In addition, a water right may be temporarily donated to the State Trust Water Right Program in order to protect the right from relinquishment or abandonment.

Ecology records show Groundwater Certificate 7293 (G1-\*10429) authorizes the use of 50 gpm and 7.3 ac-ft/yr from a well within the Skylite water system service area for multiple-domestic

water supply to Skylite Tracts. **No reference to this authorization was made in the District WSP, and this inconsistency should be addressed.**

The WSP identifies the following sources as currently inactive: the Pilchuck 10 well, Kayak Well 1, Warm Beach Well 1, the Lake Stevens diversion, and the Lake Martha diversion. **Future plans for these sources are not discussed in the WSP and the following comments should be addressed:**

- The Pilchuck 10 water system (ID #03338F) was inactivated and service provided to Pilchuck 10 customers by the Lake Stevens water system following connection of the water system mains in 2012. Water Right No. G1-26382 for the Pilchuck 10 well was temporarily donated to the State Trust Water Right Program on November 26, 2012. Ecology recommends determining future plans for the Pilchuck 10 water right before the temporary donation expires on January 10, 2023.
- The point of withdrawal of Certificate No. G1-23278 is Kayak Well 1, which is not listed in Table 4-6: Inventory of Active Wells. The 2020 Warm Beach and Kayak Water Systems Consolidation describes plans to change the point of withdrawal of G1-23278 to Kayak Wells 2 and 3, or to drill a replacement well. Ecology has not received a request to change the point of withdrawal for this certificate either in the form of a change application for the use of Wells 2 and 3 or a showing of compliance form for the use of a replacement well.
- Surface Water Certificate 328 (S1-\*02303) and SWC 11576 (S1-\*22545), both associated with the Lake Martha diversion for Warm Beach water system, were omitted from the District's Water Right Self-Assessment.
- Certificate No. G1-00718 and SWC 4648 (S1-\*07584), while listed in the Water Right Self-Assessment, both authorize sources that are named as inactive in the WSP (Warm Beach Well 1 and Lake Stevens, respectively). The District should determine the present and future need for these water rights to ensure they are protected from potential abandonment.

### ***Decommissioning of Wells***

Please be advised that Washington Administrative Code 173-160-381 requires, *“Any well which is unusable, abandoned, or whose use has been permanently discontinued, or which is in such disrepair that its continued use is impractical or is an environmental, safety or public health hazard shall be decommissioned. The decommissioning procedure (as prescribed by these regulations) must be recorded and reported as required by the department.”*

Ecology's review of the District's sources suggests potential for a number of inactive wells. Any well the District is not using and has no plans to use must be decommissioned. Noel Philip,

Ecology’s Well Construction Coordinator, has been copied on this letter. If you have any questions regarding proper decommissioning of a well, please use this contact.

**Water Right Summary**

In preparing this comment letter, Ecology reviewed specific elements of the District WSP, including the Water Right Self-Assessment (Appendix 8-2), as well as additional water rights documentation. The District holds water rights for the Lake Stevens, Pilchuck 10, May Creek, Warm Beach, Skylite, and Sunday Lake water systems.

The 212 Market & Deli (Moa/Holbeck) (ID# 04515) and Otis (ID# 06956) water systems are each served by a permit exempt well authorized by RCW 90.44.050. These permit exempt uses were established before the Stillaguamish Instream Flow Rule (chapter 173-505 WAC) was established and the perfected uses are not subject to the Rule’s limitations.

Please see Table 1 below for a comprehensive list of the District water rights and their respective relationships and limitations as understood by Ecology. Please note that the Warm Beach/Kayak water system water rights summarized here DO NOT AGREE with the District Water Right Self-Assessment (Appendix 8-2), and Section 8.1.1. of the WSP, dated February 2022. Ecology also notes that the annual quantity authorized by the Lake Stevens Surface Water Certificate 4648 (S1-\*07584) does not appear to be quantified, per Ecology’s records.

Table 2. Lake Stevens (ID #80907) Existing Water Rights

Water Right	Priority Date	Source Name	Instantaneous Rate (gpm)		Annual Quantity (ac-ft/yr)	
			Additive	Non-Additive	Additive	Non-Additive
G1-*00782 (G1-CV1-P73)	3/23/1948	Well 1 (AGB694)	1200		700	
G1-*00783 (G1-CV1-P74)	3/23/1948	Well 2 (AGB695)	1200		700	
SWC 4648 (S1-*07584)	12/28/1946	Lake Stevens	224.4 (0.5 cfs)		N/A	
<b>TOTALS:</b>			2624.4		N/A	

gpm = Gallons per Minute; cfs = Cubic Feet per Second; ac-ft/yr = Acre-feet per Year

The total instantaneous rate under all rights is limited to 2624.4 gpm. The total annual quantity under all groundwater rights is 1400 ac-ft/yr. The total annual quantity under all surface water rights has not been quantified.

The Lake Stevens water system is primarily supplied by water purchased from Everett.

Table 3. May Creek (ID# 52105) Existing Water Rights

Water Right	Priority Date	Source Name	Instantaneous Rate (gpm)		Annual Quantity (ac-ft/yr)	
			Additive	Non-Additive	Additive	Non-Additive
GWC 6488-A (CG1-*09360)	4/4/1968	Wells within a wellfield (Wells 1 and 2)	300		15	
G1-20625	5/17/1973	Wells within a wellfield (Wells 1 and 2)	200		319.5	
		<b>TOTALS:</b>	500		319.5*	

gpm = Gallons per Minute; ac-ft/yr = Acre-feet per Year

\*The total non-mitigated water quantity authorized for municipal use from the well field under Change to Ground Water Certificates 6488-A and CG1-20625 shall not exceed 500 gpm or 319.5 ac-ft/yr as stipulated in the settlement agreement between the Tulalip Tribes and the District.

The total instantaneous rate and annual quantity under all rights is limited to 500 gpm and 319.5 ac-ft/yr, respectively.

Table 4. Skylite Tracts (ID# 80220) Existing Water Rights

Water Right	Priority Date	Source Name	Instantaneous Rate (gpm)		Annual Quantity (ac-ft/yr)	
			Additive	Non-Additive	Additive	Non-Additive
G1-22033	8/5/1974	Well	100		29.7	
GWC 7293 (G1-*10429)*	9/29/1969	Well	50		7.3	
		<b>TOTALS:</b>	150		37	

gpm = Gallons per Minute; ac-ft/yr = Acre-feet per Year

\*The Report of Examination for Water Right Certificate No. G1-22033 contains the following provision: "Total withdrawal approved by this permit and GWC 7293-A shall not exceed 37 AFY." Groundwater Certificate 7293-A (G1-\*10429) authorizes the use of 50 gpm and 7.3 ac-ft/yr from a well for multiple-domestic water supply to Skylite Tracts. **No reference to this authorization was made in the District WSP, and this inconsistency should be addressed.** Please also be advised that the District should determine the present and future needs for this water right to ensure that it is protected from potential abandonment.

Should GWC 7293-A continue to not be included in the Water Right Self-Assessment by the District, then the total instantaneous rate and annual quantity under all rights is limited to 100 gpm and 29.7 ac-ft/yr, respectively.

Table 5. Sunday Lake (ID# 85205) Existing Water Rights

Water Right	Priority Date	Source Name	Instantaneous Rate (gpm)		Annual Quantity (ac-ft/yr)	
			Additive	Non-Additive	Additive	Non-Additive
G1-27418	2/9/1994	Well 3 (ABG638)	100		40.5	
G1-GWC7295 (G1-*09636)	8/6/1968	Well 3 (ABG638)	30		60	
<b>TOTALS:</b>			130		100.5	

gpm = Gallons per Minute; ac-ft/yr = Acre-feet per Year

The total instantaneous rate and annual quantity under all rights is limited to 130 gpm and 100.5 ac-ft/yr, respectively.

Table 6. Warm Beach (ID# 93000)/Kayak (ID# 23111) Existing Water Rights

Water Right	Priority Date	Source Name	Instantaneous Rate (gpm)		Annual Quantity (ac-ft/yr)	
			Additive	Non-Additive	Additive	Non-Additive
SWC 328 (S1-*02303)	3/16/1928	Lake Martha	135 (0.3 cfs)		216*	
SWC 11576 (S1-*22545)	9/11/1970	Lake Martha		135 (0.3 cfs)		216
G1-23278	12/20/1978	Kayak Well 1	70		72	
G1-24415	12/14/1983	Kayak Well 2 (BBF570)	57		42	
G1-25989	11/29/1990	Kayak Well 3 (BBF571)	243	57	114	42
G1-00718	9/11/1970	Warm Beach Well 1		35**		30
G1-24266***	4/21/1983	Warm Beach Well 2 (ABR307)	50			80

Water Right	Priority Date	Source Name	Instantaneous Rate (gpm)		Annual Quantity (ac-ft/yr)	
			Additive	Non-Additive	Additive	Non-Additive
G1-24690	8/12/1985	Warm Beach Well 3	33			39.6
G1-25686 (permit)	5/3/1990	Warm Beach Well 4 (ABR309)	200			135
<b>TOTALS:</b>			653		444	

gpm = Gallons per Minute; ac-ft/yr = Acre-feet per Year

\*Qa is not quantified by SWC 328, but subsequent Warm Beach water rights are non-additive to SWC 328 for a total Qa of 216 ac-ft/yr.

\*\* The Qi and Qa of Certificate G1-00718 are both non-additive to SWC 328 and 11576. Ecology erred in identifying the Qi of G1-00718 as additive in the 2015 Warm Beach WSP comment letter.

\*\*Certificate G1-24266 contains the following provision: “The total combined quantity from G1-24266 and all other water rights held by Warm Beach Water Company shall not exceed 216 acre-feet per year.” Ecology notes that this provision does not limit the combined quantity from all water rights held by the Warm Beach/Kayak combined system to 216 ac-ft/yr.

The total instantaneous rate and annual quantity under all rights is therefore limited to 653 gpm and 444 ac-ft/yr.

Correspondence between Tom Mortimer (on behalf of the District) and Doug Wood of Ecology, in response to Ecology’s review of the 2020 Warm Beach and Kayak Water Systems Consolidation, acknowledges that the total annual quantity under all Warm Beach water rights is limited to 216 ac-ft/yr, and the total annual quantity under all Warm Beach groundwater rights is limited to 135 ac-ft/yr.

**The following inconsistencies must be addressed:**

- SWC 328, SWC 11576, G1-00718, and G1-24690 were omitted from the Water Right Self-Assessment.
- Certificate G1-25989 authorizes the use of 243 gpm and 114 ac-ft/yr additive, not 300 gpm and 362 ac-ft/yr additive as was stated in the Water Rights Self-Assessment. This certificate also authorizes the use of Kayak Well 3, not Kayak Wells 2 and 3 as was stated in the Water Rights Self-Assessment. All sources must be recognized under a water right.



Table 7. Pilchuck 10 (ID# 80220) Existing Water Rights

Water Right	Priority Date	Source Name	Instantaneous Rate (gpm)		Annual Quantity (ac-ft/yr)	
			Additive	Non-Additive	Additive	Non-Additive
G1-22033*	8/5/1974	Well	100		29.7	
<b>TOTALS:</b>			100		29.7	

\*Certificate G1-22033 was temporarily donated to the State Trust Water Right Program on November 26, 2012. The donation will expire on January 10, 2023. Pilchuck 10 customers are now served by the Lake Stevens water system.

***Future Demand***

The Creswell and Storm Lake Ridge water systems are served solely by water purchased from Everett. Per the 2021 Everett WSP update, there is sufficient capacity for the future demands of wholesale customers. The 212 Market & Deli and Otis water systems, both served by permit exempt wells, will not provide additional customer connections and have sufficient capacity to serve their existing customers.

Table 8. Future Demand of Systems with Water Rights

Water System	ERUs Served in 2020	Average Daily Demand per ERU (gal)	Projected 20-Year Demand (ERUs)	Projected 20-Year Demand (ac-ft/yr)
Lake Stevens	25,193	173	42,104	8,722
May Creek	523	154	770	146
Skylite	155	151	160	30
Sunday Lake	203	178	295	61
Warm Beach/Kayak	1,037	166	1,365	277*

\*Projected 20-year demand of the Warm Beach/Kayak ranged from 262 ac-ft/yr (Appendix 8-2) to 277 ac-ft/yr (Table 5-9).

Based on the information provided in the Water Rights Self-Assessment (Appendix 8-2), and in Chapters 5 and 7 of the WSP, dated February 2022, water right capacity does not appear to be an issue for the Lake Stevens, May Creek, Sunday Lake, and Warm Beach/Kayak water systems. The District plans to meet the Lake Stevens water system projected demands in excess of the quantities authorized by water rights by continuing to purchase water from Everett.

Snohomish County PUD No. 1 (Water Systems ID# 80907, 04515, 06325, 23111, 52105, 06956, 80220, 44431, 85205, 93000)

2021 Water System Plan Comment Letter

May 23, 2022

Page 10

Skylite water system is expected to reach its water right capacity before 2040 based on estimated growth rates. Section 8-3 of the WSP states, “the District currently operates the Skylite Water System to produce water near the annual water limit and is refraining from making further connections to the system.” Ecology supports the limitation of further connections to the Skylite system unless an additional water source or authorization (e.g. should GWC 7293 be active) becomes available.

***Service Area***

RCW 90.03.386(2) requires that water systems be in compliance with the terms of their WSP and that any alteration of the place of use not be inconsistent with any comprehensive plans or development regulations. An evaluation of any such change should be undertaken if a future expansion of the District service area is planned.

Please contact me with any questions you may have at (425) 495-5964 or [andrea.lauden@ecy.wa.gov](mailto:andrea.lauden@ecy.wa.gov).

Sincerely,



Andrea Lauden  
Metering Coordinator  
Water Resources Program

ecc: Richard Rodriguez, Department of Health  
Noel Philip, Ecology Well Construction Coordinator

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## **Appendix 0-4**

### Consumer WSP Meeting Minutes

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**BUSINESS OF THE COMMISSION**

Meeting Date: January 10, 2023

Agenda Item: 6A

**TITLE**

Consideration of a Resolution Adopting the District’s 2021 Water System Plan and Updating Water Use Efficiency Goals

**SUBMITTED FOR: Public Hearing and Action**

Water Utility	<u>Karen Heneghan</u>	<u>3037</u>
<i>Department</i>	<i>Contact</i>	<i>Extension</i>
Date of Previous Briefing:	<u>December 20, 2022</u>	
Estimated Expenditure:	_____	Presentation Planned <input type="checkbox"/>

**ACTION REQUIRED:**

- |   |                                     |  |
|---|-------------------------------------|--|
| <input type="checkbox"/> Decision Preparation       | <input type="checkbox"/> Incidental | <input type="checkbox"/> Monitoring Report |
| <input type="checkbox"/> Policy Discussion          | (Information)                       |  |
| <input checked="" type="checkbox"/> Policy Decision |                                     |  |
| <input type="checkbox"/> Statutory                  |                                     |  |

**SUMMARY STATEMENT:**

Identify the relevant Board policies and impacts:

*Governance Process: Board Job Description: GP-3(4) a non-delegable, statutorily assigned Board Duty.*

*Ends, E-1, The purpose of Public Utility District No.1 of Snohomish County is that the people of Snohomish County and Camano Island own and control utilities that are valued as dependable, safe and responsible ...*

On December 20, 2022, a presentation was made to the Commission on the 2021 Water System Plan (WSP), which referred to the publicly posted document on the Water Utility pages of the District’s website. The 2021 WSP is an update to the District’s previously adopted 2011 WSP.

There have been many changes to the District's water systems since completion of the 2011 WSP including:

1. Constructing 5.3 miles of 12-inch diameter water main to connect the Lake Roesiger and Pilchuck 10 water systems to the Lake Stevens Integrated system.
2. Constructing 2.7 miles of 12-inch diameter water main to connect the Dubuque and Cascade Acres water systems to the Lake Stevens Integrated system.
3. Receiving ownership of the Warm Beach Water Association water system and designing and constructing identified improvements for that system.
4. Purchasing the North Lake Stevens Reservoir site for future storage needs.
5. Installing over 40.8 miles of new water mains and replacing over 16.8 miles of aging water mains.

The WSP has been reviewed by the Washington State Department of Health (DOH) and other adjacent and jurisdictional agencies and comments incorporated. Adoption of the 2021 WSP by the Commission is required prior to obtaining approval by DOH. Staff recommend adopting the 2021 final Water System Plan.

In addition, the Water Use Efficiency (WUE) Rule requires that the elected governing boards of public water systems evaluate and re-establish water use efficiency goals at least every six years and as part of their water system plan approval.

Two updated measurable WUE goals presented for discussion at the December 20, 2022, Commission study session are located in Chapter 6 of the 2021 WSP and are being presented for Public Hearing at the January 10, 2023, regularly scheduled Commission meeting, as follows:

**Supply-side goal:** The District shall maintain its distribution leakage below the State ten percent standard and shall strive to progressively achieve lower percentages of lost water, where possible.

**Demand-side goal:** The District shall actively participate in the Everett Water Utilities Committee (EWUC) regional Water Use Efficiency Program to reduce overall regional water demand by approximately 1.4 million gallons per day (MGD) between 2020 and 2029, or approximately a two percent reduction in the cumulative projected demand through 2029 (equal to 0.2% savings annually).

District staff recommends that these goals be approved by the Commission with the adoption of the 2021 Water System Plan.

*Attachments:*  
Resolution  
Exhibit A

RESOLUTION NO. 6102

A RESOLUTION Adopting the District's 2021 Water System Plan  
and Updating Water Use Efficiency Goals

WHEREAS, on July 19, 2011, the Board of Commissioners approved Resolution No. 5544, adopting the 2011 Water System Plan and Re-Establishing Water Use Efficiency Goals; and

WHEREAS, Washington State Department of Health regulations require that Water System Plans be reviewed and updated every ten years; and

WHEREAS, the Water Use Efficiency Rule requires that municipal water suppliers establish at least one goal to use water efficiently and re-establish water use efficiency goals through a public process any time a Water System Plan is submitted to Department of Health for approval; and

WHEREAS, District staff have engaged in a multi-year water planning process, subject to Washington State Department of Health regulations, to create the 2021 Water System Plan and included water use efficiency goals; and all statutory and procedural requirements of the law and the processes have been met; and

WHEREAS, a properly noticed meeting to consider the proposed 2021 Water System Plan and included water use efficiency goals was held on December 20, 2022, and a public hearing to receive testimony and other information from the public was held on January 10, 2023; and

WHEREAS, the Board of Commissioners, having reviewed and considered information and comments provided at such meeting finds that the proposed 2021 Water System Plan and the included water efficiency goals are appropriate and in the best interests of the District and its customers.



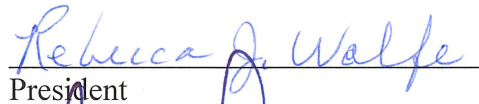
NOW, THEREFORE, BE IT RESOLVED by the Commission of Public Utility District No. 1 of Snohomish County, Washington, as follows:

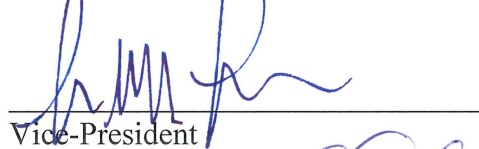
Section 1. The 2021 Water System Plan of the District is hereby adopted as set forth in Exhibit "A", which Exhibit is attached hereto and incorporated herein by this reference.

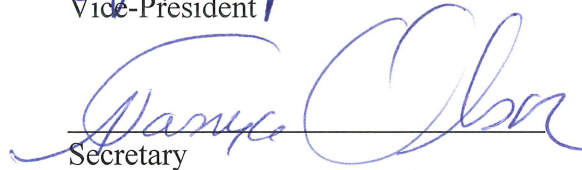
Section 2. The water use efficiency goals as set forth in the attached Exhibit "A" are hereby approved.

Section 3. Subsequent to its adoption by the Commission, the 2021 Water System Plan will be reviewed and approved by the Washington State Department of Health.

PASSED AND APPROVED this 10<sup>th</sup> day of January 2023.

  
\_\_\_\_\_  
President

  
\_\_\_\_\_  
Vice-President

  
\_\_\_\_\_  
Secretary

**Note -  
Exhibit A is a copy of Volume 1 of this 2021 WSP, so is not  
repeated in this appendix.**

**SNOHOMISH COUNTY PUBLIC UTILITY DISTRICT  
BOARD OF COMMISSIONERS REGULAR MEETING  
Everett Headquarters Building, 2320 California Street  
Zoom Online Platform Option Available**

**January 10, 2023**

**CONVENE REGULAR MEETING – 10:00 a.m. – Commission Meeting Room**

**Virtual Meeting Participation Information**

Join Zoom Meeting:

- Use link  
<https://us06web.zoom.us/j/83287930131?pwd=NjY2c1dmeDd0d2pIOTIHb3hxemZkUT09>
- Dial in: (253) 215-8782
- Meeting ID: 832 8793 0131
- Passcode: 501827

**1. GENERAL MANAGER BRIEFING AND STUDY SESSION**

- A. Updates
  - 1. Media
  - 2. Other
- B. Washington State 2023 Legislative Preview
- C. Commercial Strategic Energy Management (CSEM) Agreement

**EXECUTIVE SESSION** – Recess into Executive Session to Discuss Qualifications of an Applicant for Public Employment – Training Center Room 1

**RECONVENE REGULAR MEETING - 1:30 p.m. – Commission Meeting Room/Virtual Meeting Participation**

**2. RECOGNITION/DECLARATIONS**

- A. Employee of the Month for January - Jeff Roberts

**3. COMMENTS FROM THE PUBLIC**

If you are attending the meeting virtually (using the link or number provided above) please indicate that you would like to speak by clicking “raise hand” and the Board President will call on attendees to speak at the appropriate time. If you are joining by phone, dial \*9 to “raise hand.”

**4. CONSENT AGENDA**

- A. Approval of Minutes for the Regular Meeting of December 20, 2022
- B. Bid Awards, Professional Services Contracts and Amendments
- C. Consideration of Certification/Ratification and Approval of District Checks and Vouchers

**Continued →**

**5. PUBLIC HEARING**

- A. 2023 Retail Rate Proposal Water Utility

**6. PUBLIC HEARING AND ACTION**

- A. Consideration of a Resolution Adopting the District's 2021 Water System Plan and Updating Water Use Efficiency Goals
- B. Consideration of a Resolution Amending the District's Retail Electric Rate Schedules to Implement a 2.0 Percent System Average Rate Increase

**7. ITEMS FOR INDIVIDUAL CONSIDERATION**

- A. Consideration of a Resolution Amending District Water Utility Policies and Establishing Certain Charges for the Water Utility
- B. Consideration of a Resolution Authorizing the CEO/General Manager to Execute an Employment Agreement With F. Colin Willenbrock

**8. CEO/GENERAL MANAGER REPORT**

**9. COMMISSION BUSINESS**

- A. Commission Reports
- B. Commissioner Event Calendar
- C. Discussion of Representatives to Organizations and Committees for 2023

**10. GOVERNANCE PLANNING**

- A. Governance Planning Calendar

**ADJOURNMENT**

January 11-12, 2023:

Public Power Council (PPC) Meetings (Virtual)

The next scheduled regular meeting is January 24, 2023

**Agendas can be found in their entirety on the Snohomish County Public Utility District No. 1 web page at [www.snopud.com](http://www.snopud.com). For additional information contact the Commission Office at 425.783.8611**

**See page 4 regarding public hearing and adoption of WSP & WUE goals.**

## **SNOHOMISH COUNTY PUBLIC UTILITY DISTRICT**

**Regular Meeting**

**January 10, 2023**

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The Regular Meeting was convened by President Rebecca Wolfe at 10:00 a.m. Those attending were Sidney Logan, Vice-President; Tanya Olson, Secretary; CEO/General Manager John Haarlow; Interim General Counsel Shawn Aronow; Assistant General Managers Pam Baley, and Jason Zyskowski; Interim Assistant General Manager Karen Latimer; Chief Financial Officer Scott Jones; Chief Information Officer Kristi Sterling; other District staff; members of the public; Commission & Executive Services Director Melissa Collins; Clerk of the Board Allison Morrison; and Deputy Clerks of the Board Jenny Rich and Morgan Stoltzner.

**\* Items Taken Out of Order**

**\*\*Non-Agenda Items**

**1. CEO/GENERAL MANAGER BRIEFING AND STUDY SESSION**

A. Updates

1. Media. Communications, Marketing & Business Readiness Director Julee Cunningham reported on District related news and articles.
2. Other. There were no other reports.

B. Washington State 2023 Legislative Preview

Senior State Government & External Affairs Manager Ryan Collins provided a review of the 2022 legislative session and the context and preview of the upcoming 2023 session.

C. Commercial Strategic Energy Management (CSEM) Agreement

Customer & Energy Services Program Manager Kelsey Lewis provided the Board with information regarding the new Commercial Strategic Energy Management (CSEM) Professional Services Contract with Stillwater Energy. Senior Manager, Energy Services and Customer Innovation Jeff Feinberg responded to Board questions regarding the program.

The next step would be consideration for approval of the contract at the January 24, 2023, Commission meeting.

**EXECUTIVE SESSION**

The Regular Meeting recessed at 10:34 a.m. and reconvened at 10:44 a.m. into Executive Session to discuss qualifications of an applicant for public employment, under the terms set forth in the Open Public Meetings Act. Those in attendance were Commissioners, Rebecca Wolfe, Sidney Logan, and Tanya Olson; CEO/General Manager John Haarlow; Interim General Counsel Shawn Aronow; Assistant General Counsel Branda Andrade; and Commission & Executive Services Director Melissa Collins. The Executive Session concluded at 11:07 a.m. with no public announcements.

**RECONVENE REGULAR MEETING**

The Regular Meeting was reconvened by President Rebecca Wolfe at 1:30 p.m. Those attending were Sidney Logan, Vice-President; Tanya Olson, Secretary; CEO/General Manager John Haarlow; Interim General Counsel Shawn Aronow; Assistant General Managers Pam Baley, and Jason Zyskowski; Interim Assistant General Manager Karen Latimer; Chief Financial Officer Scott Jones; Chief Information Officer Kristi Sterling; other District staff; members of the public; Commission & Executive Services Director Melissa Collins; Clerk of the Board Allison Morrison; and Deputy Clerks of the Board Jenny Rich and Morgan Stoltzner.

**\* Items Taken Out of Order****\*\*Non-Agenda Items**

Changes to the agenda were made as follows: Table Item 7A Consideration of a Resolution Amending District Water Utility Policies and Establishing Certain Charges for the Water Utility and Add an Executive Session to the end of the meeting to Review the Performance of a Public Employee

**2. RECOGNITION/DECLARATIONS****A. Employee of the Month for January – Jeff Roberts**

Jeff Roberts was recognized as Employee of the Month for January.

**3. COMMENTS FROM THE PUBLIC**

The following public provided comments:

- Steven Keeler, Edmonds
- Gayla Shoemake, Edmonds

**4. CONSENT AGENDA**

A. Approval of Minutes for the Regular Meeting of December 20, 2022

B. Bid Awards, Professional Services Contracts and Amendments

Public Works Contract Award Recommendations:

Request for Proposal No. 22-1336-BI with Kemp West, Inc.

Formal Bid Award Recommendations \$120,000 and Over:

None

Professional Services Contract Award Recommendations \$200,000 and Over:

Request for Quotation No. 22-1287-SR with Opinion Dynamics

Miscellaneous Contract Award Recommendations \$200,000 and Over:

None

Interlocal Agreements and Cooperative Purchase Recommendations:

Contracts:

None

Amendments:

None

Sole Source Purchase Recommendations:

None

Emergency Declarations, Purchases and Public Works Contracts:

None

Purchases Involving Special Facilities or Market Condition Recommendations:

None

Formal Bid and Contract Amendments:

Request for Proposal No. 10280 with Tyndale

Miscellaneous No. CW2227694 with Achilles USA Inc.

Contract Acceptance Recommendations:

C. Consideration of Certification/Ratification and Approval of District Checks and Vouchers

A motion unanimously passed approving Agenda Items 4A – Approval of the minutes for the Regular Meeting of December 20, 2022; 4B - Bid Awards, Professional Services Contracts and Amendments; and 4C - Consideration of Certification/Ratification and Approval of District Checks and Vouchers.

**5. PUBLIC HEARING**

A. 2023 Retail Rate Proposal Water Utility

President Wolfe opened the public hearing.

Manager, Water Utilities Business Services Christina Arndt provided a presentation on the 2023 Retail Rate Proposal Water Utility.

A motion unanimously passed continuing the public hearing on the 2023 Retail Rate Proposal Water Utility to Tuesday, January 24, 2023, at 1:30 p.m. at 2320 California Street in Everett.

## 6. PUBLIC HEARING AND ACTION

### A. Consideration of a Resolution Adopting the District's 2021 Water System Plan and Updating Water Use Efficiency Goals

President Wolfe opened the public hearing.

There being no questions from the Board or the public, the public hearing was closed.

A motion unanimously passed approving Resolution No. 6102 adopting the District's 2021 water system plan and updating water use efficiency goals.

### B. Consideration of a Resolution Amending the District's Retail Electric Rate Schedules to Implement a 2.0 Percent System Average Rate Increase

A motion passed approving Resolution No. 6103 amending the District's retail electric rate schedules to implement a 2.0 percent system average rate increase. The vote was Commissioner Wolfe: Aye; Commissioner Logan: Nay; Commissioner Olson: Aye.

## 7. ITEMS FOR INDIVIDUAL CONSIDERATION

### A. Consideration of a Resolution Amending District Water Utility Policies and Establishing Certain Charges for the Water Utility

Commissioner Olson made a motion to table the Resolution until a future regular Commission meeting, to allow Water Utility staff additional time to clarify stakeholder comments. The motion passed unanimously.

### B. Consideration of a Resolution Authorizing the CEO/General Manager to Execute an Employment Agreement With F. Colin Willenbrock

A motion unanimously passed approving Resolution No. 6105 authorizing the CEO/General Manager to execute an employment agreement with F. Colin Willenbrock.

**8. CEO/GENERAL MANAGER REPORT**

CEO/General Manager John Haarlow reported on District related topics and accomplishments.

**9. COMMISSION BUSINESS****A. Commission Reports**

The Commissioners reported on Commission related activities and Board related topics.

Director, Government/External Affairs and Strategy Kim Johnston responded to Board questions on the upcoming Legislative Rally.

**B. Commissioner Event Calendar**

There were no changes to the Commissioner Event Calendar.

**C. Discussion of Representatives to Organizations and Committees for 2023**

Representatives for 2023 were to remain as adopted for 2022, as follows:

American Public Power Association (APPA) & Legislative Relations Committee	Delegate:	Sidney (Sid) Logan
	Alternate No. 1	Tanya (Toni) Olson

Energy Northwest (ENW)	Delegate:	Sidney (Sid) Logan
	Alternate No. 1:	Rebecca Wolfe

Northwest Public Power Association	Delegate:	Rebecca Wolfe
	Alternate No. 1:	Tanya (Toni) Olson

APPA Policy Makers Council	Delegate:	Sidney (Sid) Logan
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**10. GOVERNANCE PLANNING****A. Governance Planning Calendar**

Commissioner Wolfe requested a Board Retreat be scheduled to discuss Board policies. A discussion ensued and it was unanimously decided that each Board member would bring their topics for a future retreat to the January 24, 2023, Commission Meeting for further discussion.

There were no other changes to the Governance Planning Calendar.



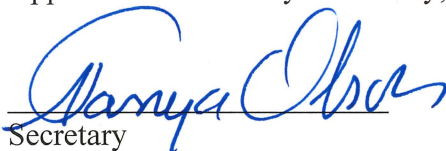
**\*\*EXECUTIVE SESSION**

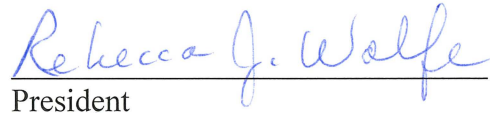
The Regular Meeting recessed at 2:29 p.m. and reconvened at 2:33 p.m. into Executive Session to review the performance of a public employee, under the terms set forth in the Open Public Meetings Act. Those in attendance were Commissioners, Rebecca Wolfe, Sidney Logan, and Tanya Olson; Interim General Counsel Shawn Aronow; Assistant General Counsel Branda Andrade; and Commission & Executive Services Director Melissa Collins. The Executive Session concluded at 2:44 p.m. with no public announcements. The Regular Meeting adjourned upon conclusion of the Executive Session.

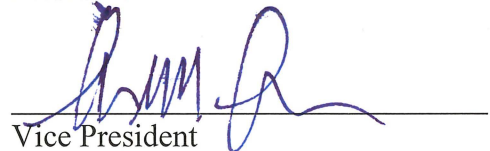
**ADJOURNMENT**

There being no further business or discussion to come before the Board, the Regular Meeting of January 10, 2023, adjourned at 2:44 p.m. An audio file of the meeting is on file in the Commission Office and available for review.

Approved this 24<sup>th</sup> day of January, 2023.

  
Secretary

  
President

  
Vice President

**SNOHOMISH COUNTY PUBLIC UTILITY DISTRICT  
BOARD OF COMMISSIONERS REGULAR MEETING  
Everett Headquarters Building, 2320 California Street  
Zoom Online Platform Option Available**

**December 20, 2022**

**CONVENE REGULAR MEETING – 9:00 a.m. – Commission Meeting Room**

**Virtual Meeting Participation Information**

Join Zoom Meeting:

- Use link
- <https://us06web.zoom.us/j/84874423752?pwd=YVdKbW9GT0V1NS84N3E3QTNJaWI0UT09>
- Dial in: (253) 215-8782
- Meeting ID: 848 7442 3752
- Passcode: 233946

**1. CEO/GENERAL MANAGER BRIEFING AND STUDY SESSION**

- A. Updates
  - 1. Community Engagement
  - 2. Legislative
  - 3. Other
- B. 2023 Cost of Service Analysis & Rate Adjustment Recommendations
- C. Western Resource Adequacy Program Update and Phase 3B Work Order Briefing
- D. 2021 Water System Plan Update
- E. Water Policy and Procedure Updates
- F. 2023 Retail Rate Proposal Water Utility

**RECONVENE REGULAR MEETING - 1:30 p.m. - Virtual Meeting Participation**

**2. RECOGNITION/DECLARATIONS**

- A. General Manager's Life Saving Award - Paul Kiss

**3. COMMENTS FROM THE PUBLIC**

If you are attending the meeting virtually (using the link or number provided above) please indicate that you would like to speak by clicking "raise hand" and the Board President will call on attendees to speak at the appropriate time. If you are joining by phone, dial \*9 to "raise hand."

**4. CONSENT AGENDA**

- A. Approval of Minutes for the Regular Meeting of December 6, 2022, and the Special Meeting of December 13, 2022
- B. Bid Awards, Professional Services Contracts and Amendments
- C. Consideration of Certification/Ratification and Approval of District Checks and Vouchers
- D. Consideration to Prequalify Contractors as Bidders for Electrical Line Work for the District During 2023

**Continued →**

**5. PUBLIC HEARING AND ACTION**

- A. Disposal of Surplus Property – 1<sup>st</sup> Quarter 2023
- B. Consideration of a Resolution Ordering, Approving, Ratifying and Confirming the Construction and Installation of the Plan or Systems of Additions to the District’s Water Utility, as Adopted on November 15, 2022, and Applicable to the Local Utility District Hereinafter Described, Forming Local Utility District No. 65 of Snohomish County, Washington, and Confirming the Final Assessment Roll
- C. Consideration of a Resolution Amending the District’s “Pilot Small Distributed Generation Rate Schedule”
- D. Consideration of a Resolution Declaring Certain Property Interests Over a Portion of Certain District Property (Tax Parcel Nos. 27102900100200, 27102900101300, 27102900100900) to be Surplus and Authorizing the Granting of an Access and Use Easement in Favor of Mt. Index Rivers Sites Community Club, Inc.

**6. ITEMS FOR INDIVIDUAL CONSIDERATION**

- A. Consideration of a Resolution Authorizing and Approving an Updated District Investment Policy
- B. Consideration of a Resolution Authorizing the CEO/General Manager or His Designee to Execute a Work Order With the Western Power Pool for Participation in Phase 3B of the Western Resource Adequacy Program Implementation

**7. CEO/GENERAL MANAGER REPORT**

**8. COMMISSION BUSINESS**

- A. Commission Reports
- B. Commissioner Event Calendar
- C. 2022 Budget, Forecast, and Major Project Status Report - November

**9. GOVERNANCE PLANNING**

- A. Adoption of the 2023 Governance Planning Calendar

**ADJOURNMENT**

January 5, 2023:

Economic Alliance Snohomish County (EASC) – 2023 Legislative Kick-Off  
Everett, WA 10:00 a.m. – 12:00 p.m.

January 6, 2023:

Pacific Northwest Utilities Conference Committee (PNUCC) Meeting (Virtual)

The next scheduled regular meeting is January 10, 2023

**Agendas can be found in their entirety on the Snohomish County Public Utility District No. 1 web page at [www.snopud.com](http://www.snopud.com). The public is invited to attend. Parking and meeting rooms are accessible for persons with disabilities. Contact the Commission Office at 425.783.8611 for special accommodations or additional information**

**See pg 2 regarding presentation of 2021 WSP and WUE goals.**

**SNOHOMISH COUNTY PUBLIC UTILITY DISTRICT**

**Regular Meeting**

**December 20, 2022**

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The Regular Meeting was convened by President Tanya Olson (virtually) at 9:00 a.m. Those attending were Rebecca Wolfe, Vice-President (virtually); Sidney Logan, Secretary; CEO/General Manager John Haarlow; Interim General Counsel Shawn Aronow (virtually); Assistant General Managers Pam Baley (virtually), Guy Payne, and Jason Zyskowski; Interim Assistant General Manager Karen Latimer; Chief Financial Officer Scott Jones (virtually); Chief Information Officer Kristi Sterling; other District staff; members of the public; Commission & Executive Services Director Melissa Collins (virtually); Clerk of the Board Allison Morrison; and Deputy Clerks of the Board Jenny Rich and Morgan Stoltzner.

**\* Items Taken Out of Order**

**\*\*Non-Agenda Items**

**1. CEO/GENERAL MANAGER BRIEFING AND STUDY SESSION**

A. Updates

1. Community Engagement. Communications & Marketing Consultant Laura Zorick reported on District related Community Engagement updates.
2. Legislative. There were no questions on the Legislative Report.
3. Other. Senior Manager, Energy Services & Customer Innovations Jeff Feinberg provided an update on the Utility Grant Award.

\* B. 2023 Cost of Service Analysis & Rate Adjustment Recommendations

Senior Manager, Rates, Economics & Energy Risk Management Brian Booth provided a presentation on the 2023 Cost of Service Analysis & Rate Adjustment Recommendations.

The next step would be the consideration of a resolution for approval of the rate adjustment to be implemented effective April 1, 2023, during the January 10, 2023, Commission meeting.

C. Western Resource Adequacy Program Update and Phase 3B Work Order Briefing

Senior Manager Power Supply Garrison Marr briefed the Board with updates on the Western Resource Adequacy Program (WRAP) and Phase 3B work order.

The next steps would be Board consideration of a resolution during the afternoon session, allowing the District to execute a stop-gap WRAP Work Order, a Memorandum of Understanding, and a Non-Disclosure Agreement.

The meeting recessed at 11:00 a.m. and reconvened at 11:05 a.m.

**D. 2021 Water System Plan Update**

Principal Engineer Karen Heneghan provided a presentation updating the Board on the 2021 Water System Plan.

The next step would be for Public Hearing and Action at the January 10, 2023, Commission meeting for approval of a resolution authorizing the approval of the District's 2021 Water System Plan.

**E. Water Policy and Procedure Updates**

Principal Engineer Max Selin provided a presentation on the Water Policy and Procedure updates.

The next step would be to return at the January 10, 2023, Commission meeting for consideration of a resolution approving the District's revised Water Policy and Procedure.

**F. 2023 Retail Rate Proposal Water Utility**

Manager, Water Utility Business Services Christina Arndt provided a presentation on the Water Utility 2023 Retail Rate Proposal.

The next steps would be to return for Public Hearing on the 2023 Water Utility Rates at the January 10, 2023, Commission meeting, followed by consideration of a resolution authorizing the 2023 Retail Rates at the January 24, 2023, Commission meeting.

The meeting recessed at 12:38 p.m.

**RECONVENE REGULAR MEETING**

The Regular Meeting was reconvened by Sidney Logan, Secretary at 1:30 p.m. Those attending were Tanya Olson, President (virtually); Rebecca Wolfe, Vice-President (virtually); CEO/General Manager John Haarlow; Interim General Counsel Shawn Aronow (virtually); Assistant General Managers Pam Baley (virtually), Guy Payne, and Jason Zyskowski; Interim Assistant General Manager Karen Latimer; Chief Financial Officer Scott Jones (virtually); Chief Information Officer Kristi Sterling; other District staff; members of the public; Commission & Executive Services Director Melissa Collins (virtually); Clerk of the Board Allison Morrison; and Deputy Clerks of the Board Jenny Rich and Morgan Stoltzner.

**\* Items Taken Out of Order**

**\*\*Non-Agenda Items**

\*\*A moment of silence was observed in honor of District employee Omar Jamaludin.

Changes to the agenda were made as follows: Item 05D.00 add "At Places" for the Declaring Mt. Index River Community Club Access Easement Coversheet.

## 2. RECOGNITION/DECLARATIONS

### A. General Manager's Life Saving Award – Paul Kiss

Senior Manager Regional Design and Construction Services, Aaron Janisko introduced Operations Superintendent Paul Kiss, who was presented the General Manager's Life Saving Award.

## 3. COMMENTS FROM THE PUBLIC

The following public provided comments:

- Gayla Shoemake, Edmonds

## 4. CONSENT AGENDA

- A. Approval of Minutes for the Regular Meeting of December 6, 2022, and the Special Meeting of December 13, 2022
- B. Bid Awards, Professional Services Contracts and Amendments

Public Works Contract Award Recommendations:

Request for Proposal No. 22-1328-KS with Asplundh Tree Expert, LLC

Request for Proposal No. 22-1333-SC with Davey Tree Surgery Company

Formal Bid Award Recommendations \$120,000 and Over:

Request for Quotation No. 22-1331-CS with Electro Technical Industries, Incorporated,

dba ETI

Professional Services Contract Award Recommendations \$200,000 and Over:

Request for Proposal No. 22-1281-AR with Eyemed

Miscellaneous Contract Award Recommendations \$200,000 and Over:

Request for Proposal No. 21-1200-HL with AT&T

Interlocal Agreements and Cooperative Purchase Recommendations:

Contracts:

Purchase Order No. 4500080777 with Cellco Partnership dba Verizon Wireless

Contract No. CW2248381 with Clean Harbors Environmental Services, Inc.

Amendments:

None

Sole Source Purchase Recommendations:

None

Emergency Declarations, Purchases and Public Works Contracts:

None

Purchases Involving Special Facilities or Market Condition Recommendations:

None

Formal Bid and Contract Amendments:

Public Works Contract No. CW2244780 with Trico Companies LLC

Public Works Contract No. CW2248032 with Reece Construction Company

Contract Acceptance Recommendations:

None

- C. Consideration of Certification/Ratification and Approval of District Checks and Vouchers
- D. Consideration to Prequalify Contractors as Bidders for Electrical Line Work for the District During 2023

A motion unanimously passed approving Agenda Items 4A – Approval of Minutes for the Regular Meeting of December 6, 2022, and the Special Meeting of December 13, 2022; 4B – Bid Awards, Professional Services Contracts and Amendments; 4C – Consideration of Certification/Ratification and Approval of Checks and Vouchers; and 4D – Consideration to Prequalify Contractors as Bidders for Electrical Line Work for the District During 2023.

## 5. PUBLIC HEARING AND ACTION

- A. Disposal of Surplus Property – 1<sup>st</sup> Quarter 2023

Secretary Logan opened the public hearing.

Manager Materials Management and Warehouse Hud Allworth responded to questions from the Board.

There being no further questions from the Board or the public; the public hearing was closed.

Based on staff's recommendations that the items were no longer necessary or useful to the District, a motion unanimously passed approving those items listed on Exhibits A and B of the Surplus Property Recommendation Report be declared surplus and be sold for high bid or disposed of according to the policy in the 1<sup>st</sup> Quarter of 2023.

- B. Consideration of a Resolution Ordering, Approving, Ratifying and Confirming the Construction and Installation of the Plan or Systems of Additions to the District's Water Utility, as Adopted on November 15, 2022, and Applicable to the Local Utility District Hereinafter Described, Forming Local Utility District No. 65 of Snohomish County, Washington, and Confirming the Final Assessment Roll

Secretary Logan opened the public hearing.

There being no questions from the Board or the public; the public hearing was closed.

A motion unanimously passed approving Resolution No. 6097 ordering, approving, ratifying, and confirming the construction and installation of the plan or systems of additions to the District's Water Utility, as adopted on November 15, 2022, and applicable to the Local Utility District hereinafter described, forming Local Utility District No. 65 of Snohomish County, Washington, and confirming the final assessment roll.

- C. Consideration of a Resolution Amending the District's "Pilot Small Distributed Generation Rate Schedule"

Secretary Logan opened the public hearing.

Senior Manager Rates, Economics and Energy Risk Management Brian Booth responded to questions from the Board.

There being no further questions from the Board or the public; the public hearing was closed.

A motion unanimously passed approving Resolution No. 6098 amending the District's "Pilot Small Generation Rate Schedule".

- D. Consideration of a Resolution Declaring Certain Property Interests Over a Portion of Certain District Property (Tax Parcel Nos. 27102900100200, 27102900101300, 27102900100900) to be Surplus and Authorizing the Granting of an Access and Use Easement in Favor of Mt. Index River Sites Community Club, Inc.

Item 05D.00 Declaring Mt. Index River Community Club Access Easement Coversheet was provided at places, by reference made a part of the packet.

Secretary Logan opened the public hearing.

Manager Real Estate Services Maureen Barnes responded to questions from the Board.

There being no further questions from the Board or the public; the public hearing was closed.



A motion unanimously passed approving Resolution No. 6099 declaring certain property interests over a portion of certain District property (Tax Parcel Nos. 27102900100200, 27102900101300, 27102900100900) to be surplus and authorizing the granting of an Access and Use Easement in favor of Mt. Index River Sites Community Club, Inc.

## **6. ITEMS FOR INDIVIDUAL CONSIDERATION**

- A. Consideration of a Resolution Authorizing and Approving an Updated District Investment Policy

A motion unanimously passed approving Resolution No. 6100 authorizing and approving an updated District Investment Policy.

- B. Consideration of a Resolution Authorizing the CEO/General Manager or His Designee to Execute a Work Order With the Western Power Pool for Participation in Phase 3B of the Western Resource Adequacy Program Implementation

A motion unanimously passed approving Resolution No. 6101 authorizing the CEO/General Manager or his Designee to execute a work order with the Western Power Pool for participation in Phase 3B of the Western Resource Adequacy Program implementation.

## **7. CEO/GENERAL MANAGER REPORT**

CEO/General Manager John Haarlow reported on District related topics and accomplishments.

## **8. COMMISSION BUSINESS**

- A. Commission Reports

The Commissioners reported on Commission related activities and Board related topics.

Commissioner Logan requested information on what plans are in/could be in place in the event of attacks on PUD substations. The Board concurred with staff returning with the information.

- B. Commissioner Event Calendar

There were no changes to the Commissioner Event Calendar.

- C. 2022 Budget, Forecast, and Major Project Status Report - November

CEO/General Manager John Haarlow responded to questions from the Board.

**9. GOVERNANCE PLANNING**

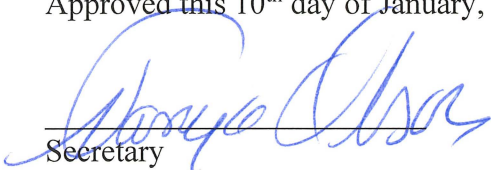
A. Adoption of the 2023 Governance Planning Calendar

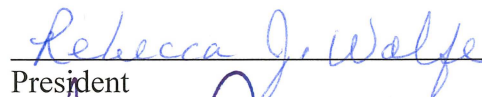
A motion unanimously passed adopting the 2023 Governance Planning Calendar.

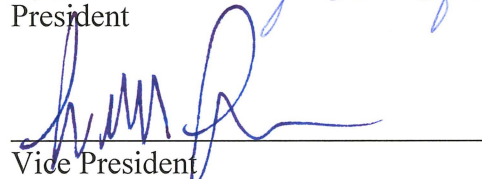
**ADJOURNMENT**

There being no further business or discussion to come before the Board, the Regular Meeting of December 20, 2022, adjourned at 2:11 p.m. An audio file of the meeting is on file in the Commission Office and available for review.

Approved this 10<sup>th</sup> day of January, 2023.

  
Secretary

  
President

  
Vice President

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**See pg 2 - regarding presentation of Draft 2021 WSP before submittal to DOH.**

**SNOHOMISH COUNTY PUBLIC UTILITY DISTRICT**

**Regular Meeting**

**October 19, 2021**

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The Regular Meeting, held virtually, was convened by President Sidney Logan at 9:00 a.m. Those attending were Rebecca Wolfe, Vice-President; Tanya Olson, Secretary; CEO/General Manager John Haarlow; General Counsel Anne Spangler; Assistant General Managers Pam Baley, Guy Payne, Brant Wood, and Jason Zyskowski; Chief Financial Officer Scott Jones; other District staff; Commission & Executive Services Director Melissa Collins; Assistant Clerk of the Board Allison Morrison; and Deputy Clerks of the Board Jenny Rich and Lela Wall.

**\* Items Taken Out of Order**

**\*\*Non-Agenda Items**

**\*\*Commissioner Logan read the following statement:**

In accordance with the governor's Proclamation 20-28.15, we are holding meetings remotely.

**1. CEO/GENERAL MANAGER BRIEFING AND STUDY SESSION**

**A. Updates**

1. Community Engagement. Communications and Marketing Representative Laura Zorick reported on the District's recent Community Engagement activities.
2. Legislative. There were no questions about the Legislative report.

Government & External Affairs Director Kim Johnston responded to a question regarding federal and state relief money.

3. Other. There were no other topics.

**B. Clean Energy Fund: Solar Deployment Program Conditional Award**

An overview of the District's pending Clean Energy Fund – South Everett Community Solar project, and the necessary partnership agreements to move forward with the project, was provided by Senior Customer & Energy Services Program Manager Suzy Oversvee; Customer & Energy Services Program Manager Kelsey Lewis; and Senior Generation Operation Technology Engineering Specialist Jason Cohn.

The next steps were Board consideration of a Grant agreement with Commerce and a Lease agreement with the City of Everett at the November 2, 2021, or November 16, 2021, Commission meeting.

### C. Energy Risk Management Report – 3<sup>rd</sup> Quarter 2021

Senior Manager Rates, Economics, & Energy Risk Management Brian Booth and Data Scientist Peter Dauenhauer provided an overview of the 3rd Quarter of 2021 that included Supply, Demand, Market Prices, Peak Week Demand, Forecast Errors Over Time, and Forward Prices.

The Credit Limit Analysis had no exceedances of limits during the quarter, but the Financial Load Resource Imbalance Test had two exceedances and the Price Volatility Test had one exceedance.

### D. Water Supply Update

Short-Term Power Trader Mike Shapley provided a presentation on the Water Year 2021 (WY'21) that began on October 1, 2020. Highlights included the District energy portfolio mix; a WY'21 summary; WY'21: Hydro generation update; Bonneville Power Administration (BPA) Slice and District owned resources; and the WY'22: Weather forecast and expectations.

Per the Board's suggestion, a page listing the presentation acronyms used would be incorporated into the future Water Supply Updates.

The meeting recessed at 10:37 a.m. and reconvened at 10:45 a.m.

### E. 2021 Water System Plan Update

Assistant General Manager Water Utility Brant Wood provided a high-level look at the purpose and timeline of the required Water System Plan (WSP), which included growth projections, conservation goals, and the Capital Improvement and Financial plans for the District's Water System.

The next steps would be a presentation and public hearing on the Dec 2022-Jan 2024 Water Utility Retail Rate and Cost of Service. Additional steps to meet regulatory requirements were to have the WSP ready to submit to the Washington Department of Health (DOH) in November. The DOH, State Environmental Policy Act (SEPA), Snohomish County, and adjacent water system review comments would be addressed in an updated WSP by early 2022, which would be brought for Board approval and adoption. The final adopted plan would be resubmitted to DOH for approval in mid-2022.

The meeting recessed at 12:12 p.m.

**RECONVENE REGULAR MEETING**

The Regular Meeting, held virtually, was reconvened by President Sidney Logan at 1:30 p.m. Those attending were Rebecca Wolfe, Vice-President; Tanya Olson, Secretary; CEO/General Manager John Haarlow; General Counsel Anne Spangler; Assistant General Managers Pam Baley, Guy Payne, Brant Wood, and Jason Zyskowski; Chief Financial Officer Scott Jones; other District staff; members of the public; Commission & Executive Services Director Melissa Collins; Assistant Clerk of the Board Allison Morrison; and Deputy Clerks of the Board Jenny Rich and Lela Wall.

**\* Items Taken Out of Order****\*\*Non-Agenda Items**

\*\*Commissioner Logan read the following statement:

In accordance with the governor's Proclamation 20-28.15, we are holding meetings remotely.

**2. COMMENTS FROM THE PUBLIC**

Gayla Shoemake, Edmonds, commented on building more solar installations.

**3. CONSENT AGENDA**

A. Approval of Minutes for the Regular Meeting of October 4, 2021

B. Bid Awards, Professional Services Contracts and Amendments

Public Works Contract Award Recommendations Over \$25,000:

None

Formal Bid Award Recommendations \$120,000 and Over:

Request for Quotation No. 21-1195-CS with Wireless Structures Consulting, Inc. DBA Western Utility Telecom, Inc.

Request for Quotation No. 21-1201-CS with Electro Technical Industries, Inc.

Professional Services Contract Award Recommendations \$200,000 and Over:

None

Miscellaneous Contract Award Recommendations \$200,000 and Over:

None

Interlocal Agreements and Cooperative Purchase Recommendations:

Contracts:

Purchase Order No. 4500072362 with Clary Longview Ford

Amendments:

Purchase Order No. OA4600003155/CW2244392

Sole Source Purchase Recommendations:

Purchase Order No. 4500072433 with SAP America, Inc.

Emergency Declarations, Purchases and Public Works Contracts:

Addendum to March 10, 2020 Major Emergency for a Health Event

Amended Declaration of Emergency

Purchases Involving Special Facilities or Market Condition Recommendations:

None

Formal Bid and Contract Amendments:

Miscellaneous No. CW2230271 with AT&T

Public Works Contract No. CW2238556 with JR Merit, Inc.

Contract Acceptance Recommendations:

None

C. Consideration of Certification/Ratification and Approval of District Checks and Vouchers

A motion unanimously passed approving Agenda Items 3A – Approval of the Minutes for the Regular Meeting of October 4, 2021; 3B – Bid Awards, Professional Services Contracts and Amendments; and 3C – Certification/Ratification and Approval of District Checks and Vouchers.

#### **4. PUBLIC HEARING**

A. Public Hearing Regarding a Proposal to Change the Boundaries of Commissioner Districts of Public Utility District No. 1 of Snohomish County

President Logan opened the public hearing.

General Counsel Anne Spangler displayed some of the slides from the September 21, 2021, presentation to provide clarification on suggested boundary changes.

The final proposal would be brought before the Board on November 2, 2021, for approval.

There being no public comments, President Logan closed the public hearing.

#### **5. CEO/GENERAL MANAGER REPORT**

CEO/General Manager John Haarlow reported on District related topics and accomplishments.

#### **6. COMMISSION BUSINESS**

A. Commission Reports

The Commissioners reported on Commission related activities and Board related topics.

## B. Commissioner Event Calendar

There were no changes to the Commissioner Event Calendar.

**7. GOVERNANCE PLANNING**

## A. Governance Planning Calendar

There were no changes to the Governance Planning Calendar.

**EXECUTIVE SESSION**


The Regular Meeting recessed at 2:04 p.m. and reconvened virtually into Executive Session at 2:20 p.m. to discuss computer and telecommunications security and risk assessments, under the terms set forth in the Open Public Meetings Act. It was anticipated the Executive Session would last approximately 2 hours, with no public announcements. Those in attendance were Commissioners Sidney Logan, Rebecca Wolfe, and Tanya Olson; CEO/General Manager John Haarlow; General Counsel Anne Spangler; other District staff; Commission & Executive Services Director Melissa Collins; Assistant Clerk of the Board Allison Morrison; and Deputy Clerks of the Board Jenny Rich and Lela Wall. The Commission immediately adjourned the Regular Meeting upon conclusion of the Executive Session.

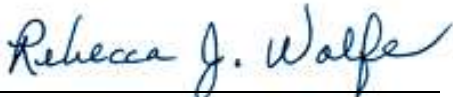
**ADJOURNMENT**

There being no further business or discussion to come before the Board, the Regular Meeting of October 19, 2021, adjourned at 3:49 p.m. An audio file of the meeting is on file in the Commission Office and available for review.

Approved this 2<sup>nd</sup> day of November 2021.

  
Secretary

  
President

  
Vice President



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## **Appendix 1-1**

### **Policy Manual**

**Following is the version of the Policy Manual that was in effect at the time of DOH's approval of the 2021 Water System Plan.**

**Because changes to the Policy Manual can be adopted by Snohomish PUD's Board of Commissioners, please see the PUD's web site or call the PUD's Water Utility at (425) 397-3000 to be directed to the current edition.**

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Snohomish Public Utility District No. 1 requests a submittal exception in accordance with WAC 246-290-125. Included in the District's Policy Manual (Appendix 01-1 of the Water System Plan) are the District's standard water system details as well as standard construction and testing procedures for water system projects.

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# Section 1

## Introduction

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### 1.1 Goal

Snohomish County Public Utility District No. 1 (District) has developed this Policies and Procedures Manual to provide a helpful guide to water services for customers, the building trades, and the employees and representatives of the District. The goal of the District's Water Utility is to provide safe and reliable service to all District 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 Snohomish County PUD Water Utility are established as follows: first, emergencies; second, maintenance and operation; and third, new service installations.
- (c) The District will promote water conservation as an ethic to be incorporated in all practices where it is reasonably practicable and cost-effective. The District may require conservation practices be utilized when necessary 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 Related Policies

The District's function is not to plan land uses within its boundaries, but to respond to land uses planned for Snohomish County under the applicable 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 has prepared and the Washington Department of Health has approved a Water System Plan (Plan) for the District's service area. This Plan projects 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 AGM 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 Applicant 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 Assistant General Manager.

### **1.3 Scope of Manual**

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 provision of electrical or other utility services besides water.

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

In specific instances, the Assistant 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 strategic initiatives, 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 AGM must report any waivers or modifications to the Board of Commissioners within the next two regularly scheduled meetings of the Board.

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 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 Snohomish County PUD Board of Commissioners; except in an emergency situation the AGM 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 meetings of the Commission.

## **1.6 Conflict**

In case of conflict between this Policy and Procedures 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 adjudged 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 Policies and Procedures 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 Applicant**

Any individual person, property owner, builder, or developer who is proposing a main extension and will be responsible for its financing.

### **1.8.2 Assistant General Manager (AGM)**

The District's Assistant General Manager for Water, Generation & Corporate Services, herein referred to as AGM.

### **1.8.3 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.

### **1.8.4 Distribution System Charge (DSC)**

That charge levied by the District and payable by all New Customers connecting to a District-installed water main extension, or a water main extension constructed by a third-party with title thereto transferred to the District, when such New Customers have not contributed to the cost of the extension either through an LUD assessment, other charge imposed by District policy, or through purchase of property to be served by the water main extension. The DSC also applies to New Customers within satellite systems in cases where the conditions for District acquisition of the system include payment of the DSC.



### **1.8.5 District**

Public Utility District No. 1 of Snohomish County.

### **1.8.6 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 800 cubic feet (one cubic foot is equal to 7.48 gallons) per month and 27.0 cubic feet per day. The "ERU" shall be used as the method of comparing anticipated water demand and usage characteristics of multi-family residential users and non-residential water users (such as schools, businesses, parks, manufacturing companies, etc.) to that of the single-family residential unit described in this subsection.

The ERU determinations for different customer classes and meter sizes are shown in Appendix B.

### **1.8.7 General Facilities Charge (GFC)**

That charge 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 system general facilities, (i.e., 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.

### **1.8.8 Interim Connection**

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

### **1.8.9 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).

### **1.8.10 New Customer**

Any New Customer attaching to the District's water system where no attachment has previously existed, requesting additional attachments to such system, or adding to the number of "equivalent residential units" served through an existing water service attachment to the District's water system.

### **1.8.11 Point of Delivery**

That point, 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.

### **1.8.12 Service Connection Charges (SCC)**

Those charges levied by the District and payable by a New Customer to reimburse the District's cost of installing all or a portion of that New Customer's water service, including the water meter, from the distribution main to that customer's private service line. (This charge may be included as a part of the applicable assessment for New Customers attaching to the District's water system as a part of an LUD formation and construction.)

### **1.8.13 Standard Specifications**

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

### **1.8.14 Temporary Water Service**

Metered water service provided on a short-term, temporary basis to a fixed site (e.g., a construction site). Includes water service supplied through a District main or a fire hydrant designated by the District and equipped with a separate construction fill station installed for this purpose.

### **1.8.15 Water Consumption**

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

### **1.8.16 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.

### **1.8.17 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

---

## 2.1 General Provisions

### 2.1.1 Scope

Section 2 of this Policies and Procedures Manual provides the General Terms, Conditions, and Policies for furnishing and receiving water service. These terms, conditions and policies are a part of all proposals, offers, agreements, and contracts for furnishing and receiving water service relating to the District. A copy of this document shall be available for public inspection during regular District business hours at the District's Water Operations Facility at 3301 Old Hartford Road, Lake Stevens, WA.

## 2.2 Initiating and Terminating Service

### 2.2.1 Service Application or Contract

- (a) Each New Customer desiring water service must make application, furnish proof of identity as required by federal regulation within a reasonable timeframe, and may be required to sign an application form or contract prior to service connection.

Application for water service may be made at the District's Water Operations Facility at 3301 Old Hartford Road, Lake Stevens.

- (b) The District may, in some circumstances, accept application for service from a second party, with the understanding that the first party will sign an application within fifteen (15) days. Such second party shall be responsible for payment of services unless and until an appropriate written and signed service application is made by the first party and accepted by the District for the entire service period.
- (c) All New Customers are to be informed, at the time of application, 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.

### **2.2.2 Agreement**

Acceptance of service by a customer, with or without a written application, creates a contract obligating the customer to pay current rates, comply with service requirements and regulations, and is conditioned upon the District's verification of the customer's identity.

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

A contract may be entered into by any owner of rental property for the provision of uninterrupted service to the premises between tenancies. The owner agrees to pay for water service charges during this period and until a tenant assumes responsibility for water service under these policies.

### **2.2.4 Initiation of Service**

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

- Proper application.
- Valid service and mailing address(es).
- Payments as required on outstanding accounts.

(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 will require appropriate evidence of state, city or county plumbing inspection, if requested by the District.

The District may, at its option, require the presence of a responsible adult in the building at the time the water is turned on. If required, and arrangements are made to have such adult present at a predetermined time, and if such person is not present, the District, at its option, may charge a fee commensurate with that listed in the District's Schedule of Charges and Fees to arrange a subsequent time to turn on the water. Only assigned 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 cause or may result in significant water loss and/or property damage.
- No one assumes responsibility for service.
- Failure to pay water charges when due.
- A chargeback of a credit/debit transaction that was received for payment after a disconnection notice was sent.
- A check that was received for payment after a disconnection notice was given is dishonored.

The District may also refuse or disconnect water service used in a manner that is seriously detrimental to the service being rendered to other customers as further described in Sections 2.3.5 and 2.3.16.

- (b) When disconnection occurs, the customer shall be advised in writing that service will be restored if the customer contacts the District and fulfills other requirements of RCW 54.16.285. In the customer's absence, the notice will be left on the premises.
- (c) Disconnection of service does not release a customer from any obligation to the District.
- (d) Service will not be disconnected without a disconnect notice for non-payment of bills unless.
  - No one has assumed responsibility to pay for the services, or
  - A check received for the payment of services after a disconnect notice has been given is dishonored.
  - A chargeback of a credit/debit transaction that was received for payment after a disconnection notice was sent.
- (f) While an appeal is pending, at the District's discretion, termination of service may be implemented 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 (see Appendix B, Table B-10).

Only authorized District personnel may initiate and turn-on service to a water service connection. Appropriate charges, as specified in Appendix B, for turning on or reconnecting service will be assessed as applicable.

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

Except as may be otherwise provided for by a special contract or agreement with the District, when a change of occupancy or of legal responsibility takes place for water service to any premise being 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. The outgoing customer may be held responsible for all service supplied 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 mutual consent of the customer and the District. Under some circumstances the District may, at its option, require written authorization from the customer paying for water service before discontinuing such water service.

### **2.2.8 Consumer Alerts, Unusual or Suspicious Account Activity**

The District may take appropriate steps as outlined in its Identity Theft Prevention Program in response to consumer alerts, indications of fraudulent activity, and other irregular account activity, up to and including termination of 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, except meters and special facilities installed or furnished by the District. The customer's plumbing is to conform to:

- District's service requirements and regulations.
- Applicable municipal, county or 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 AGM, or his/her designee, shall have the authority to waive the requirement of adjacency to a District main when the District deems it to be in the best interests of the District to do so.

### **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 AGM or his/her designee.

Evidence of permission to make such crossings shall be provided to the District at the time of 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 to the point of delivery. The customer owns and maintains equipment beyond the point of delivery (see Subsection 1.8.11). The District's responsibility and liability for maintaining District-owned pressure reducing valves provided for individual homes shall be limited to replacement of the device upon failure.

### **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 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 or tampering with any District equipment with the intent of defrauding or illegally diverting utility service may be prosecuted by the District in accordance with RCW 9A.56. 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, 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 service or disconnect service to customers when conditions are hazardous 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, the District may direct a crew or serviceperson to standby. Cost for this service may be charged to the party responsible for the situation.

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. 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 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 it is not immediately remedied by the customer, the District reserves the right to terminate water service to the customer until such cross-connection is removed.
- (b) 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 the customer will be charged a standard fee (see Appendix B, Table B-10).
- (c) 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.



- (d) Although the customer is responsible at all times for maintaining customer-owned equipment, the District may inspect customer equipment before or after 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 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 and the customer has all necessary authorization to operate a public water system.
- (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. The property owner shall be responsible for the entire billing unless one tenant agrees in writing to assume the entire bill.

### **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 will be made; and if the meter is found to register within two (2) percent of accuracy, the District may charge a test fee (see Appendix B, Table B-10) 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, fast or slow, the District will pay for the testing and may adjust the customer's billing for the known or assumed period of error, not to exceed the previous six (6) months.

### **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 PRV should 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:

For pressures greater than 80 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 (see Appendix B, Table B-1). After the PRV is installed, the District will be responsible for its repair and/or replacement at no additional cost to the customer, subject to the limitation set forth in Section 2.3.4. 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.

### **2.3.11 Booster Facilities**

The District may boost service pressure via a customer-owned and maintained individual booster pump housed in a suitable location on the customer's property. This method of service shall only be 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) where 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 agreement to pay a Boosted Minimum Charge (see Appendix B, Table B-6) 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). At any time an unauthorized cross-connection is discovered and it is not immediately eliminated, that water service will be terminated 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 AGM or his/her designee, compromise the health and safety of other users of the District's water system.

The entire cost of installing a backflow-prevention assembly shall be borne by the customer, and the assembly shall remain in the customer's ownership and as the customer's responsibility.

Periodic inspections and repairs of backflow-prevention assemblies, as required by WAC 246-290-490, shall be arranged by customers at their own expense, using firms or individuals who are licensed cross-connection control specialists. 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 termination of water service.

#### **2.3.14 Relocation and Abandonment of Delivery Points**

- (a) A customer's delivery point may be relocated at the customer's request, subject to advance payment of the estimated cost of relocating the District's service pipe, meter and other facilities, which includes a Meter Abandonment Fee to cover the cost of removing the existing meter connection and disconnecting the service at the District's main and a Service Connection Charge for the installation of a new meter and other facilities or equipment necessary to connect to the District's main at the new location. These costs are described in Appendix B, (Tables B-1 and B-10). 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 the 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 relocations.

- (b) An existing delivery point may be abandoned and removed at the customer's request. Abandonment typically occurs when a delivery point is relocated, but may also be requested where a customer wishes to remove redundant service points on the customer's property. Abandonment of a delivery point at the request of a customer is subject to advance payment of the estimated cost of removing the meter, the District's service pipe, and other facilities and to disconnect the service at the District's main. The cost of abandonment is described in Appendix B, (Table B-10), as a Meter Abandonment Fee.

#### **2.3.15 Resale**

Customers may resell water only with prior, written District authorization. Rates charged may not exceed rates the District charges for similar service; provided that the

prohibitions in this Section shall not apply when resale is pursuant to the terms of a valid wholesale agreement entered with the District.

### **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 occur occasionally. They 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 District will make no repairs. The customer will be charged a set fee for such response (see Appendix B, Table B-10).

### **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 by it to be economically 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 AGM 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 on monthly or bimonthly cycles at District option, and routinely at regular intervals within a five-day variance. 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) Opening or closing readings may be prorated or interpolated.
- (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 Multiple Delivery Points**

The rates of the District are based upon the supply of service to the entire premises through a single delivery and metering point. Separate supply for the same customer at other points will be separately metered and billed. Unless otherwise specified in a contract, the District will not totalize metering of separate points of supply or services.

### **2.4.3 Billing**

Bills and/or notifications will be sent to the mailing address and/or email address furnished by the customer. Failure to receive a bill will not release the customer from the obligation to pay for services provided in a timely manner.

Bills will be issued monthly or bimonthly, depending on the reading cycle or assigned payment plan and generally will be based on exact meter readings. Bills may be estimated when:

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

In the event that bills 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 bills, notices and related information by first class mail and/or will send email or email notification to customers who have made their e-mail addresses available to the District in connection with the use of the District's electronic bill pay and presentment services (e.g., SnoPAY). If customers do not provide proper mailing addresses and/or email addresses or a means of receiving mail, their service will be subject to disconnection.

#### **2.4.4 Payments**

The customer's obligation to pay a bill accrues on the date the bill is issued. Payment is due by the due date on the bill. Payments will be considered made when received at the District office. Payments are to be accompanied by a billing remittance slip or account number.

#### **2.4.5 Payment Plans**

Customers may have an opportunity to keep water service accounts current through optional payment programs pending review of the customer's payment history. Residential customers shall have the option of a budget billing payment plan.

#### **2.4.6 Adjustments**

Pursuant to Resolution No. 4860 adopted by the Snohomish PUD Board of Commissioners on July 13, 1999, and updated by Resolution No. 5647 adopted on October 22, 2013, certain Water Utility staff have 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.

##### ***Authority Levels:***

AGM	Up to \$500 each occurrence
Water Utility Sr. Managers	Up to \$100 each occurrence
Water Utility Associate	Up to \$20 each occurrence
Water Utility Administrator	Up to \$40 each occurrence
Water Services Liaison	Up to \$50 each occurrence

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

Municipal Tax (debit or credit) will be adjusted back when incorrect tax codes are identified, for a maximum of six (6) months for the current customer.

A final balance (debit or credit) of less than five dollars (\$5) 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) Leak Adjustments are available for single-family residential customers only. A single-family customer may be eligible for a water bill adjustment 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 (e.g., but not limited to, irrigation, swimming pools, outdoor hose bibs), would 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, written notification will be mailed to the customer. A door hanger may also be left in a prominent place at the residence. The date of the 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, a letter will be mailed to the customer. The date of the letter 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 conduct the repairs.



The District will adjust by fifty percent (50%) the charge for the excess amount of water used during the eligible time frame for a qualifying leak that has been repaired. The eligible time frame for account adjustments will consist of: (a) the ten (10) day period allotted for repairs, regardless of how long the repair actually takes; (b) the period from the “official notification” date back to the beginning of the current billing period; and (c) a limited number of previous billing periods if the District determines that there was an excess amount of water use attributable to a qualifying leak, provided that retroactive adjustments under this subsection will not exceed the previous six (6) billings on monthly billed accounts, or three (3) billings on bimonthly billed accounts and must be approved by a Water Utility Senior Manager.

The methodology for determining excess amount of water over normal consumption will be determined by the previous years’ history for an existing customer; an average use of 800 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 twelve (12) consecutive months, from the time of a previous leak adjustment. Additional adjustments may be provided if, in the District’s opinion, a good faith effort was made by the customer to repair the leak and new circumstances have caused further leaking.

The AGM or his/her designee will be responsible and accountable for authorizing adjustments.

No adjustment shall be made in the water billing that is caused by freezing.

#### **2.4.7 Late Payment Charges**

A late payment fee may be assessed on all accounts that have an unpaid balance no sooner than thirty (30) days after the billing date. (See Appendix B, Table B-10).

#### **2.4.8 Disconnect Notices**

- (a) Disconnect Notices will be mailed no sooner than thirty-one (31) days after the original billing date. The notice will be for arrears only and a disconnection fee may be charged for credit disconnection.
- (b) A brochure explaining credit, disconnect policies and customers' rights and remedies, will accompany each Disconnect Notice on all accounts.
- (c) A fee may be charged when a field collection call is required and no disconnection is made. (See Appendix B, Table B-10)
- (d) Disconnection will occur following the due date on the disconnect 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.
- (e) Exceptions: In certain instances, where health, safety or essential services would be otherwise jeopardized, or for purposes of economy, the District may withhold disconnect notices.

#### **2.4.9 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, or lawsuit.

- (a) Undercharges/Overcharges: The District will, within one (1) year after it becomes aware of undercharges/overcharges that are a result of its error, take action to collect/credit all amounts that were undercharged/overcharged during the three (3) years prior to the date upon which the District became aware of the error, or back to the date of responsibility change, whichever is more recent. If the District fails to act during that one-year period, no collection action will be taken. No action shall be taken to collect/credit any undercharges/overcharges resulting from District error, for water utility services that the District delivered more than three (3) years before it became aware of that error.
- (b) Payment for Undercharges: A customer may pay amounts undercharged as a result of District error, without interest, in installments of approximately equal amounts during a period that is no longer than the period for which the customer was undercharged for services. If a customer does not agree to pay for undercharged water utility services or, if having agreed fails to make payment, normal District collection practices will be followed.

#### **2.4.10 Extenuating Circumstances**

- (a) The District may pursue a solution with customers temporarily unable to pay on time due to extenuating circumstances. 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 if the customer has made application to appropriate agencies for assistance and payment is pending.

#### **2.4.11 Insolvent Accounts**

If the District has reason to believe a customer to be insolvent, in financial difficulty or contemplating bankruptcy, appropriate action may be taken to secure payment of charges due. Requirements may include an adequate security deposit, altered payment schedule, or other actions deemed necessary and reasonable by the District.

#### **2.4.12 Transfer of Unpaid Balances**

A water service customer's previous unpaid balance may be transferred from one service address to another as part of the customer's current utility service obligation and subject to the District's requirements for payment.

## **2.5 Dispute Resolution**

### **2.5.1 Mandatory Hearing**

Any customer or other person who believes that he/she has been adversely affected by a decision which the District has made to:

- (a) Terminate the delivery of water service (i.e., disconnect the customer); or
- (b) Refuse to deliver water service (i.e., not connect the customer); or
- (c) Require the customer to pay for water service previously delivered (i.e., transfer an outstanding balance to a new water or electric account); or
- (d) Require the customer to make periodic payments in specific amounts to pay for water service previously delivered as a condition of receiving water or electric service (i.e., require a payment plan); or
- (e) Require the customer to provide security as a condition of receiving water (i.e., require a security deposit); or,
- (f) Require the customer to pay a fee or penalty; (e.g., reconnection fee, account service fee, etc.);

has the right to have that decision reviewed in a hearing to be held by a District Hearing Officer.

### **2.5.2 Discretionary Hearing**

The District may, at its discretion, 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 Dispute Resolution Procedures**

The procedure for initiating, processing and resolving disputes shall be those that are set forth in the Commission's adopted "Dispute Resolution Procedure" as it is amended from time to time.

## **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. The amount of the SCC is shown in Appendix B, Table B-1.
- (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 (GFC)**

A General Facilities Charge (GFC) is applied on new service connections to compensate for costs the District incurs in construction or acquisition of water system general facilities, (i.e., source, storage, treatment and transmission facilities); required to support the addition of the new customers. The GFC amount is based on the demand a new water service connection is expected to place on the water system (see Appendix B, Tables B-2 and B-3). Equivalent Residential Units (ERU) will be used to represent the demand a given service will place on the District's water system and consequently that service's respective share of the costs of the District's water system general facilities (see Appendix B, Table 3). The following procedures apply to payment of the GFC:

- (a) All New Customers connecting to a District water main or expanding their service connection shall pay a GFC, except as follows:
  - (1) The GFC shall not apply to extensions, new developments, or subdivisions where all applicable water system source, storage, treatment, and transmission facilities are financed wholly by the benefited properties under the LUD process (see Section 3.3.2) or through the Applicant extension process.

- (2) If a New Customer provides documentation, acceptable to the District, that the applicable GFC for such customer's requested connection has already been paid through past payment by an Applicant, or other means, the GFC shall not be applied.
- (b) Where construction of a development or subdivision requires connection of a new Applicant-installed main extension to the District's water system, the Applicant has the option of paying the total applicable GFC for all lots at the time of conveyance of the main extension to the District, or deferring payment of the GFC applicable to any individual lot until a service connection is requested for such lot (see Appendix B, Table B-2). For Satellite or Remote systems, the option of deferring payment of the GFC is at the discretion of the AGM.
- (c) Where a development or subdivision is constructed within the boundaries of the District's integrated water system, but connection with the District's integrated water system is deemed by the District in its sole judgment to be impracticable at the time of construction, such development or subdivision may construct and utilize a separate, temporary water supply, storage and distribution system, to be owned and operated by the District. Such system shall be attached to the District's integrated water system at District cost at such time that the District deems attachment practicable and appropriate. The Applicant of the development or subdivision must pay the applicable GFC in addition to the construction of the temporary source and storage facilities. The Applicant has the option of paying the GFC at the time of conveyance of the new distribution system to the District, or deferring payment of the GFC applicable to any individual lot until a service connection is requested for such lot (see Appendix B, Table B-2).
- (d) When the Applicant chooses to defer the payment of the GFC, an adjusted GFC amount shall be applicable in order to permit the District to recover administrative costs and interest costs associated with delayed payment (see Appendix B, Table B-2).
- (e) When the Applicant chooses to defer the payment of the GFC with regard to any specific parcel of property to be connected to the District's water system (including, in the case of a condominium, any unit or common area), the Applicant shall be obligated to disclose to the initial purchaser of such parcel of property that a GFC is due and must be paid to the District prior to installation of a meter and connection of such parcel to the District's water system. Installation of a meter and connection of a parcel of property, including a condominium unit or any parcel held in common for the development, to the District's water system shall not occur until all applicable fees have been paid to the District, including but not limited to the required GFC.  
An Applicant who fails to provide the disclosure required in this subsection shall defend, indemnify and hold the District harmless from and against any and all claims, demands, losses, costs and damages of whatsoever nature, including attorney fees and costs, incurred by the District as a result of such failure.

- (f) The District shall determine the appropriate number of ERUs to be assigned to any and all New Customer connections. The GFC for a subdivision constructed under the circumstances described in subsections (b) and (c) above where the Applicant has chosen to pay the GFC at the time of conveyance to the District of the Applicant-installed main extension or water distribution system, shall be based upon the total of the estimated total number of ERUs as determined by the District to be necessary to provide service for all of the parcels of property within the development or subdivision to be served by the District. If the use classification or the number of dwelling units for any parcel changes between the date of the estimate and the date of application for service to such parcels, causing a change in the estimated ERUs applicable, the GFC shall be recalculated accordingly. The recalculation shall be based upon the new number of ERUs. If the recalculated GFC is greater than the original payment, the Applicants for service to parcels which have a different use classification or a different number of dwelling units shall pay the difference between the recalculated GFC and the estimated GFC. No refunds will be made by the District where the recalculated charges are less than the original payment.

In recalculating the GFC, the rates in effect at the time of the recalculation shall be used; and for purposes of calculating the difference that the Applicant shall pay, the estimated GFC shall be recomputed based upon the rates then in effect.

- (g) The GFC shall also apply to an LUD or to the identified and assessed individual properties contained therein at the time of formation. Properties within an LUD are subject to the applicable LUD GFC. However, once an LUD has been established and the final assessment roll confirmed, any additional individual water service customers within such established LUD requesting a new water service connection or adding to the number of ERUs to be served by that customer's existing water service connection shall be deemed a "New Customer," and be subject to the applicable GFC imposed at the time of connection (see Section (h) below).
- (h) In all cases, the GFC paid shall be based upon the GFC in effect on the date of payment.

### **2.6.3 Distribution System Charge (DSC)**

The Distribution System Charge (DSC) is assessed to compensate for costs the District and its existing customers have paid to install the system's existing local distribution network, or for the costs of installing new distribution lines required to support the addition of the new customers.

The DSC applies to each New Customer connecting to a District-owned water main when such New Customer has not contributed to the cost of the water main either through an LUD assessment, other charge imposed by District policy, or through purchase of an individual parcel specifically for which the water main extension was originally installed.

The DSC also applies to each New Customer within satellite systems in cases where the conditions for District acquisition of the system include payment of the DSC.

Depending on the type of development, the DSC is calculated as either a standard charge per connection, or as a charge based on front footage. The DSC for various types of service is shown in Appendix B, Tables B-4 and B-5.

Payment of the DSC is required with regard to each of the following situations:

- (a) Whenever construction of a development or subdivision includes connection to a District main **and** extension of a new or the replacement of an existing main by the Applicant along the entire frontage of the proposed development or subdivision is **not** required, a DSC shall be imposed upon the Applicant.
- (b) Whenever a lot for which a DSC has been paid is subdivided, and additional water connections are made to serve the new lots created by subdivision, an additional DSC shall be collected from the Applicant or each New Customer connecting to a District main.
- (c) Whenever a New Customer connects to a District main under an Interim Connection Agreement (ICA), a DSC shall be imposed.

Where applicable, a DSC collected from a New Customer shall be paid as reimbursement to the Applicant responsible for installation of the water main, in accordance with Section 3.3.9 of this manual.

In the case of a New Customer connection to a water main installed through a completed LUD process, the DSC collected shall be paid as reimbursement to the District; the DSC shall be equal to the apportioned distribution system cost assessed to each participating LUD property, or the current DSC amount, whichever is greater.

#### **2.6.4 Rate Schedules**

- (a) The District has rate schedules for particular types of service provided. A summary of these charges is provided in Appendix B, (Tables B-6, B-7, B-8, and B-9). For specific detail, refer to the Water Rate Schedules available on the Internet at <http://www.snopud.com>. In case of conflict between the provisions of any rate schedule or special contract and this Policies and Procedures Manual, the provisions of the rate schedule or special contract shall apply.

#### **2.6.5 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 Seattle-Tacoma-Everett area. Such rates will be established by the AGM or his/her designee, on a case-by-case basis, by obtaining three (3) or more estimates from private rental firms in the area.

#### **2.6.6 Account Service Charge**

- (a) An Account Service Charge (see Appendix B, Table B-10) is to be billed during processing of each service application, except for:
  - Initial meter installation for service to a premise.
  - Services or meters added to existing premises or account by new service application.
  - Initial temporary meter and service for construction.
  - Owner/agent agreement with owner/agent assumption of responsibility for service between tenants.
  - Disconnection of an account for nonpayment and reconnected subject to a disconnection and/or reconnection fee.
- (b) A credit of the account service charge may be given in those cases where a customer has been cut-in to an account in error.
- (c) The customer is to be advised of the account service charge at the time the application is taken.
- (d) The account service charge is to be billed within ten (10) business days from the date the application was taken.
- (e) 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.
  - Electric and water service on one account -- one charge.
  - 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.

### **2.6.7 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 42.17, 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 Water Utility, located at the Water Operations Facility, 3301 Old Hartford Road, Lake Stevens, Washington. Requests for public records will be handled in compliance with provisions of the District's policy on Access to Public Information and Records. No fee is charged for inspection of public records on the premises; however, the District imposes a charge for providing copies of public records. Such charges do not exceed the actual costs of copying. The customer may be billed a records research charge at cost for documentation requested on their account.

### **2.6.8 Disconnection/Reconnection Charge**

- (a) Whenever water service has been disconnected for noncompliance with the Policies and Procedures, for nonpayment, or for fraudulent use, the service will not be reconnected until the situation requiring such action has been corrected to the satisfaction of the District. A disconnection fee shall be charged to cover the cost of turning off the water service (see Appendix B, Table B-10). A separate reconnection fee shall be charged for same day reconnection during regular business hours, next day reconnection during regular business hours, and reconnection at all time after regular business hours including weekends and holidays. See Appendix B, Table B-10 for the different reconnection fees. As appropriate, the customer will be pre-advised of these fees.
- (b) When an account requires the physical reconnection of both electric and water, the total charge will include components for each type of service (see Appendix B, Table B-10).

### **2.6.9 Discounts**

Effective October 1, 2010, reduced rates for the primary residence for single-family water customers are available for "Low-Income Senior Citizens" and for "Other Low-Income Citizens." The Water discount programs will be administered by the District's Customer Service Department in accordance with the criteria and income levels set forth in the District's Electric Rate Schedule 7, Paragraphs 3 (b) and (c), as they are amended from time to time. Qualifications and rates can also be found on the Internet at <http://www.snopud.com>.

- (a) **Low-Income Senior Citizens.** Low-income senior citizens whose completed applications have been approved by the District are eligible for the percentage reductions on the Monthly Customer Charge and the Commodity Rate charges in Table B-6 of the District's Water Service Charges and Rates – Single-Family that are applicable to their combined disposable income level.
- (b) **Other Low-Income Citizens.** Other low-income citizens whose completed applications have been approved by the District are eligible for the percentage reductions on the Monthly Customer Charge and the Commodity Rate charges in Table B-6 of the District's Water Service Charges and Rates – Single-Family that are applicable to their combined disposable income level.
- (c) **Primary Residence.** "Primary residence" shall mean the dwelling the person stays in to live and work the majority of the time during the year. A person can have only one "primary residence" at any given time. Guidelines for determining primary residence include, but are not limited to:
  - Place of employment
  - Mailing address for bills and correspondence
  - Address on driver's license and car registration
  - Address on federal and state tax returns
  - Address on voter registration card

**2.6.10 After-Hours Connection Charge - New Customer or Vacant Account Reconnect**

- (a) For connection requested to be completed during the hours of 5:30 p.m. to 7:30 a.m., or during weekends or holidays, customers will be advised at all times that there will be an after-hours connection charge (see Appendix B, Table B-10) in addition to the Account Service Charge.
- (b) When an account requires the physical reconnection of both electric and water, an additional charge will be imposed for the electrical component of the work.

**2.6.11 After-Hours Service Charge - Established Customers**

Established customers will be advised at all times of a charge (see Appendix B, Table B-10), plus material cost and tax, if a water serviceperson is dispatched to the customer's premise, at the customer's request, during other than normal business hours (5:30 p.m. to 7:30 a.m. and weekends and holidays) and it is determined that the problem is caused by a failure of the customer's facilities.

**2.6.12 Returned Check Charge**

An accounting service charge (see Appendix B, Table B-10) may be made 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 or for which a charge back is received for irregularities, lack of sufficient funds in the payer's checking account or the customer having closed the account.

### **2.6.13 Field Collection Call Charge**

Whenever it becomes necessary for a District representative to make a collection call at the customer's premise(s) to enforce payment of a billing or security deposit, a field collection call charge (see Appendix B, Table B-10) will be made.

### **2.6.14 Security Deposit**

- (a) Security deposit may be required of a customer at application or later for any of the following reasons:
- Incomplete or improper application.
  - Misrepresentation of identity.
  - Tampering with District equipment.
  - No established credit.
  - Payment record.
- (b) A notice will be provided to the customer when a security deposit is required, showing the amount and due date.
- (c) Payment or acceptable collateral is due as stated in the notice unless other arrangements are made within that period.
- (d) Amount of deposit will not exceed the established flat fee amount (see Appendix B, Table 10) for those residential customers who have been District customers for less than twelve (12) months. The amount of deposit for those residential customers who have been District customers for more than twelve (12) months will not exceed the estimated maximum billing for two (2) consecutive months within a 12-month period.
- (e) Amount of deposit for commercial customers will be the highest two (2) month billing in a 24-month period.
- (f) Deposit, plus interest, will be applied to the account based on evaluation of customer credit history, after twelve (12) months experience with residential customers and twenty-four (24) months with commercial customers.
- (g) Upon termination of service, an existing deposit, plus accrued interest, will be applied to any amounts due and any balance refunded.
- (h) Transfers: When a customer relocates and reapplies for service, an existing deposit will be applied to the bill. A credit balance will be carried over to the

customer's new service location. A new deposit based on the consumption at the new address, or a flat fee, will be required when appropriate.

- (h) Interest: Interest will be paid on all deposits. The interest rate paid will be established periodically by the District Treasurer.

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

The 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.

#### **2.6.16 Surcharges**

By action of the Board of Commissioners, the District may impose surcharges on monthly or bimonthly 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 criminal or civil proceedings for theft of water, destruction of District property and other violations of law affecting delivery of its services authorized by applicable city or county ordinance or by federal or state law, including RCW 9A.61 Defrauding a Public Utility, and 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 (see Appendix B, Table B-12) 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 (see Appendix B, Table B-12) 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 (see Appendix B, Table B-12) against any person, firm or corporation who shall take water from an angle stop, service lead, angle check valve, or related appurtenances intended for a future meter installation without consent from the District to take such water. A meter will not be installed to serve such property until such charge is paid together with the standard meter installation fees. If a meter application has been purchased from the District and, prior to installation of such meter, 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 (see Appendix B, Table B-12) against any person, firm or corporation who shall operate any valve in the District's system without the District's consent. Such sum shall be due and payable at the time of discovery by the District of such 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 not 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 for any purpose other than the fighting of 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, regulations of Snohomish County, and the Snohomish County Coordinated Water System Plan, 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 be billed the difference between the estimated amount and the actual cost, if the actual cost exceeds the estimate by more than ten percent (10%).

### **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, filling swimming pools, charitable car washes, etc.). Temporary water service may be provided from a District blow-off assembly or from a fire hydrant specifically designated for this purpose by the District through a District supplied construction fill station (see Section 2.9.2). Only District personnel are authorized to install a connection to a District blow-off assembly or fire hydrant for this purpose.

Temporary service may be authorized for a period not exceeding six (6) months at a time. Upon expiration of the initial six-month period, a customer may request an extension of temporary service for up to two (2) additional six-month periods. The customer will be responsible for paying the associated "Temporary Construction Fill Station" fee as shown

in Appendix B, Table B-10 (Miscellaneous Fees) for each six-month period for which temporary service is requested, as well as a damage or security deposit. No more than two (2) extensions will be granted, unless authorized by the AGM or his/her designee.

A customer obtaining temporary water service will not be required to pay a SCC, GFC, or DSC. However, a customer obtaining temporary water service will be required to pay a “Temporary Construction Fill Station” fee as shown in Table B-10 for each six (6) month period for which temporary service is requested, as well as a damage or security deposit. In addition, temporary service will be metered and the customer shall be required to pay a charge for water usage in accordance with the commercial/industrial rate schedule (see Appendix B, Table B-8). Arrangements for metering and billing will be established on a case-by-case basis. Any damage to District facilities or equipment caused by the customer is the responsibility of the customer and will become due and payable to the District immediately. Failure to pay for the damage to the District’s equipment will result in immediate and permanent removal of the temporary service. No future temporary construction fill stations will be installed for the customer (regardless of the project or location for which the new temporary service is desired) until all damage charges have been paid in full.

Upon termination of temporary service, the District will disconnect the temporary water service and take possession of the associated District equipment. Following disconnection and payment of all outstanding charges for water usage or damage claims for damaging District equipment, the District shall refund any damage or security deposit, 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 via a District installed temporary construction fill station per Section 2.9.1. 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 and obtain the necessary water only through the construction fill station installed by District personnel on a hydrant specifically designated by the District for this purpose.

### 2.9.3 Bulk Water Withdrawals

Customers may purchase bulk water from certain District-designated “Water Fill Stations” for short duration purposes or for intermittent use by a mobile water tank (e.g. tanks on hydro-seeding or public works maintenance vehicles). Procedures for obtaining a Bulk Water Use Permit shall be as follows:

- To obtain a Bulk Water Use Permit, the customer shall complete a Bulk Water Use Application, pay a fee established by the District for the Permit and pay a refundable key deposit (see Appendix B, Table B-10). A permit will be issued either for a daily (one to three days); monthly; or six-month period. At the District’s discretion, the fee may be adjusted if the quantity of water deviates by more than fifty percent (50%) from the following:
  - Daily Permit                      Limited to 2,500 gallons; or 334 cubic feet
  - Monthly Permit                    Limited to 10,000 gallons; or 1,336 cubic feet
  - Six-Month Permit                Limited to 60,000 gallons; or 8,021 cubic feet
- Unauthorized duplication of keys is prohibited. Keys may not be transferred to or used by unauthorized persons. Keys must be returned in order for the District to refund the key deposit.

Customers taking water from District fill stations must record the START meter reading on the log sheets provided in the fill station boxes PRIOR to withdrawing water and at COMPLETION of withdrawing water. This must be done each time water is withdrawn because someone else may use the fill station in between visits.

- The customer shall utilize only those "Water Fill Stations" specifically designated by the Bulk Water Use Permit.
- Any damage to District facilities or equipment caused by the customer is the responsibility of the customer and will become due and payable to the District immediately and may be deducted from the original deposit. Violation of these regulations or Permit conditions may result in revocation of Permit.
- The customer shall obtain a laminated permit from the District that indicates a Bulk Water Use Permit has been obtained. At any time a water fill station is being used, the customer shall display the laminated permit in a prominent position clearly visible from the street. The customer shall not provide to any other person.



- ❑ Return of the key and final meter readings, so the amount of water withdrawn can be totaled, are required in order to close-out bulk water permits. The water consumption record(s) and key should be returned to District's Water Operations Facility, 3301 Old Hartford Road in Lake Stevens. Following key return and verification of water usage, the key deposit will be refunded by mail unless other arrangements are made.

## **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 benefitted.

An Applicant proposing an extension will normally be responsible for financing the entire cost of such extension. Costs include new facilities, replacement of existing system components when necessary for making the extension or improvement, and upgrades to meet requirements such as current construction standards or fire flow which are associated with the Applicant's project. Over-sizing water system components as outlined below, however, will not in all cases be charged solely 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, public rights-of-way, or have dedicated easements. All water facilities 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 AGM or his/her designee 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 are 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. The Applicant must ensure that the latest version of the Standards and Specifications is followed.

The Standards and Specifications have been developed as professional, technical guidelines for regulating system design and installation. The AGM may modify the Technical Standards and Specifications, from time to time to maintain consistency with changing technology and industry standards. In addition, the AGM 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 Applicant's 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. The contractor shall contact the District Water Operations Facility at (425) 397-3000 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 authorized 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) copies of preliminary plans, showing the location of all water lines, hydrants, and valves needed to serve the area.

Applicants should schedule a meeting with District Engineering 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-11), will be assessed to compensate for review services.

The District will notify the Applicant 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. The District may require additional special requirements such as cross connection control devices or backflow prevention

assemblies. This process will enable an Applicant to estimate more accurately the associated construction costs and District charges.

If fire flow is required, the plan must be approved by the appropriate Fire Marshal. District standards may be more stringent than standards required by local fire jurisdictions, and if there is any conflict between standards, the more stringent standard will apply.

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, as described in Section 3.3 (see Appendix B, Table 11).

#### **3.2.4 Extension Agreement**

If a project is accepted, the Applicant shall then execute with the District an Extension Agreement 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 AGM or his/her designee.

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

At the time the Extension Agreement is submitted, two (2) 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 may include, but are not limited 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 Applicant'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 “Individual Notice of Intent to Perform an Asbestos Project” to the Puget Sound Clean Air Agency, if required. An “Individual Notice of Intent to Perform an Asbestos Project” will generally be necessary for any project which requires the contractor to remove in excess of ten (10) linear feet of asbestos-cement water main. No work on asbestos-cement main 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 required “Individual Notice of Intent to Perform an Asbestos Project,” and the contractor shall file the same with the Puget Sound Clean Air Agency. The cost of asbestos related permits shall be paid by the Applicant’s contractor. A copy of any required permit(s) shall be available at the project site at all times.

The Applicant’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 Applicant, 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 any necessary easements, and to file and record the legal easements prior to District final acceptance, or prepare, obtain and convey all easements to the District at the Applicant’s sole cost.

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

Upon completion of the project, two (2) sets of revised as-built drawings and specifications, an additional set in a digital format compatible with the District’s CAD system (AutoCAD, Microstation, or DXF file), and a pdf copy of the final as-built drawing, 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.

### **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 original stamped drawing is provided which reflects as-built conditions;
- (i) a digital copy of as-built water plan (both CAD file and pdf final drawing) is provided; and
- (j) a "Bill of Sale" is executed and accepted by the District.

The date of the final acceptance letter will begin the period of warranty. The final acceptance shall not constitute acceptance of any unpaid, 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 defective work or materials or for any breach of contract.

In the event that a letter of credit or similar financial instrument has been provided as a means of guaranteeing project completion, at the District's sole option a Conditional Letter of Final Acceptance may be issued prior to full Applicant/contractor compliance with all of the requirements 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 an Applicant 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 GFCs or other fees, or completion of an extension project. However, nothing in this provision shall be interpreted as a requirement that the District accept a Letter of Credit, for any purpose. If a Letter of Credit is used to guarantee payment, the following conditions must be met:

- (a) Payment of a Letter of Credit processing fee to the District (see Appendix B, Table B-11;

- (b) The Letter of Credit must be issued by a financial institution in a form acceptable to the District;
- (c) The Letter of Credit must name the District as sole beneficiary of the funds described therein;
- (d) Expiration of a Letter of Credit without a District draw upon the funds described therein shall not relieve the Applicant from any obligations to the District;
- (e) 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 Applicant shall provide an executed maintenance bond for 10 percent (10%) of the full value of the water facilities installed. Such value shall be determined by the District. The Applicant 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 Applicant shall, within five (5) business days of such payment, reinstate the value of the bond or cash in lieu of bond to an amount equal to 10 percent (10%) 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 Applicant to furnish additional surety to cover any remaining work.

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

The Applicant's contractor who is constructing facilities to be transferred to the District shall agree to indemnify, defend and to hold the District harmless from any and all claims, losses or liability for damages arising from acts done or omissions made under

the contract, to the fullest extent allowed by applicable law. Before commencing work such 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 transfer ownership of all installed water mains and facilities to the District pursuant to a Bill of Sale utilizing a District-approved form. The Bill of Sale shall be signed by the Applicant or its authorized agent. The Bill of Sale shall describe lengths and sizes of water mains, and size and quantities of services and hydrants, and the location in general terms, including the name of the plat if applicable.

The Applicant shall provide the District with all applicable invoices and other information necessary for preparation of the Bill of Sale.

### **3.2.13 Limited Period of Plan Validity**

The District's final plan approval shall be valid for a period of twelve (12) months after the date upon which it is approved for construction. If construction has not commenced by that date, the District's approval of the plan shall lapse and the design and approval shall no longer be effective. Should the Applicant wish to go forward with the extension, a new review of the construction plans will be required to ensure consistency with the existing water system infrastructure and the latest version of the District's policies, standards, and specifications. Any changes to the construction plans shall be made by the Applicant's engineer at the Applicant's sole expense and additional review fees shall apply per Appendix B, Table B-11.

## **3.3 Financing and Fees**

### **3.3.1 Financing Methods**

Main extensions can be paid for in three ways:

- (a) The Applicant 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) For projects involving multiple property owners and developed properties, 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. Upon receipt of payment of the estimated amount due from the Applicant, 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. On jobs where the estimated cost of materials exceeds One Hundred Fifty Thousand Dollars (\$150,000), the District must call for public bids, and award the contract to the lowest responsive bidder.

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

Property owners within a defined area may petition the District's Board of Commissioners for formation of an LUD to finance the extension of water mains to serve their properties. Assessments are levied upon properties benefited by the improvements. All costs and expenses included under RCW 35.44.020, including but not limited to engineering, construction, legal, survey, administrative, overheads, easements, and costs associated with the procurement of all necessary permits and conduct of environmental analysis, are a part of the LUD costs.

The District will prepare a petition at the current cost established in Appendix B, Table B-11 for property owners desiring to initiate the formation of an LUD.

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 of the District shall determine whether or not to form an LUD on the basis of the facts and circumstances pertinent to each particular proposal.

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

Under applicable law, certain properties within the boundaries of an LUD 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.

The LUD process may also be available for financing the costs of water system attachment for certain individual, pre-existing single-family residences not located within or contiguous to an LUD currently undergoing formation. Such process requires participation in a "non-contiguous Local Utility District" available only to owners of single-family residences taking permanent service from an existing District pipeline. In order to qualify for the non-contiguous LUD process, the dwelling to be served must be the residence of the Applicant or of the Applicant's tenant. The determination of whether or not a service can be considered permanent shall be at the District's sole discretion. Any funds payable by the District to a third-party applicant under an applicable latecomer policy or agreement as a consequence of an LUD customer attachment shall be paid only

upon adoption by the Board of Commissioners of the final assessment roll relating to such LUD (see Sec.3.3.9).

### **3.3.3 LUD Assessments**

For an LUD, each property included will pay an assessment established by the LUD process and designed to ensure that 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 GFC, DSC and, at the option of each assessed property owner, a SCC as defined in Section 2.6.2. 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 deadlines in the LUD process 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 and applicable to the affected system, or the LUD assessments, whichever is greater.

Further information can be found in the District's LUD Procedure Manual.

### **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-11) to cover the cost for up to two (2) 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 (Appendix B, Table B-11).

### **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) General Facilities Charge (GFC)

- (b) Distribution System Charge (DSC)
- (c) Service Connection Charge (SCC)

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

**3.3.7 General Facilities Charge (GFC) – See Section 2.6.2**

**3.3.8 Distribution System Charge (DSC) - See Section 2.6.3**

**3.3.9 Reimbursement Using the DSC**

When a New Customer attachment is made to a water distribution main extension or replacement installed and paid for by a third-party, the DSC collected by the District from the New Customer, less five percent (5%) retained by the District for administrative costs, may be paid over to such third-party as a partial reimbursement for costs of that main distribution extension or replacement installation. However, the following provisions shall apply:

- (a) DSCs collected by the District shall be paid by the District to the third-party installer for a period of ten (10) years from the date of acceptance of the subject water main extension or replacement, or until such time as the third-party installer is fully reimbursed for its actual cost of that portion of the water main extension to which the DSC applies, whichever period is shorter. DSCs from New Customers attaching after such period shall be retained by the District.
- (b) Third-party reimbursements shall apply only with regard to water main extensions constructed by such third-party outside the established boundaries of any subdivision or property development for which the main extension was installed. The cost of a water main extension subject to reimbursement under this section shall include all appurtenances required and installed as a part of the water main extension.
- (c) Third-party reimbursements shall be made only for DSCs collected from New Customers whose connection is considered to be permanent by the District. DSCs collected from New Customers whose connection is considered Interim by the District, shall be retained by the District and applied to a future, permanent solution. Refer to Section 3.6 for more information on Interim Connections.
- (d) Reimbursement shall be available only to third parties who have entered into an “Application/Agreement for Private Developer Water System Extension” or a “Distribution System Charge Reimbursement Agreement” with the District, and shall be subject to all applicable policies of the District, including established DSCs.

- (e) Reimbursement shall be required only in situations where the District is reasonably able to locate the third party who installed the new or replacement water main. It is that person's responsibility to provide the District with updated contact information for the Reimbursement Agreement. If with reasonable diligence the District is unable to locate the third party who is entitled to the DSC payment within the ten-year reimbursement period, using information supplied by such person, the District shall retain the DSC, and any claim that person may have for reimbursement shall be extinguished.

### **3.3.10 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**

- (a) The District may require over-sizing or replacement of existing facilities in conjunction with construction of an extension or improvement by an Applicant. Such requirements may apply on, or adjacent to, a development or subdivision, or to facilities that are associated with the development, but "off-site." The sizing required for Applicant-project needs alone will be based upon the District's Standards and Specifications (Appendix A), or upon hydraulic analysis acceptable to the District that has been conducted specifically for a proposed project.
- (b) When a new development or subdivision has frontage on or abuts an existing District main or associated appurtenances (hydrants, pressure reducing valves, blow-off assemblies, air/vacuum relief valves, and water meters), and the District has determined in its sole discretion that any portion or all of such facilities are in need of replacement due to age, condition, substandard size or materials, or due to the likelihood of damage caused by construction of the development or subdivision improvements, the Applicant shall replace such facilities without contribution from the District. If the District has determined in its sole discretion that the development will not impact or cause damage to other existing facilities on frontages from which the development is not taking direct service and the development is not required to make improvements along such frontages by the governmental agency with jurisdiction over the work, the Applicant shall only be required to replace those facilities within the frontage from which it takes service. The Applicant may be entitled to reimbursement for additional customers connecting to the replacement facilities in accordance with Section 3.3.9.
- (c) Any new water system improvements installed for a development and located adjacent to or requiring extensions from an unfunded future proposed District project shown in the District's Water System Plan, and not included in the District's current Capital Improvement Program, shall be installed by the Applicant to sizes shown in the Water System Plan with no over-sizing

contribution from the District. The Applicant may be entitled to reimbursement for additional customers connecting to the subject extension per Section 3.3.9.

- (d) In cases where fire flows required by applicable land use plans have changed since the construction of the existing main, the Applicant will be responsible for the cost of upgrading the existing main to meet required flows established in the District's Standards and Specifications for Design and Construction or the current flow required by the local fire prevention authority, whichever is greater.
- (e) Notwithstanding anything else in this Section, in the event that application of this policy would require the Applicant to install a replacement main that in the determination of the District in its sole discretion should be installed at a later date or in conjunction with a different project, the Applicant shall pay to the District in lieu of installation of such replacement main a DSC in an amount as determined in Appendix B, Tables B-4 and B-5. Such sum shall be held by the District for partial reimbursement to a third party of its costs of later installation of any replacement main that would otherwise have been required under this Section. The DSC shall be utilized by the District as provided in Section 3.3.9; however, should the District later install the replacement main at its cost, then the District shall apply the DSC against its replacement main installation cost.
- (f) If:
  - 1) the District requires a) over-sizing of a main fronting the development or adjacent thereto (i.e., "off-site"); or b) replacement of a main which is "off-site" but is adjacent to the development; and
  - 2) in the District's sole opinion such improvement can be conveniently completed in conjunction with other system improvements required of the Applicant under these policies to accommodate District needs associated with but not directly resulting from the development;

then in such event the District may, at its option, participate in the associated construction costs. The following guidelines will apply when the District requests such improvements and agrees to participate in payment of costs of over-sizing or replacement of facilities:

- (i) Upon receiving an application for an extension or an improvement, the District will determine if over-sizing or replacement of District facilities is best accomplished in conjunction with construction of the proposed development. The District's Water System Plan, the applicable land use plan, and existing system deficiencies will be the primary factors in making this determination.
- (ii) If over-sizing or replacement of such facilities is required, a pre-established reimbursement amount and time for reimbursement shall be negotiated between the District and the Applicant and included in the Extension Agreement.

- (iii) The amount of reimbursement for over-sizing will be based generally on the following:
  - (1) Mains:
    - A. For pipes up to 4 inches larger in diameter than the District's design standard for the development/lot - reimbursable costs will consist of material cost differences for pipe, valves, and fittings.
    - B. For pipes greater than 4 inches larger in diameter than the District's design standard required to serve the development/lot - reimbursable costs will include increased material and construction costs (e.g. cost differentials for larger components, increased excavation, special bedding, testing, cleaning, etc.).
  - (2) Other Facilities: Contributions for providing larger or replacement facilities will be conducted on a case-by-case basis and are subject to negotiations between the District and the Applicant.
- (iv) The methodology of reimbursement will be selected by the District at its sole discretion, and will be included in the Extension Agreement. Reimbursement 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 reimbursement in lump sum or by installment.
  - (4) A combination of the above.
- (v) 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 by the District 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, Applicants will be required to extend water mains along frontages associated with parcels, subdivisions, or developments. At the District's discretion, an Applicant may also be required to extend a main across the

property being developed to facilitate looping of the system (per Section 3.4.3), in addition to extension along one or more frontages. In individual cases, the requirements for length and location of mains along such frontages shall be guided by the District's Water System Plan. Depending on the circumstances, reimbursement may be available following main installation, under the District's policies for the Distribution System Charge (see Section 3.3.9).

Applicants will normally be required to install a main along the entire length of any and all general use (open generally to the development residents and their guests and invitees, whether or not deemed "private") roads or developed public rights-of-way abutting the property being developed and from which the development takes water service. If the District has determined in its sole discretion that the development will not impact or cause damage to other existing District facilities on frontages from which the development is not taking direct service and the development is not required to make improvements along such frontages by the governmental agency with jurisdiction over the work, the Applicant shall only be required to replace facilities within the frontage from which it takes service.

In cases where the development's permanent access and permanent water utility distribution service line are not taken from the same general use road or public right-of-way, the location of the permanent distribution service connection, as determined at the sole discretion of the District, shall be the frontage along which the District main will be extended.

At the District's option, the requirement for extension along a frontage 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 the Applicant's property.

### **3.4.3 Looping**

Looping of water mains, at Applicant cost, may be required in order to satisfy pressure, fire flow, and system hydraulic requirements. In addition, looping may be desirable to promote system reliability and water quality. 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 Water System 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 Applicant 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 Applicant's responsibility will be determined by the District on a case-by-case basis.

#### **3.4.4 Water System Fire Flow Requirements**

Water system lines and extensions installed pursuant to other Sections of this Policy to serve a new development shall be sized in accordance with the District's Standards and Specifications for Design and Construction. Such standards are based upon sound engineering and operational practices and shall provide to all new development lots not less than the following fire flows, or shall be at the level required by the local fire prevention authority, whichever is greater:

<u>Lot Size</u>	<u>Fire Flow Requirements</u>
a) Less than 1 acre	1,000 gpm
b) Multi-family/commercial/industrial	1,500 gpm

For purpose of evaluating the sufficiency of fire flows, a "cluster development" shall be evaluated according to the effective size of the building lots, based upon the relative distances between residential construction.

#### **3.4.5 Water System Flow Standards Not Altered by Sprinkler Systems**

The District supports the local fire jurisdictions requirements for residential fire protection sprinkling systems. However, such systems will not provide 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 main extensions and taps to the District's water system shall be installed only by a licensed contractor approved in advance 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 or guarantee by the District as to the said contractor or its workmanship, nor shall such approval relieve the customer or the contractor of their individual responsibility to comply in all respects with District policies and specifications.

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

The Applicant 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 AGM 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 the District personnel, with material supplied by the Applicant, 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-12).

### **3.5.6 Service Equipment**

If the Applicant is also constructing houses and will construct and complete houses at a rapid rate, the District, at its option, may require the Applicant 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 AGM or his/her designee shall have the authority to allow an interim connection and administer an Interim Connection Agreement (ICA). The customer shall pay all of the costs and expenses associated with obtaining interim water service.

### **3.6.2 Interim Connection Agreement (ICA)**

Any interim connection will require an (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 and fees and charges associated with the initial installation of the temporary meter and the future abandonment of the temporary meter.

### **3.6.3 Fees and Charges**

Prior to execution of the ICA by the District, the customer shall pay an Interim Connection Agreement Fee, Permit Fee, Service Connection Charge for installation of the temporary meter, a Service Connection Charge for the future installation of the permanent meter (which includes the cost of installing a new meter and other facilities or equipment necessary to connect to the District's main if and when a main is installed abutting the property), and a Meter Abandonment Fee (which includes the cost of removing the temporary meter connection and disconnecting the service at the District's main). These fees are described in Appendix B.

Prior to execution of the ICA by the District, the Applicant shall also pay the applicable GFC, DSC, and the cost to install a PRV (if necessary). These costs and fees are described in Appendix B.

### **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**

Whenever a property temporarily served pursuant to an ICA can receive permanent service by connection to a newly extended District water main abutting the property, the ICA will be terminated. The cost of relocating the temporary meter connection to the permanent location is included in the fees and costs paid by the customer upon initiation of the ICA. Relocation of the temporary meter connection to the permanent location may result in temporary loss of service. The customer will also be required to extend their personal water service line from the new location of the permanent meter to the home at their cost within sixty (60) days of receiving written notice from the District.

# 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 Snohomish County (County). 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 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 County. 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 of 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 county 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's Water Utility 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 water system 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, Snohomish Health District, 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 AGM or his or her designee 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 shall 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) After a review of the full feasibility study is conducted with the owner(s)/customers of the existing systems, the request for service may be withdrawn, or with the assistance of the District, proceedings to transfer ownership may be initiated.
  - (f) Improvements required to upgrade the system to District standards (particularly those associated with water 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, Snohomish Health District, and the District prior to transfer of ownership.

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

A completed full feasibility study, together with the recommendations of Water Utility staff, shall 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 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) The applicant 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 study 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 by the District, 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 AGM or his or her designee 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 County. 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:

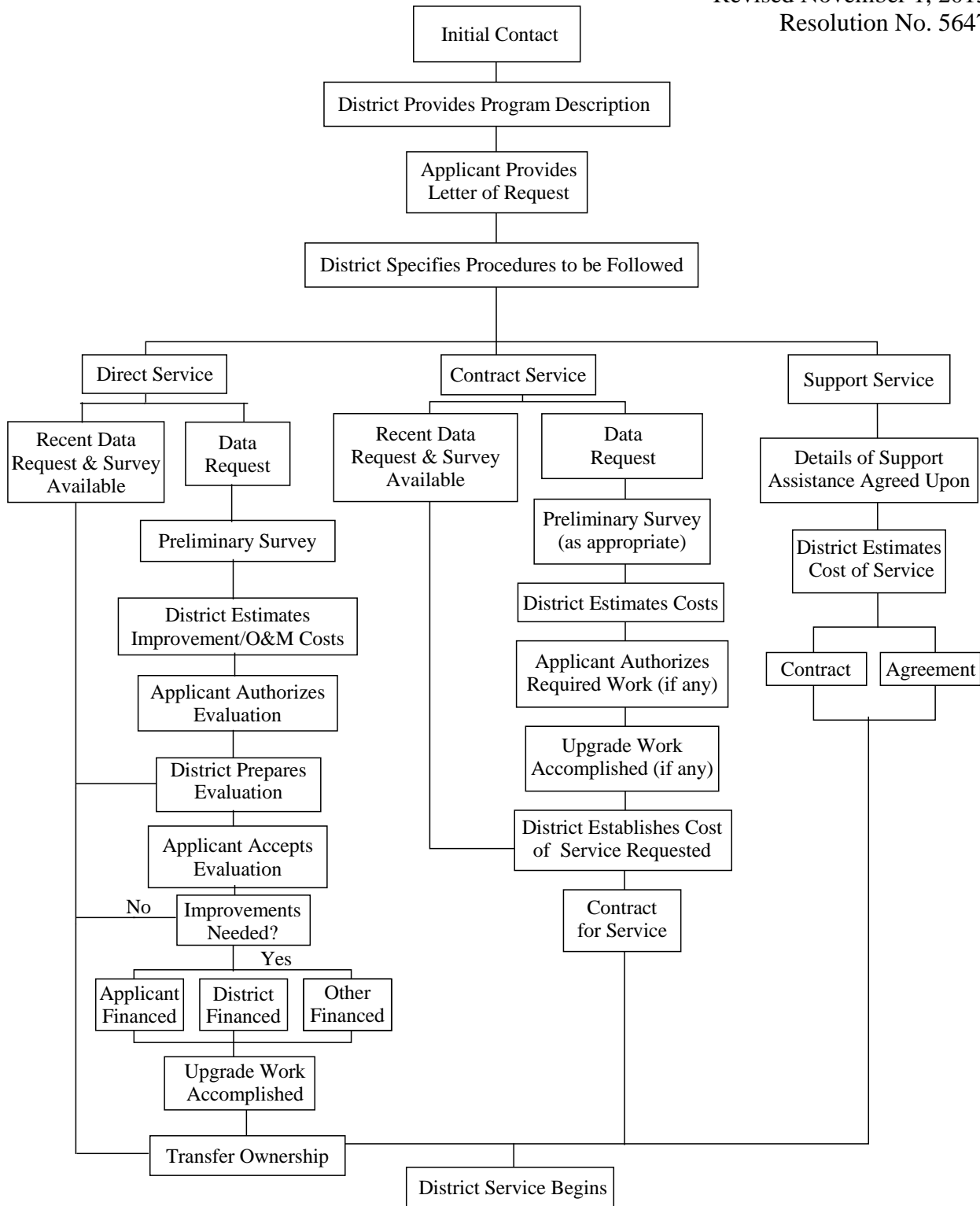
- Leadership and support to smaller utilities to ensure that its views are considered in formulating local and state regulatory actions.
- Administration of programs for joint purchasing of equipment and supplies to achieve economies of scale for smaller utilities.
- Provide technical support programs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

#### **4.4.1 Conditions**

The Support Assistance Program relationship is one that will not impact 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 AGM or his or her designee shall have the authority to execute a contract or agreement for support assistance, on behalf of the District.



**Exhibit 4-1 Satellite System Program Service Application and Review Procedures**

**Table B-1**  
**Service Connection Charge <sup>(1,2)</sup>**

Meter Size	Meter Installation <sup>(2)</sup>	Meter Drop Only	PRV
3/4	\$1,355	\$190	\$280 <sup>(3)</sup>
1	\$1,520	\$265	\$280 <sup>(3)</sup>
1½	Actual Cost	\$560	
2	Actual Cost	\$640	

**Footnotes:**

- <sup>(1)</sup> Applicability: applies to all new customers connecting to a PUD facility, and all existing customers requesting additional service work (See Section 2.6).
- <sup>(2)</sup> Plus applicable City or County fees.
- <sup>(3)</sup> Applies only when done concurrent with new service installation. If not done concurrently, charge is based on actual costs.

**Table B-2**  
**General Facilities Charge (GFC) <sup>(1)</sup>**

System	GFC <sup>(2)</sup>
Integrated System	
Paid at Time of Conveyance	\$3,645/ERU
Paid at Time of Lot Sale/Service Connection <sup>(3)</sup>	\$4,125/ERU
Satellite and Remote Systems (Sunday Lake & Storm Lake Ridge)	
Paid at Time of Conveyance	\$5,915/ERU
Paid at Time of Lot Sale/Service Connection <sup>(3)</sup>	\$6,685/ERU

**Footnotes:**

- <sup>(1)</sup> For applicability, see Section 3.3.
- <sup>(2)</sup> See Table B-3 for ERU determination.
- <sup>(3)</sup> Applies only to lots in developments whose bill of sale was accepted by the District after August 31, 1998, where the Developer chose to defer payment responsibility to the property owner at the time of service connection.

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**Table B-3**  
**ERU Determination**

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<b>Customer Class</b>	<b>ERU</b>
Single-Family Residential Dwelling Unit	1 ERU
Multi-Family Residential Dwelling Unit	0.778 ERU
Commercial/Industrial	
¾-inch meter	1 ERU
1-inch meter	2.5 ERU
1½-inch meter	5 ERU
2-inch meter	8 ERU
3-inch meter	1 ERU per 0.55 gpm estimated peak day demand <sup>(1)</sup>
4-inch meter	1 ERU per 0.55 gpm estimated peak day demand <sup>(1)</sup>
6-inch meter	1 ERU per 0.55 gpm estimated peak day demand <sup>(1)</sup>
8-inch meter	1 ERU per 0.55 gpm estimated peak day demand <sup>(1)</sup>

**Footnotes:**

<sup>(1)</sup> Estimated demand to be determined by the District, based on comparable facilities and information provided by the Applicant or Customer.

**Table B-4**  
**Distribution System Charge (DSC) <sup>(1)</sup>**

Category	Responsible for Payment	DSC
Single-Family Residential (excluding Satellite, and other LUD Systems with specific DSC rates identified in Table B-5)		
Subdivision (Long or Short Plat)	Developer	\$38.00/front foot <sup>(2)</sup>
Individual Parcel	New Customer	\$4,210/parcel
Multi-Family Residential (Duplex Lot)	Developer or New Customer	\$4,210/parcel
Multi-Family Residential (3 or more connections)	Developer or New Customer	\$38.00/front foot <sup>(2)</sup>
Commercial or Industrial (Multiple Parcel/Single Facility - Strip Malls, Large Scale)	Developer or New Customer	\$38.00/front foot <sup>(2)</sup>
Commercial or Industrial (Individual Parcel/Single Facility, Small Scale)	Developer or New Customer	\$38.00/front foot <sup>(3)</sup>

**Footnotes:**

- <sup>(1)</sup> Applicability: (See Section 2.6.3)
- <sup>(2)</sup> Total length, measured in feet, of all subdivision or parcel boundaries that front on a public right-of-way that contains an existing PUD main, or that will require a District main based on the PUD's Comprehensive Water Plan.
- <sup>(3)</sup> Total length, measured in feet, of the individual parcel that fronts on a public right-of-way that contains an existing District main per Section 3.4.2. In the event the parcel abuts more than one road or public right-of-way, the DSC front footage shall be calculated based upon the side of the parcel that abuts a road or public right-of-way from which the parcel takes permanent access and from which the permanent service line is installed. In cases where the permanent access and permanent service line are not taken from the same road or public right-of-way, the location of the permanent service, as determined at the sole discretion of the District, shall be the side from which the DSC's are calculated. The PUD shall be the sole arbiter in determining whether or not the Commercial or Industrial Facility shall be deemed Small Scale.



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**Table B-5**  
**Distribution System Charge (DSC) <sup>(1,2)</sup>**  
**Exceptions from the Standard DSC for Satellite and other LUD Systems**

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<b>Service Category</b>	<b>DSC (\$)</b>
Single-Family Residential, Within Acquired and LUD Systems	
Getchell Park	\$4,655/connection
Ray Gray Road (non-assessed)	\$5,525/connection
Ray Gray Road (proportionately assessed) DSC Credit to full non-assessed DSC above	(\$2,310)/connection \$3,055/connection
Other Future Systems	*

**Footnotes:**

- <sup>(1)</sup> Applicability: (see Section 2.6.3)
- <sup>(2)</sup> DSC for LUD's calculated from original Distribution portion of Assessment.  
These numbers shall be used (with no annual adjustment) until the DSC as identified in Table B-4 is equal to or greater than the DSC shown herein. At such time, the DSC from Table B-4 shall be used and the DSC number shall be removed from Table B-5.
- \* To be determined case-by-case, on average cost per lot basis.

**Table B-6**  
**Water Service Rates and Charges - Single Family <sup>(1,2)</sup>**

Description	Monthly Customer Charge	Commodity Rate	Unmetered Monthly Rate	Monthly Surcharge
General Rates and Charges	\$23.33	\$3.57/CCF	\$59.09	N/A
Special Rates and Charges				
Lake Roesiger <sup>(3)</sup>	\$23.33	\$3.57/CCF	\$67.49 <sup>(3)</sup>	N/A
Dubuque <sup>(5)</sup>	\$23.33	\$3.57/CCF	\$69.09 <sup>(4)</sup>	10.00 <sup>(5)</sup>
Booster Facilities <sup>(6)</sup>	\$23.33	\$3.57/CCF	N/A	N/A
Machias Ridge East <sup>(7)</sup>	\$23.33	\$3.57/CCF	\$90.28 <sup>(4)</sup>	31.19 <sup>(7)</sup>
T Marks/Joywood <sup>(8)</sup>	\$23.33	\$3.57/CCF	\$89.09 <sup>(4)</sup>	30.00 <sup>(8)</sup>
Kayak Estates Water System <sup>(9)</sup>	\$23.33	\$3.57/CCF	\$79.09 <sup>(4)</sup>	20.00 <sup>(9)</sup>
Cascade Acres <sup>(10)</sup>	\$23.33	\$3.57/CCF	\$89.09 <sup>(4)</sup>	30.00 <sup>(10)</sup>
Warm Beach <sup>(11)</sup>	\$23.33	\$3.57/CCF	\$94.09 <sup>(4)</sup>	35.00 <sup>(11)</sup>

**Notes:**

CCF = 100 Cubic Feet

N/A = Not Applicable

**Footnotes:**

- <sup>(1)</sup> Single-family applications shall include single-family residential units; and duplexes and multiple-family residential customers with individual meters to each unit.
- <sup>(2)</sup> Rates are subject to proportional increases to compensate for any gross revenue tax imposed by any municipal body upon the District.
- <sup>(3)</sup> An additional charge of \$0.84/CCF is charged to Lake Roesiger residents, for septic tank pumping.
- <sup>(4)</sup> Includes monthly surcharge.
- <sup>(5)</sup> Surcharge ends: July 1, 2026 (Refer to Resolution 4482)
- <sup>(6)</sup> This schedule will be on limited accounts (see 2.3.11 Booster Facilities).
- <sup>(7)</sup> Surcharge ends: April 1, 2022 (Refer to Resolution 4915)
- <sup>(8)</sup> Surcharge ends: August 1, 2028 for Joywood & March 1, 2018 for duplex units metered individually. (Refer to Resolution 5087)
- <sup>(9)</sup> Surcharge ends: November 18, 2026 (Refer to Resolution 5271, plus delay due to actual ownership transfer date)
- <sup>(10)</sup> Surcharge ends: December 31, 2034 (Refer to Resolution 5657)
- <sup>(11)</sup> Surcharge ends: September 13, 2038 (Refer to Resolution 5864)

**Table B-7**  
**Water Service Rates and Charges - Multiple Family**<sup>(1,2)</sup>

<b>Description</b>	<b>Monthly Customer Charge</b>	<b>Commodity Rate</b>	<b>Monthly Surcharge</b>	<b>Septic Pumping Charge</b>
General Rates and Charges	\$24.01	\$3.47/CCF	N/A	N/A
Special Rates and Charges				
Lake Roesiger <sup>(4)</sup>	\$24.01	\$3.47/CCF	N/A	\$0.84/CCF
Dubuque <sup>(3)</sup>	\$24.01	\$3.47/CCF	\$10.00 <sup>(3)</sup>	N/A
West Machias <sup>(5)</sup>	\$24.01	\$3.47/CCF	\$30.00 <sup>(5)</sup>	N/A
Kla-Ha-Ya <sup>(6)</sup>	\$24.01	\$3.47/CCF	\$30.00 <sup>(6)</sup>	N/A
Kayak Estates Water System <sup>(7)</sup>	\$24.01	\$3.47/CCF	\$20.00 <sup>(7)</sup>	N/A
Cascade Acres <sup>(8)</sup>	\$24.01	\$3.47/CCF	\$30.00 <sup>(8)</sup>	N/A
Warm Beach <sup>(9)</sup>	\$24.01	\$3.47/CCF	\$35.00 <sup>(9)</sup>	N/A

**Notes:**

CCF = 100 Cubic Feet

N/A = Not Applicable

**Footnotes:**

- <sup>(1)</sup> Multiple-family applications shall include duplexes, triplexes, and other multiple-family residential customers of two units or more, metered through one meter.
- <sup>(2)</sup> Rates are subject to proportional increases to compensate for any gross revenue tax imposed by any municipal body upon the District.
- <sup>(3)</sup> Surcharge ends: July 1, 2026 (Refer to Resolution 4482)
- <sup>(4)</sup> An additional charge of \$0.84/CCF is charged to Lake Roesiger residents for septic tank pumping.
- <sup>(5)</sup> Surcharge ends: November 1, 2025 (Refer to Resolution 5087)
- <sup>(6)</sup> Surcharge ends: February 1, 2025 (Refer to Resolution 5087)
- <sup>(7)</sup> Surcharge ends: November 18, 2026 (Refer to Resolution 5271, plus delay due to actual ownership transfer date)
- <sup>(8)</sup> Surcharge ends: December 31, 2034 (Refer to Resolution 5657)
- <sup>(9)</sup> Surcharge ends: September 13, 2038 (Refer to Resolution 5864)

**Table B-8**  
**Water Service Rates and Charges - Commercial/Industrial** <sup>(1,2)</sup>

Description	Monthly Customer Charge	Commodity Rate	Monthly Surcharge	Monthly Septic Pumping Charge
General Rates and Charges	\$52.18	\$3.37/CCF	N/A	N/A
Special Rates and Charges				
Lake Connor Park	\$98.09	\$3.97/CCF	N/A	N/A
Lake Roesiger <sup>(3)</sup>	\$52.18	\$3.37/CCF	N/A	\$0.84/CCF
Kayak Estates Water System <sup>(4)</sup>	\$52.18	\$3.37/CCF	20.00 <sup>(4)</sup>	N/A
Warm Beach <sup>(5)</sup>	\$52.18	\$3.37/CCF	35.00 <sup>(5)</sup>	N/A

**Notes:**

CCF = 100 Cubic Feet

N/A = Not Applicable

**Footnotes:**

<sup>(1)</sup> Commercial or industrial occupants, including governmental and institutional occupants.

<sup>(2)</sup> Rates are subject to proportional increases to compensate for any gross revenue tax imposed by any municipal body upon the District.

<sup>(3)</sup> An additional charge of \$0.84/CCF is charged to Lake Roesiger customers for septic tank pumping.

<sup>(4)</sup> Surcharge ends: November 18, 2026 (Refer to Resolution 5271, plus delay due to actual ownership transfer date)

<sup>(5)</sup> Surcharge ends: September 13, 2038 (Refer to Resolution 5864)



**Table B-9**  
**Wholesale Water Service <sup>(1,2)</sup>**

	Monthly Customer Charge	Commodity Rate
Twin Falls/Seymours <sup>(3,4)</sup>	\$52.18	\$3.37/CCF <sup>(5)</sup>

**Notes:**

CCF = 100 Cubic Feet

**Footnotes:**

- <sup>(1)</sup> Available only for wholesale water service for resale by a wholesale customer to its retail water customers.
- <sup>(2)</sup> Rates are subject to proportional increases to compensate for any gross revenue tax imposed by any municipal body upon the District.
- <sup>(3)</sup> Water will be supplied through one master meter.
- <sup>(4)</sup> Wholesale service to Twin Falls/Seymours is subject to terms as defined in the Wholesale Water Agreement between the District and Twin Falls/Seymours, as amended from time to time, including, but not limited to, Section 2 thereof.
- <sup>(5)</sup> The actual rate for each year will be based on the District's Water Commercial/Industrial Rate as described in Section 3 of the Wholesale Water Agreement with Twin Falls/Seymours.

	Monthly Customer Charge	Commodity Rate
Sudden View/Blue Rock Water Co./Iliad <sup>(3,4)</sup>	\$52.18	\$3.37/CCF <sup>(5)</sup>

**Notes:**

CCF = 100 Cubic Feet

**Footnotes:**

- <sup>(1)</sup> Available only for wholesale water service for resale by a wholesale customer to its retail water customers.
- <sup>(2)</sup> Rates are subject to proportional increases to compensate for any gross revenue tax imposed by any municipal body upon the District.
- <sup>(3)</sup> Water will be supplied through one master meter.
- <sup>(4)</sup> Wholesale service to Sudden View/Blue Rock Water Co./Iliad is subject to terms as defined in the Wholesale Water Agreement between the District and Sudden View/Blue Rock Water Co./Iliad, as amended from time to time, including, but not limited to, Section 2 thereof.
- <sup>(5)</sup> The actual rate for each year will be based on the District's Water Commercial/Industrial Rate as described in Section 3 of the Wholesale Water Agreement with Sudden View/Blue Rock Water Co./Iliad.

**Table B-10  
Miscellaneous Fees**

1	Account Service Charge	\$15
2	Disconnect Fee (Due to customer request or non-payment)	\$40
3	Same Day Reconnect During Business Hours*	\$80
4	Next Day Reconnect During Business Hours*	\$40
5	Key Box Installation	\$150
6	Returned Check Charge	\$20
7	Late Payment	\$10
8	Damage and Security Deposit for temporary water service (physical water service)	\$500
9	Security Deposit for Residential Water Accounts	\$60
10	Damage and Security Deposit Interest	Current Rate
11	Meter Abandonment/Removal Fee**	\$1,530**
12	Records Research Charge	Actual Cost
13	Meter Water Test	Actual Cost
14	Crew/Serviceman Standby (Customer Request)	Actual Cost
15	Damage from Addition of New Equipment	Actual Cost
16	Damage to District Property	Actual Cost
17	Disconnection, Non-routine	Actual Cost
18	Recording Fees	Actual Cost
19	Temporary Construction Fill Station	\$900
20	Bulk Water Use Deposit (Key)	\$275
19	Bulk Water Use Fee	
	Daily Permit, Limited to 2,500 gallons; or 334 cubic feet	\$35
	Monthly Permit, Limited to 10,000 gallons; or 1,336 cubic feet	\$75
	Six-Month Permit, Limited to 60,000 gallons; or 8,021 cubic feet	\$300
22	After-Business Hours* Service Call	Actual Cost
	Customer Equipment Failure, Customer Request to Repair	Minimum \$150
23	After-Business Hours* Connection for New Customer	\$150
	<b>(plus Account Service Charge)</b>	\$15
22	After-Business Hours* Reconnection – Water	\$150

\* Regular Business Hours: 8:00 a.m. to 5:30 p.m., Monday through Friday, excluding weekends and holidays.

\*\*Subject to automatic annual adjustment based upon the change ratio of the Engineering News Record Construction Cost Index for the Seattle Area as reported on a November-to-November calendar basis.

**Table B-11  
Engineering Service Fees**

Plan Review Fee - Two (2) Reviews	
Residential	\$250
Non-residential	\$1,000
Letter of Credit Processing Fee (for developer extensions)	\$200
Extension Agreement Fee	\$30/ERU
Booster Pump Agreement Fee	\$25
County Right-of-Way Permit Fee	\$100
Interim Connection Agreement Processing Fee	\$100
LUD Petition Fee	\$100
LUD Administration Charge	\$200
LUD Feasibility Study	Actual Cost
Non-standard Services	Actual Cost
Satellite System Preliminary Feasibility Study	Actual Cost
Satellite System Full Feasibility Study	Actual Cost
Water Availability Letter	
General	\$25
Fire Flow Model	\$200
Fire Flow Test	\$300

**Table B-12  
Standard Penalties**

Unauthorized Taking of Water	Minimum of \$200
Tampering with Equipment	Minimum of \$200
Unauthorized Valve Operation	Minimum of \$200
Tapping Main without Advance Notification	Minimum of \$200
Customer Self-Connection or Reconnection	\$200
Unauthorized Use of District Fire Hydrant	\$200
Unauthorized Use of District Fill Station	\$200
Meter Access	\$250



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# Snohomish County PUD No. 1, Water Utility Standards and Specifications for Design and Construction

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Snohomish County PUD No. 1  
3301 Old Hartford Road  
Lake Stevens, WA 98258  
(425) 397-3000



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# Snohomish County PUD No. 1, Water Utility

## Standards and Specifications for Design and Construction

---

### **1.0 Introduction**

This Section outlines the general and specific construction requirements for water systems operated and maintained by or for Snohomish County PUD No. 1 (DISTRICT).

### **2.0 Design Standards**

#### **2.1 Water Source Development**

##### **2.1.1 Water Source Construction**

New water sources must be designed to meet the Department of Ecology (Ecology) and DOH regulations and design guidelines. Reference documents include but not limited to RCW 18.104, Water Well Construction, administered by DOH; WAC 173-160, Minimum Standards for Construction and Maintenance of Water Wells, administered by Ecology; and WAC 246-290 or 246-291, regulations regarding the health aspects of public water system, as administered by DOH.

All test and production wells must be drilled in accordance with detailed drilling and testing specifications, which have either been prepared by, or approved by the DISTRICT.

All new groundwater sources shall be provided with an access port for insertion of devices to measure depth to water and a meter to measure total production.

##### **2.1.2 Water Rights**

Water rights must be obtained in accordance with Ecology regulations and procedures. Water rights documents,



correspondence, and other associated records will be maintained by the DISTRICT.

### **2.1.3 Water Quality**

Water quality must be proven to conform with the Federal Safe Drinking Water Act (as amended); DOH criteria specified in WAC 246-290 for Group A systems; DOH criteria specified in WAC 246-291, for Group B systems; and/ or any additional requirements of the Snohomish Health DISTRICT.

The DISTRICT reserves the right to reject any source whose water quality does not meet these criteria, or sources having excessive costs associated with treatment requirements.

## **2.2 Transmission, Storage, and Distribution**

### **2.2.1 Pipe Materials**

The DISTRICT'S standard material for water mains is AWWA C151 ductile iron Class 52, meeting the criteria specified in these Standards and Specifications. Should soil testing determine that the surrounding soils are corrosive, or should a ground survey indicate stray electrical current is present, the DISTRICT may require that the ductile iron pipe be encased in 8-mil thick polyethylene per ANSI/AWWA C105 prior to backfill. Pipe materials other than ductile iron shall be allowed only at the discretion of the DISTRICT.

If allowed, buried polyethylene pipe shall be fusion-welded joints and PVC pipe shall use gasketed joints. Pipe used above grade or in vaults shall be ductile iron or brass whenever practical. PVC pipe shall not be used above grade for any pressure applications. Copper tracer wire shall be installed over all nonmetallic pipes. Tracer Wire shall be AWG 12/1 Gauge (Gage Size 12, One Conductor Solid Copper), Underground UL Rated for Direct Burial (typical of all tracer wire required by District).

PVC or polyethylene pipe shall not be used in soils with existence of or potential for hydrocarbon contamination. Ductile iron pipe used in such soils shall use Nitrile gaskets.

## 2.2.2 Pipe Sizing

All water pipe shall be sized based on the minimum standard established below or larger as determined by the hydraulic (pressure and velocity) requirements of the water system using domestic and fire demands which may be reasonably expected over the life of the pipe. Final approval of water pipe sizing shall rest solely with the DISTRICT'S Engineering Senior Manager.

Extensions and replacements to and within the DISTRICT'S system shall be sized whichever is the more stringent of:

1. To provide at least 40 psi, during peak hourly design flow conditions, at every service connection (meter) point throughout the distribution system; and
2. To provide at least 20 psi, during fire flow at maximum day demand with the fire suppression and equalizing storage depleted, at all points throughout the distribution system. Fire flow shall be per DISTRICT policy or as required by the governing body or bodies with jurisdiction over the work, which ever is greater); and
3. To flow water no faster than 8 fps under the conditions stated in condition (1) and (2) above.
4. Water mains shall be a minimum of 8-inch CL 52 ductile iron on all public and private right-of-ways and where future looping is anticipated by the DISTRICT within  $\frac{1}{2}$  mile. Water mains shall be a minimum of 12-inch CL 52 ductile iron on all public and private right-of-ways where future looping is ***NOT*** anticipated within  $\frac{1}{2}$  mile. Four-inch CL 52 ductile iron will be allowed on dead-end runs less than 300 Lf. in length where looping is not anticipated and where it is in accordance with the governing fire flow requirements. Sizing of mains smaller or of different materials shall be allowed only at the sole discretion of the DISTRICT.
5. All 8-inch and larger water mains shall be capable of providing not less than 500 gpm flow for operational flushing while maintaining 30 psi residual at all points in the system.

6. Water main sizing shall be in accordance with the DISTRICT'S current Water System Plan and the DISTRICT'S 20-year Capital Improvement Program.

### **2.2.3 Pipe Layout**

All water pipe shall be designed to lie in public road right-of-way, or if not available, on a dedicated, recorded utility easement. Permanent easements shall be a minimum of 20 feet in width. Trench layout shall be designed in such a way to accommodate the standard trench depth. All pipe shall maintain a positive or negative slope between respective high and low points in the waterline; high points shall be fitted with air-vacuum release assemblies. Every high point greater than three pipe diameter where the pipeline converts from a positive grade to a negative grade requires an air vacuum release valve. In addition, it is required (unless directed otherwise by PUD engineering) that air valves be installed every half mile or 2500 feet on straight horizontal runs (AWWA M51). All dead ends (and low points if required) shall be fitted with flushing assemblies. All layouts by private consultants shall be reviewed and approved by the DISTRICT for conformance with these and other requirements prior to issuance of final construction documents.

### **2.2.4 Storage Facilities**

Minimum storage requirements are based on the components listed below:

- (a) Operational storage is the storage volume devoted to supplying the water system under normal operation when sources of supply are in the "off" status. Generally, a 3-foot operating band is designated for operational storage in each of the DISTRICT'S storage facilities.
- (b) Equalizing storage is needed to meet peak hourly demands in excess of the DISTRICT'S supply capacity, which is designed to provide peak day demands. Based on typical diurnal variation in demands, the required equalizing storage is 22.75 percent of the peak day demands served by each storage facility. The bottom elevation of the equalizing storage volume should maintain at least 40 psi throughout the zone served by the tank during the peak hour demand.
- (c) Standby storage is equal to two times the average day demands served by each storage facility. When a tank is served by multiple

reliable wells, standby storage can be reduced to the volume needed for two average days with the largest producing well out of service. The bottom elevation of the standby storage volume should maintain at least 20 psi throughout the zone served by the tank during an average day demand.

- (d) Fire storage is based on the maximum design fire flow and duration for the zone served by the tank. This volume may be split between multiple tanks located within the same pressure zone. The bottom elevation of the fire storage should maintain at least 20 psi throughout the zone served by the tank during the design fire flow plus maximum day demand. Fire storage can be nested with the standby storage volume.
- (e) Dead storage is any volume at the bottom of the tank that cannot provide a minimum of 20 psi to the highest customer fed by gravity from the tank or through a booster pump station with backup power.

### **2.2.5 Pressure Requirements**

Water systems shall be designed to maintain a minimum residual pressure of 40 psi at meter outlets under peak hourly design flow conditions, excluding fire demand. Furthermore, water systems shall be hydraulically designed to provide service connections with a pressure range of 40-100 psi.

### **2.2.6 Pressure Reducing Stations**

Pressure reducing valve installations will utilize the DISTRICT'S standard for all sizes of installations. The typical installation consists of a main line PRV, with smaller diameter bypass PRV with flow and test ports; a pressure relief valve; and a complete PRV bypass. Refer to the DISTRICT'S standard details for further information.

### **2.2.7 Fire Flow**

All DISTRICT facilities will be designed and constructed to meet or exceed the requirements of the local fire prevention authority or the DISTRICT minimum standards shown below, whichever is greater. For water systems requiring fire flow capability, the design shall be adequate to maintain, under fire flow conditions plus maximum day demand with the fire suppression and equalizing storage depleted, a minimum of 20 psi residual at all

points throughout the distribution system as per WAC 246-290-230 requirements.

<u>Lot Size</u>	<u>Flow Requirement</u>
a) Less than 1 acre	1,000 gpm
b) Multi-family/commercial/industrial	1,500 gpm

***A “cluster development” shall be evaluated according to the effective size of the building lots, based upon the relative distances between residential construction.*** Modifications to this requirement are permitted if approved by the DISTRICT, at its sole discretion.

## **2.2.8 Fire Hydrant Spacing**

For developments requiring 500 gpm minimum operational flows, fire hydrants shall be spaced at 1200’ intervals with no lot further than 600’ from the nearest hydrant. For developments requiring fire flow as noted in section 2.2.7 above fire hydrant spacing shall be 600’ with no lot further than 300’ from the nearest hydrant or as determined by the local fire prevention authority, whichever is more stringent.

## **2.2.9 Valve Placement**

At the discretion of the DISTRICT, valves may be installed at any crosses or tees. The number of valves at each intersection shall equal the number of connecting lines. In addition, unvalved water mainline lengths of pipe shall not exceed 600 feet in school, commercial, or multi-family areas, and 1200 feet in other-service areas.

## **2.2.10 Water and Sewer Line Separation**

Transmission and distribution water piping shall be separated at least 10 feet horizontally from waste disposal piping, drain fields, and/or waste water gravity or forced mains. The bottom of the water main shall be 18 inches above the top of the sewer component. All parallel and crossing installations of water and sewer lines shall be in accordance with the latest revisions of the WAC and Department Ecology criteria for septic system and sewage works design.

## 2.2.11 Pump Stations

Main supply and booster pump stations will be designed consistent with the site conditions; i.e., above ground, masonry or wood frame structure with metal roof; in vault, in-line submersible turbine; or buried, steel pre-fabricated and assembled. Where appropriate, previous pump station designs will be duplicated with appropriate changes, thus minimizing design time and overall construction costs.

Pump systems serving an area with reservoir storage shall be sized to refill the reservoir(s) in 72 hours while meeting maximum day demands. Pump systems serving an area without storage shall be sized to provide at least peak hour demands. Maximum day demands and peak hour demands shall be based on the build-out of the area to be served, as determined by the DISTRICT in coordination with the local land use authority. All DISTRICT pump stations shall include the following items, as a minimum:

1. Minimum 6-inch reinforced concrete floor (2,500 psi minimum 28-day strength).
2. Floor drain properly plumbed away from the building to daylight or an approved storm sewer system. Floor drain shall be a minimum of 6-inch diameter. (Placement of outfall need to take in consideration of environmental sensitive areas).
3. Interior and exterior paint, color per DISTRICT selection.
4. Lockable steel door (BEST cylinder, core and keyway to match existing DISTRICT factory registered key system).
5. Composition shingle, tile, shake, metal, or other roofing material approved by DISTRICT.
6. Proper pump house venting (eaves, wall dampers, doors, etc.).
7. Wiring installed per National Electric Code (NFPA 70).
8. Thermostat-controlled wall heater.
9. Suitable interior and exterior lighting.
10. Manual electrical power transfer switch and emergency power inlet receptacle.
11. All interior and underslab piping shall be sized for potential build out of the area to be served.

12. Interior piping of Schedule 40 brass, Type L copper, or ductile iron. Manifold(s) shall be secured. Flexible connections required for pump(s).
13. Pipe penetrations through the floor (or wall) shall be sleeved or wrapped with a bond breaker (e.g. roofing felt). Pipe and fittings under the floor slab shall be restrained with Grip-Rings or Mega-Lugs.
14. Pump(s) installed and secured. Duplex/replacement pump if required by DISTRICT. Motor(s) shall meet NEMA 12.6C. Booster pumps shall be ANSI end-suction type; Goulds or approved equal.
15. Flanges and valves at pressure tank(s), booster pump(s), etc. to allow removal of equipment.
16. Controls and telemetry to be compatible with the DISTRICT'S SCADA System.
17. Pump low suction shutoff switch.
18. Pump control pressure switch/telemetry interface.
19. ASME pressure relief valve, properly rated based on flow/system pressures.
20. Master (source) meter installed within the pump house.
21. Bladder tank(s), if required.
22. On well systems (well casing need to be min. 6" above grade).
23. System documentation (restrictive covenant, water right, geologic report, wellhead protection plan, pump tests, etc.).
24. Raw water tap installed minimum 6 inches above floor.
25. Disinfection/treatment system, as required.
26. Static water surface level determination system.
27. Comply with additional requirements of Urban and Rural Standards indicated below, as applicable.
28. Motor control(s) shall conform to DISTRICT Standards and specific requirements will vary depending on motor size and voltage requirements. For pumps serving a pressure zone with a storage reservoir, a PRV shall be plumbed to allow water to return to the suction pressure zone for fire demands; the valve shall be forced closed

during pump runs. There shall also be a valved bypass between pressure zones; the valve shall be normally closed.

29. Skid-mounted, pre-manufactured pump/pressure tank units installed within the appropriate structure (as described below) may be allowed for service to a small portion of a service area (pressure zone) subject to the DISTRICT'S review and acceptance of the equipment.

Pump station structures shall be constructed according to one of the following two standards, to be selected by the DISTRICT. The selection of which standard shall be followed will be based on the expected lifetime of the structure, compatibility with surrounding land uses, and potential exposure to vandalism or other damage. In general, the permanent pump station requirements will be required on all structures intended for a useful life of 10 years or more, or pump stations sited in areas where vandalism is likely to occur as determined by the DISTRICT. Temporary pump station structure requirements will be allowed for structures intended for a useful life under 10 years in length and sited in areas where vandalism to the structure is unlikely.

- (a) Permanent pump station structures shall be of solid grouted reinforced concrete masonry unit (CMU) construction. Unless otherwise dictated by the building department of the local government having jurisdiction, the exterior of the building shall be split-face CMU, roof shall be wood framed with standing seam metal roofing with matching gutters and downspouts, and doors and frames shall be hollow metal. The interior of the building shall be furred out from the CMU block as necessary to install 2" XPS foam R10 insulation covered with ½" ACX plywood. Color selection shall be by the DISTRICT.

There shall be exterior access to two separate rooms for electrical generator and pumping control equipment. Skid-mounted pump/pressure tank units may be allowed for temporary service to a small portion of a service area (pressure zone) that will expand within the life of the pump station.



- (b) Temporary pump station structures shall be of insulated 2x6 wood framed construction meeting UBC. Floor plates shall be pressure treated. Exterior sheathing shall be at least shop grade T-1-11 plywood, minimum ½-inch thickness. Interior sheathing shall be ½-inch ACX plywood. Roof shall be composition shingle, minimum 35-year warranty. Gutters and downspouts of front fascia only. All color selection(s) shall be made by the DISTRICT. There shall be exterior access to two separate rooms for electrical generator and pumping control equipment.

## **2.3 Water Services**

### **2.3.1 Standard Water Services**

All water services shall be metered and protected from backflow. Meter size shall be based on Uniform Plumbing Code fixture count criteria. Water mains constructed in platted areas shall include the installation of water service lines to common or individual property corners or as individually approved by the DISTRICT. All meter boxes shall be placed in non-traffic areas where possible. Water service installation shall include all materials indicated on the appropriate standard detail. Service lines that are part of a water main extension shall be installed concurrent with the water main installation. Services shall be connected to the water mains and extended to the customer's property line, prior to pressure and bacteriological testing of the water main, if applicable.

Service lines for standard domestic water service will normally be 1-inch diameter Type K soft copper pipe or One-inch polyethylene pipe, rated for 200 psi service, with a copper tracer wire may be used where required by soil conditions or aggressive water chemistry, as determined by the DISTRICT.

Service lines for 1½ and 2-inch water services will normally use 2-inch diameter soft type K copper pipe. Two-inch polyethylene pipe, rated for 200 psi service, with a copper tracer wire may be used where required by soil conditions or aggressive water chemistry, as determined by the DISTRICT.

Service lines for water services larger than 2” shall use ductile iron pipe of at least Thickness Class 52, sized for velocity and flow requirements.

In areas where static pressures are low, demands through the water service will be near the meter's limit, or the service line will be unusually long, the DISTRICT/customer should consider upsizing the service line to minimize frictional pressure losses and water velocity.

The customers are responsible for installation of their own supply line from the water meter to the point of use. Customer supply lines should generally not exceed 300 feet from the meter to the point of use, in order to maintain adequate pressure/flow. Customer supply lines over 300 feet are not prohibited; however, the DISTRICT cannot assure adequate pressure/flow for these services.

Refer to the DISTRICT'S standard drawings for more information.

### **2.3.2 Irrigation Water Services**

Designers of each new large irrigation system shall submit Water Balance calculations and other data required to justify demands to the DISTRICT for review before the new irrigation service is approved and installed. All irrigation services shall be equipped with an appropriate backflow assembly as determined by the DISTRICT in accordance with applicable cross connection policies. The new irrigation customer shall complete an Irrigation Agreement with the DISTRICT as a condition of service. Refer to the DISTRICT'S standard drawings for more information.

### **2.3.3 Backflow Prevention**

Please note that all commercial installation (including tenant improvements) shall require premise isolation (an RPBA in an above grade heated enclosure). Such assembly shall be installed in proximity of the water meter per PUD standard detail.

Minimum standards for the installation and maintenance of backflow prevention assemblies shall be those set forth in the latest edition of “Accepted Procedures and Practice in Cross-Connection Control,” as published by the Pacific Northwest Section of the American Waterworks Association (AWWA). The

DISTRICT is authorized to establish higher standards for installation and maintenance of backflow prevention assemblies where they find they are supported by good engineering practice, industry standards, or the protection of public health.

Irrigation and fire services shall be as shown on the approved plans. The degree of hazard shall determine the backflow prevention assemblies required. The DISTRICT shall be the authority on determination of degree of hazard. Backflow devices shall be listed on the current Washington State DOH approved list of backflow preventers. Each backflow device and installation shall be tested and approved prior to activation of service. For more detailed information related to backflow prevention, refer to the DISTRICT'S policies for cross connection control. For specific details refer to the DISTRICT'S standard drawings.

### **3.0 Material and Construction Specifications**

#### **3.1 General**

##### **3.1.1 Standard Specifications**

All work shall be performed in accordance with those sections referenced in this specification; the current edition of the "Standard Specifications for Road, Bridge and Municipal Construction" prepared by the Washington State Chapter, American Public Works Association (herein referred to as the "Standard Specifications"), and in accordance with the requirements of the DISTRICT and laws of the State of Washington as they may be amended and modified.

##### **3.1.2 Reference Specifications**

The latest publications of the following organizations are used as reference and abbreviated as follows:

- AWWA - American Water Works Association
- ANSI - American National Standards Institute
- ASA - American Standards Association
- ASTM - American Society for Testing and Materials
- APWA - American Public Works Association
- PSCAA - Puget Sound Clean Air Agency

- L & I - Washington State Department of Labor and Industries
- DOH - Washington State Department of Health
- DOT - Washington State Department of Transportation

### **3.1.3 Approved Equal**

The term "approved equal" shall mean that the quality and characteristics of equipment or materials intended for use must be equal to that named and must receive the approval of the DISTRICT. The DISTRICT shall be the sole arbiter in the determination of equality.

### **3.1.4 Inspection**

The DISTRICT will provide inspection service for all water system construction. The CONTRACTOR shall inform the DISTRICT 72 hours in advance of scheduled operations. Inspection is required for workmanship, location of waterline appurtenances, excavation within 5" of existing water mains, tie-ins, filling, flushing, pressure tests, bacteriological tests, final cleanup and restoration.

### **3.1.5 Existing Utilities or Obstructions in the Public Right-of-Way**

The CONTRACTOR shall notify the underground utilities locating center at 1-800-424-5555 forty-eight (48) hours prior to construction.

If, in the execution of the work, it becomes necessary to interrupt existing surface drainage, sewers, underdrains, conduit, utilities, or similar underground structures or parts thereof, the CONTRACTOR shall be responsible for, and shall take all necessary precautions, to protect and provide temporary services for same. The CONTRACTOR shall, notify DISTRICT and governing body or bodies as soon as possible and, repair all damage to such facilities or structures due to his construction operations at his own expense. Such work shall be done to the satisfaction of the DISTRICT and to the governing body or bodies with jurisdiction over the work.

### **3.1.6 Salvage of Material**

Unless otherwise indicated on the plans or in the specifications, all non-asbestos containing fittings, pipe and other related items shall be and remain the property of the DISTRICT, and shall be carefully removed, salvaged and stockpiled by the CONTRACTOR within the construction area. At the direction of the DISTRICT the CONTRACTOR shall remove and dispose of unwanted material in an appropriate manner and deliver salvageable material to the DISTRICT desired location.

### **3.1.7 Disposal of Asbestos Material**

Important: materials containing asbestos or contaminated with asbestos in any manner whatsoever less than one (1) foot in length, including but not limited to asbestos cement water pipe, asbestos containing waste materials, including but limited to pipe fittings, protective coveralls, hepa filters and any other protective devices shall be bagged, sealed, labeled, and removed from the trench and properly disposed of in strict accordance with asbestos control standards, with Washington Department of Labor and Industries worker safety regulations, and all other applicable laws and regulations. Asbestos-cement water pipe greater than one (1) foot in length shall be disposed of according to the applicable laws and regulations regarding disposal of asbestos cement water piping.

### **3.1.8 Petroleum Contaminated Soils Removal and Disposal**

Petroleum contaminated soils (PCS's) are defined as those soils encountered during the excavation of the project that are suspected to contain petroleum products. The DISTRICT has, during the design of the project, assessed the project alignment for any evidence of PCS's and has, based on this assessment, no reason to expect that PCS's exist in the project area. However, if PCS's are encountered due to private residential home heating fuels or old unrecorded and abandoned gas station sites, or other PCS contributors, the following procedures shall be followed:

- **CONTRACTOR's PCS preconstruction requirements:**

The CONTRACTOR shall have on site, or, have immediate access to, a state approved "Site Safety Plan" (SSP) listing the

required emergency contacts for certified hazardous waste testing and disposal.

The CONTRACTOR shall be required to have a calibrated gas detector at the job site at all times to monitor trench safety.

- **Contaminated Soils Identification**

Identification of PCS's by visual oil sheen or by the smell of diesel or gas shall require the CONTRACTOR to immediately test the trench for gas fumes with an approved calibrated gas detector and take the appropriate action to ensure safety of the CONTRACTOR and DISTRICT personnel.

The CONTRACTOR shall immediately notify the certified hazardous material testing lab identified on the CONTRACTOR's SSP to take samples and make an assessment the level of the site contamination.

The CONTRACTOR shall stop all excavation, seal the end of the trench with Bentonite Clay or other material impervious to petroleum products and, after samples have been taken, backfill the trench with material suitable for compaction.

If it is determined the soils are not hazardous, the CONTRACTOR may resume excavation of the project. If the soils are hazardous then the CONTRACTOR shall, based on the CONTRACTOR's certified testing lab recommendations, leave the contaminated soils in place and change the project alignment to go around the contaminated area or remove and dispose of the PCS's.

- **Contaminated Soils Removal and Disposal**

If the PCS's are to be removed the CONTRACTOR shall have the material taken to an approved storage yard for further testing and containment. The certified testing lab (identified on the CONTRACTOR's SSP) shall submit to the DISTRICT for review its analysis of the PCS and its recommendation for disposal.

### **3.1.9 Laws and Safety Regulations**

All work performed under this specification shall be in compliance with applicable regulations issued by Washington Department of Labor and Industries, the United States

Environmental Protection Agency, Washington Department of Ecology, Washington Department of Fish and Game, the Puget Sound Clean Air Agency, and any other governing body or bodies with jurisdiction over the work described in this specification. All vehicles utilized for disposal of contaminated waste shall be equipped and marked in accordance with the rules and regulations of the Washington State Department of Transportation, and all CONTRACTOR personnel shall be trained and qualified as may be required by applicable law. The CONTRACTOR shall provide and install trench safety security measures in accordance with the requirements of the Washington Industrial Safety and Health Act, and as necessary to protect workers, the work area, and existing utilities, structures, and other affected properties.

### **3.1.10 Surface Restoration**

Roads, driveways, shoulders, landscaping and all other areas, removed, broken, caved-in, settled or otherwise damaged due to the installation of the improvements, shall be repaired and/or resurfaced to match the existing surface or landscaped areas as directed by the DISTRICT and governing body or bodies with jurisdiction over the work.

- 1) Private driveways, walks, and other surfaced areas shall be repaired, patched or resurfaced as required for the type of surfacing encountered.
- 2) Existing landscaping, fences, mailboxes, ornamentation, etc. Shall be restored to original or better than original condition.

### **3.1.11 Asphalt Concrete Pavement / ATB**

The finished patch shall have a minimum thickness as shown on the DISTRICTS standard drawings and as approved by the governing body with jurisdiction over the work. Before placement of the asphalt concrete patch, the base course material shall be shaped to the same section and slope as the finished grade and compacted to 95 percent maximum dry density at optimum moisture content as determined by standard proctor compaction test, ASTM designation D698, Method D. The asphalt concrete shall be rolled and cross-rolled to obtain thorough compaction. The edges of the patch shall be sealed

with asphalt grade AR 4000. Asphalt concrete shall be hot plant-mix, conforming to Standard Specifications.

All asphalt concrete overlays, which are required by the governing body or bodies with jurisdiction over the work, required due to inadequate patching or patch failure, shall be done at the CONTRACTOR'S expense. The governing body or bodies with jurisdiction over the work shall be the sole judge of whether a patch has failed or is inadequate.

### **3.1.12 Temporary MC Cold Mix Asphalt**

Temporary cold mix patching (if allowed) will be kept to a minimum. All roads, streets, driveways, and other pavement areas, or portions thereof, that are removed during the course of the project and do not receive a final patch on a daily basis shall be patched temporarily with medium curing cold premixed asphalt concrete of a thickness sufficient to allow safe, unimpeded pedestrian and equipment and vehicular traffic over the patched area. Temporary patches shall be placed immediately after backfilling and compacting and removed prior to final patching at the CONTRACTOR'S expense. Temporary patches shall be maintained at all times by the CONTRACTOR prior to removal.

### **3.1.13 Crushed Rock Surfacing**

Existing shoulders and gravel surfaces shall be resurfaced with crushed rock surfacing (5/8-inch minus) as shown on the DISTRICT'S standard drawings and as approved by the governing body with jurisdiction over the work. The finished surface shall match the slope, crown, and grade of the existing surface. Materials and placing shall be in accordance with the applicable provisions of, the Standard Specifications. The crushed rock may be spread in one (1) layer and shall be adequately bladed and mixed to obtain even distribution of the rock. Alternate blading and rolling shall continue until the required finish surface and density is obtained.

The crushed rock shall be compacted to at least 95 percent maximum dry density at optimum moisture content. Water shall be added as necessary during blading and rolling operations to obtain the required compaction.



### **3.1.14 Dust Control**

The CONTRACTOR shall keep all roadway surfaces free of all nuisance materials including, but not limited to, dust, mud, gravel, rock and other debris, in accordance with the requirements of all applicable federal, state and local laws and regulations. The CONTRACTOR shall provide a water truck and a street sweeper to clean all nuisance materials. All impacted roadway surfaces shall be cleaned of dust, mud, and other debris during each working day and at the end of each working day. The DISTRICT will furnish water for such cleaning operations at sites as shown on the Contract Plans and Detail Sheets.

## **3.2 Material Specifications**

### **3.2.1 Water Piping - General**

Pipe shall be new and undamaged. Repair of any damage shall be made by the CONTRACTOR at the CONTRACTOR'S sole cost and expense and in a manner satisfactory to the DISTRICT. See Contract Plans and Detail Sheets for required materials and installation.

Pipe shall be transported and handled in such a manner as to ensure final installation in an undamaged condition. Pipe shall be loaded and unloaded using hoists and lifting straps in such a manner so as to avoid shock or damage. Unloading of pipe will be overseen by the DISTRICT. The CONTRACTOR shall notify the DISTRICT not less than two (2) working days in advance as to the time and location of all pipe delivery.

Any pipe damaged beyond repair, as determined by the DISTRICT in its sole discretion, shall be rejected by the DISTRICT, and the CONTRACTOR shall immediately place all such damaged pipe apart from the undamaged pipe and remove such damaged pipe from the site within 24 hours of rejection by the DISTRICT.

### **3.2.2 Ductile Iron Pipe**

Ductile iron pipe shall be thickness class 52 and conform to the latest edition of AWWA C151. Ductile iron pipe shall be cement lined and sealed in accordance with AWWA C104. Cement

lining thickness shall be 1/16-inch. The pipe joints shall conform to AWWA C111. Pipe joints shall be rubber gasket push-on type, Tyton, or approved equal. Thrust-restraint gaskets shall be used where noted on the plans and as required by field conditions

### **3.2.3 Poly and PVC Pipe**

Poly and PVC pipe are not allowed, unless directed by the DISTRICT.

### **3.2.4 Pipe Fittings**

Materials: Pipe fittings shall be short bodied ductile iron for rated working pressure of 350 pounds per square inch (psi) in accordance with AWWA C110 and AWWA C153. Joints for fitting shall be mechanical joint as per AWWA C111 or flanged joint as per AWWA C115 with rubber gaskets. All fittings shall be cement lined and sealed per AWWA C104.

Fittings shall be Tyler, US Pipe, Sigma, Star Pipe products, or as approved by the DISTRICT. All Mechanical Joints, unless otherwise noted on the plans, shall use Mechanical thrust restraint followers. Mechanical thrust restraint shall be EBAA Iron MegaLug/Flange, Romac, RomaGrip, Star Pipe StarGrip, or as approved by the DISTRICT.

### **3.2.5 Resilient Seated Gate Valves (2" Through and including 12" Valves)**

Valves shall be ductile iron body, coated inside and outside with fusion bonded epoxy coating, non-rising stem and "O" ring packing conforming to AWWA C509. Valves shall be Clow series 6100, M&H style 4067, American AVK Company series 65, Waterous series 500 or Mueller A-2360 and Kennedy KS-RW.

### **3.2.6 Butterfly Valves (Larger than 12")**

#### ***Working pressure of 150 P.S.I. or Less***

Butterfly valves shall be ductile iron body and shall be of the rubber seat type, Class 150B, and meet the full requirements of AWWA C504. Butterfly valves shall be, Dresser 450, Mueller Class 150 linesal, Pratt groundhog or as specified on the plans.

### ***Working pressure of 150 P.S.I. or More***

Butterfly Valves shall be designed and manufactured for a working pressure of 250 P.S.I. and shall be of the rubber seat type, Class 250B with class 125 flanges (bolt pattern), and meet the full requirements of AWWA C504. Butterfly valves shall be M&H 2500 High Test, Pratt Triton HP-250 or approved equal.

#### **3.2.7 Tapping Tee and Valve**

The tapping tee shall be of the size shown listed and shall be **Romac FTS420 or Ford FTSC** Fabricated Carbon Steel Epoxy Coated Tapping Sleeve or approved equal. The tapping valve shall be of the size listed and joint configuration shown. The tapping valve shall conform to the general requirements for resilient seated gate valves, of these specifications.

#### **3.2.8 Combination Air-Vacuum Release Valve Assembly**

The 1-inch combination air and vacuum release valves shall be installed in accordance with the DISTRICT'S standard drawings.

#### **3.2.9 Valve Boxes, Marker Posts and Asphalt Protection Pad**

Valve boxes shall be cast iron, two-piece, 18 inch x 30 inch, with cast iron lid and shall be style 940 (deep lip style) or approved equal. Valve box extensions shall be provided. Refer to DISTRICT'S standard drawings for details. Three feet square x 6-inches thick asphalt pads shall be provided for all installations in graveled shoulders. Refer to DISTRICT'S standard drawings for details.

#### **3.2.10 Fire Hydrant Assemblies**

The fire hydrant assembly shall conform to the DISTRICT'S standard detail. Fire hydrants shall be center stem compression, traffic style conforming to AWWA C502.

The fire hydrant resilient seated valve shall comply with the general requirements for resilient seated gate valves, of these specifications. Valves shall be six (6) inch with flange x

mechanical joint connections. Refer to the DISTRICT'S standard drawings for more details on hydrant installation.

The CONTRACTOR shall field verify the depth of bury required for each fire hydrant installation. The CONTRACTOR shall install a corrugated metal pipe, size/style as directed by the governing body or bodies with jurisdiction over the work in the ditch area adjacent to the hydrant assembly, if requested by the DISTRICT or specified on the DISTRICT plans.

### **3.2.11 Blow-Off Assemblies**

All blow-off assemblies shall be in accordance with the DISTRICT'S standard drawings

## **3.3 Construction Standards**

### **3.3.1 Installation of Pipe**

Pipe and appurtenances shall be handled in such a manner as to ensure delivery to the site and final installation in a sound, undamaged condition. Particular care shall be taken to keep the pipe clean.

Pipe and appurtenances shall be loaded and unloaded in a manner so as to avoid shock or damage. Damaged pipe shall be rejected and the CONTRACTOR shall immediately place all damaged pipe apart from the undamaged pipe and shall remove such damaged pipe from the site within 24 hours. All pipe installation shall be accomplished in accordance with AWWA C600. All pipe shall be laid and joined in accordance with the approved design plans with a trench depth of 48 inches unless otherwise stipulated on the DISTRICT plans or directed by the DISTRICT with all fittings and valves at the required locations and all valve stems plumb. Pipe shall be inspected before it is placed in the trench for debris and structural defects and defects in the interior lining and outside coating. The inside of the pipe barrel shall be clean and Pipe ends shall be protected at all times during construction to prevent debris from entering pipe. All pipes shall be transported and delivered to the site with protective end caps in place and all pipe shall be stored in the same manner. Alternatively, pipe ends may be covered by

taping (or banding) 6 mil plastic in such a manner that shall effectively keep the pipe free from any debris during transport and while the pipe is under site storage conditions (i.e. strung along roadway or stockpiled at a staging area). Pipe shall be laid in accordance with the manufacturer's recommendations. Pipe shall be subject to hydrostatic tests and sterilization as specified hereinafter.

### **3.3.2 Installation of Valves, Valve Boxes and Asphalt Protection Pad**

Valves shall have interiors cleaned of all foreign matter and shall be inspected both in open and closed positions prior to installation. The valves and valve boxes shall be set plumb and the valve boxes shall be centered and placed directly over the valves in such a manner that the valve boxes do not transmit shock or stress to the valves. (Crushed rock 5/8" minus or approved equal) shall be carefully tamped around the valve boxes to a distance of three feet on all sides or to the undisturbed face of the trench if it is closer. An asphalt protection pad shall be placed around the completed valve box installation for those installations in graveled shoulder or non-landscaped areas. Refer to the DISTRICT'S standard drawings for further information.

### **3.3.3 Installation of Valve Marker Posts**

All valves shall have valve marker posts installed in close proximity to the location of the valves. Refer to the DISTRICT'S standard drawings for further information.

### **3.3.4 Installation of Services**

Services as specified in the standard details and shown on DISTRICT plans shall be installed by the CONTRACTOR unless otherwise directed by the DISTRICT. An individual service shall be installed to each lot; size and location as indicated on DISTRICT plans. Services shall be installed at the lot corner unless otherwise directed by the DISTRICT. A single run of copper tubing, unless otherwise directed, shall be used for all service installations.

Standard domestic water services: as shown on the plans and according to DISTRICT standard details.

1-1/2-inch and larger services: as shown on the plans and according to DISTRICT standard details.

Note: meter stop shall be preliminarily installed a minimum of 24-inch above construction grade. The copper service line shall be cut, angle meter stop moved to proper depth and re-installed after final grade is established. The final pressure test shall be performed after the services have been set to final grade and all other utilities that may reasonably impact the water facilities are installed.

Refer to the DISTRICT'S standard drawings for further information.

### **3.3.5 Installation of Back Flow**

Backflow assemblies shall be located immediately downstream of the water service connection (or water meter box), within 1 to 2 feet, and prior to any branch connections. Alternate installation locations must be pre-approved by the DISTRICT.

Installation of approved backflow assemblies shall be in accordance with the "Accepted Procedure And Practice In Cross-Connection Control" Manual, of the Pacific Northwest Section of the American Water Works Association latest edition.

Backflow assemblies selected for installation must appear on the most current Washington State Department of Health list of backflow assemblies approved for installation in Washington State.

Prior to installation of a backflow assembly, the installer or developer or property owner must call the DISTRICT at (425)397-3000 to schedule an inspection.

Following an installation inspection approval by a DISTRICT Inspector, the backflow assembly must be scheduled for an initial test by a Washington State Department of Health certified Backflow Assembly Tester.

The property owner is responsible for initial and **annual** testing of any backflow assembly.

The property owner is responsible for freeze protection of any backflow assembly.

The installer or developer or property owner must provide backflow assembly test cock protection with plugs, caps, or covers.

The Water meter must be installed in order to test the backflow assembly.

For more information or technical assistance, please contact the DISTRICT at (425)397-3000.

### **3.3.6 Alignment**

The location of water mains will generally be on the north and east sides of streets. The main, valves, fittings, and services will be staked by the CONTRACTOR. The CONTRACTOR shall also provide centerline and property corners to adequately locate the new facilities. The main shall be installed as indicated on the DISTRICT plans.

### **3.3.7 Trench Depth**

Trench depth shall be 48 inches, unless otherwise indicated on the DISTRICT plans or directed by DISTRICT.

### **3.3.8 Installation of Water Main Casing**

The work includes the jacking and/or auguring and all related work of steel casing pipes at the location(s) shown on the DISTRICT plan(s).

#### ***Materials***

The casing pipe shall be smooth steel, bare pipe, size and length as noted on DISTRICT plans, 0.250 inch wall thickness and comply with AWWA C200.

#### ***Installation***

The casing pipe shall be installed such that no voids or spaces exist along the outside diameter of the pipe over its full length.

Refer to the DISTRICT'S standard drawings for further information.

### **3.3.9 Concrete Blocking**

Provide concrete blocking at all fittings and horizontal or vertical angle points. Conform to the standard detail for general blocking herein and the standard details for vertical blocks. All fittings to be blocked shall be wrapped with 6 mil polyethylene. Concrete blocking shall be properly formed with plywood or other acceptable forming materials and shall not be poured around joints. The forms shall be stripped prior to backfilling. Where required, thrust restraint shall be installed with the use of DISTRICT-approved mechanical restraint devices.

### **3.3.10 Connection to Existing System**

The CONTRACTOR shall make, at its sole expense, all connections to existing piping unless otherwise indicated on DISTRICT plans. All connections to the DISTRICT'S existing system shall comply to the DISTRICT'S construction standards, approved in advance, and be scheduled with the DISTRICT'S construction inspector at least 10 working days in advance of the work. The DISTRICT reserves the right to delay the connection to coordinate with other potential work in the area in order to minimize the impact to our customers. Field conditions may require a change in design due to location of existing utilities. The DISTRICT will redesign affected portions and the CONTRACTOR shall install the facilities at the CONTRACTOR'S expense.

Connections to existing mains may be made with either a cut-in or a hot tap. The DISTRICT reserves the right to require a hot tap if disruption of service through use of cut-in installation is judged to be unduly detrimental. The CONTRACTOR shall be responsible for ensuring that reasonable efforts are made to inform customers of any service connections. If a cut-in is used, a valve must be added to the main line, unless existing valves provide a valve spacing of 1000 feet or less in the vicinity of the new connection.

It is understood that any information concerning existing utilities or obstructions shown on the plans is made available to the CONTRACTOR for informational purposes only, and it is not guaranteed accurate by the DISTRICT. Incompleteness or error in this information shall not be cause for claim against the DISTRICT. It shall be the responsibility of the CONTRACTOR



to determine the actual location and numbers of existing utilities and obstructions.

The CONTRACTOR shall be responsible for the protection and proper operation of all existing piping and appurtenances during construction, and shall take care not to cause or permit any damage to protective coatings or impairment of the operation of the existing system in any way whatsoever. All pipe and materials used when connecting to existing systems shall be disinfected with a solution of water and chlorine (200 parts per million) and rinsed with clean water prior to connection

The CONTRACTOR shall protect all existing utilities, structures, and landscaping from damage of any kind; any such damage shall be repaired by the CONTRACTOR at no expense to the DISTRICT.

If a connection is to be made to an existing asbestos-cement water main, the CONTRACTOR shall obtain all permits or authorization, provide all necessary worker certifications, and have on-site required protective clothing and disposal bags. No asbestos-related work shall begin without proper permits, certifications, protective clothing, and disposal bags.

### **3.3.11 Temporary Construction Connection to Existing System**

Temporary Construction connections shall be provided by means of a DISTRICT installed (at developer cost) RPBA and meter (hydrant watchdog). Contractor shall install a temporary blow-off (field located per the DISTRICT'S inspector instructions) to accommodate connection via hydrant watchdog to the DISTRICT'S water system. Alternatively, at the DISTRICT'S discretion an in-line DCVA of appropriate size may be required by PUD staff. Permanent connection to the DISTRICT'S existing water system will only be allowed **after** PUD inspector verifies satisfactory results of the bacteriological and pressure tests.

### **3.3.12 Valve Operation**

Only DISTRICT personnel are permitted to operate valves on the DISTRICT existing water system, including emergencies unless personnel, property or environmental safety is threatened. Exposing a potable water line during construction without the DISTRICT's approval can result in a penalty being imposed per DISTRICT policy and procedure manual.

### **3.3.13 Earthwork**

#### ***Clearing, Grubbing, and Excavation***

Specifications covering clearing, grubbing and excavation apply to all work in which the DISTRICT has obtained a permit(s) and agreements or easements to do such work. If, in the course of the project, damage is occurring or may occur to the public right-of-way and/or private property, the CONTRACTOR shall adjust his/her mode of operation to alleviate such damage. The DISTRICT may stop work if proper work procedures are not instituted to eliminate or reduce damage.

All damage to public and private property shall be restored to the satisfaction of the DISTRICT and the appropriate governing body or bodies with jurisdiction over the work.

Clearing and grubbing of the access areas and work site shall be accomplished in advance of excavation and move-in of equipment and materials. Clearing and grubbing shall conform to the Standard Specifications. The CONTRACTOR shall remove and dispose of all debris at a approved disposal site which meets State and Snohomish County standards.

#### ***Foundation Preparation and Bedding***

Foundation preparation and bedding shall be in accordance with the applicable provisions of the Standard Specifications.

In case unstable or unsuitable existing material is encountered at the trench bottom, the DISTRICT may direct the use of suitable bedding material that shall be

placed in accordance with the Standard Specifications. Wet trench conditions will not necessarily be considered an indication of unstable conditions. The trench shall be de-watered and an inspection made by the DISTRICT to determine the suitability of the trench material.

### ***Bedding Material***

Bedding material is required around valves, fittings and services and shall consist of crushed rock 5/8" minus or approved equal; provided, however, that the source and quality of such material shall be subject to approval by the DISTRICT.

### ***Trench Backfill and Compaction***

Trench backfill and compaction shall be in accordance with the DISTRICT and the appropriate governing body or bodies with jurisdiction over the work.

Imported trench backfill material shall be placed in loose lifts no greater than 12 inches thick. Each lift shall be compacted by mechanical means to at least 95 percent of the modified Proctor maximum dry density as determined by the ASTM D 1557 test procedure, and to a firm and non-yielding condition. The CONTRACTOR shall maintain the backfill material moisture content within 2 percent of the optimum moisture content as determined by the ASTM D 1557 test procedure.

In cases where existing native soil removed from excavations will be used as trench backfill, the backfill material shall be placed in loose lifts no greater than 10 inches thick. Each lift shall be compacted by mechanical means to at least 95 percent of the modified Proctor maximum dry density as determined by the ASTM D 1557 test procedure, and to a firm and non-yielding condition. The CONTRACTOR shall maintain the backfill material moisture content within 2 percent of the optimum moisture content as determined by the ASTM D 1557 test procedure.

### 3.4 Testing and Sterilization

#### 3.4.1 Hydrostatic Pressure Test

Prior to final acceptance of the system, the entire system shall be subject to hydrostatic pressure testing for 2 hours at 250 pounds per square inch (psi) at the lowest point of main being tested and a minimum of 200 psi at the highest point (or as directed by the DISTRICT). Note that the District requires the main to be pressure tested in increments **of no greater than 1500 feet**. If the pressure at the end of the two hour test (with out pumping) is between 245 and 250 psi, then hydrostatic testing allowance shall be as described below in tabular form (see 3.4.2 Leakage Tests). **If the pressure falls below 245 PSI, then the water pipe being tested has failed for that portion of main.** Test shall be conducted with hydrants open against port caps. After all utilities are installed and angle stops reset to final grade, any leaks or imperfections developed under said pressure shall be remedied by the CONTRACTOR before final acceptance of the system. The CONTRACTOR shall provide all necessary equipment and shall perform all work connected with the tests and conduct said tests in the presence of a DISTRICT inspector. The scale of the pressure gage used for the pressure test shall have a minimum of 2 psi increments. Insofar as practical, tests shall be made with pipe joints, fittings and valves exposed for inspection. Preliminary pressure tests are recommended for water mains after services are installed.

#### 3.4.2 Leakage Tests

Leakage tests shall be made concurrently with the hydrostatic pressure test and shall only be allowed if during the 2 hour pressure test the pipe being tested has maintained at least 245 psi after being pressurized a single time. If the pressure during the test has not fallen to less than 245 psi (**with out any re-pumping**), then hydrostatic testing allowance shall be as follows:

##### Allowable Leakage Per 1000 Ft. Of Pipeline - Gallons Per 2 hours

Nominal Pipe Diameter – inches	4	6	8	12
Gallons Per 2 hours	0.47	0.71	0.95	1.42

### **3.4.3 Disinfection and Bacteriological Purity Test**

Disinfection of the new water system shall be required prior to completion of the project and connection to the public water system and shall be in accordance with AWWA C651, and the drinking water standards of the State of Washington Department of Health and shall be NSF approved. The concentration of chlorine in the water shall be 50 parts per million throughout the pipe and this solution shall be held for a period of 24 hours. Disinfection of the entire water system installed or disturbed including pipe, pipe fittings, valves and appurtenances, is required to conform with the specifications stated herein.

After the water main has been successfully sterilized and flushed, the DISTRICT's inspector will take a representative number of bacteriological purity tests.

A satisfactory bacteriological report must be obtained and provided to the DISTRICT before the main is placed in service.

### **3.4.4 Disposal of Chlorinated Water**

Water containing chlorine residuals shall not be disposed of into any storm drainage system, creek, stream, river, or lake.

Water with high chlorine residuals (above drinking water levels) shall be flushed into a tanker truck and disposed of in an appropriate manner.

Other methods of flushing and disposal of chlorinated water must be approved by the DISTRICT.

## **3.5 Traffic Maintenance**

CONTRACTORS shall conduct work so as to interfere as little as possible with public travel. CONTRACTORS shall also provide and maintain suitable detour routes. The CONTRACTOR shall obtain written permission/permit from the appropriate jurisdiction for road closures, except verbal

permission may be used in an emergency. Work which involves State or County road rights of way shall be restricted to the hours between 8:00 a.m. and 5:00 p.m. and no work shall be allowed in such rights of way on Saturdays, Sundays or Holidays unless authorized by the governing jurisdictions and by the DISTRICT.

### **3.6 Safety**

CONTRACTORS will be solely and completely responsible for conditions at job sites, including safety of all persons and property during the performance of work. This requirement will apply continuously and not be limited to normal working hours.

The CONTRACTOR shall comply with safety and health standards identified in the current edition of the "Standard Specifications for the Road, Bridge and Municipal Construction," published by DOT and the APWA (Washington State Chapter), including, without limitations, Section 1-07.1 and 1-07.23 of these specifications.

The CONTRACTOR shall prepare a Traffic Control Plan, in accordance with DOT requirements and the Manual on Uniform Traffic Control Devices (MUTCD).

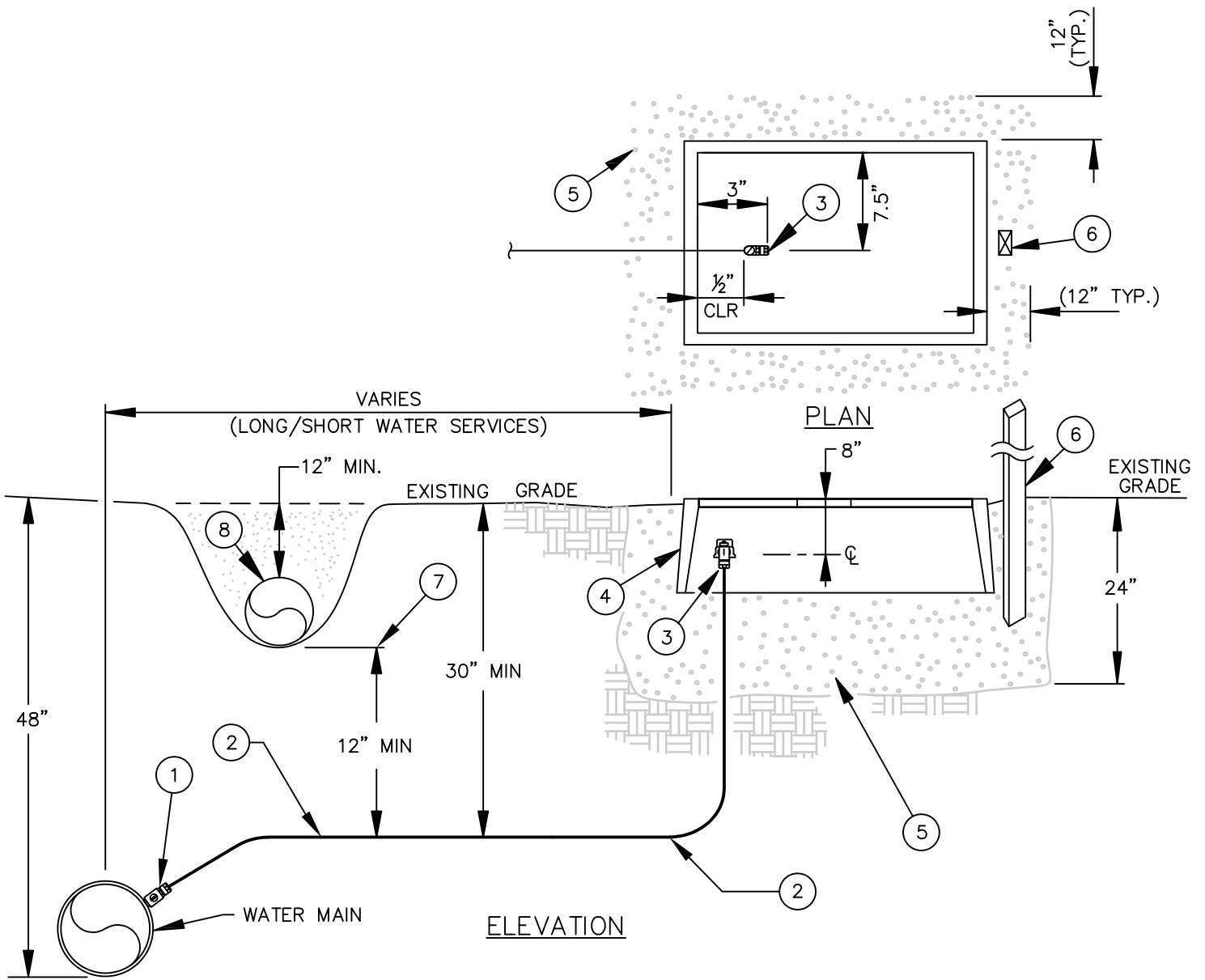
## General Notes

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1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE DISTRICT'S "STANDARDS AND SPECIFICATIONS FOR DESIGN AND CONSTRUCTION." CONTRACTOR SHALL HAVE A COPY OF THIS DOCUMENT AND A MINIMUM OF TWO SETS OF THE APPROVED WATER PLANS ON-SITE AT ALL TIMES. THE LATEST VERSION OF THE DISTRICT'S STANDARDS CAN BE FOUND AT <https://www.snopud.com/account/services/water/get-water/policies-and-procedures/?hilit=water+policies> UNDER THE LINK LABELED "Appendix A: Standards & Specifications for Design & Construction (3 MB)"
2. BEFORE COMMENCING ANY CONSTRUCTION, CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING WITH THE DISTRICT'S ENGINEER AND WATER INSPECTOR. APPROVED DRAWINGS ARE SUBJECT TO MINOR FIELD ADJUSTMENTS AS REQUIRED BY PUD WATER INSPECTOR.
3. THE CONTRACTOR SHALL NOTIFY THE UNDERGROUND UTILITIES LOCATING CENTER AT **811** 48 HOURS PRIOR TO CONSTRUCTION. CONTRACTOR TO VERIFY LOCATION OF EXISTING CULVERTS AND UNDERGROUND UTILITIES. ANY CONFLICT WITH EXISTING UTILITIES TO BE MITIGATED AT THE SOLE EXPENSE OF THE DEVELOPER.
4. ALL FILLING AND FLUSHING OF THE NEWLY INSTALLED MAIN SHALL BE THROUGH A DISTRICT PROVIDED (AT DEVELOPER COST--\$900 NON-REFUNDABLE PLUS USAGE) RPBA AND METER (SITE SPECIFIC FILL STATION, I.E. HYDRANT WATCHDOG). INSTALL A TEMPORARY BLOW OFF (FIELD LOCATED PER THE DISTRICT'S INSPECTOR INSTRUCTIONS) TO ACCOMMODATE CONNECTION VIA HYDRANT WATCHDOG TO THE DISTRICT'S WATER SYSTEM. ALTERNATIVELY, AT THE DISTRICT'S DISCRETION AN IN-LINE DCVA OF APPROPRIATE SIZE MAY BE REQUIRED BY PUD STAFF. PERMANENT CONNECTION TO THE DISTRICT'S EXISTING WATER SYSTEM WILL ONLY BE ALLOWED AFTER PUD INSPECTOR VERIFIES SATISFACTORY RESULTS OF THE BACTERIOLOGICAL AND PRESSURE TESTS.
5. THE CONTRACTOR WILL MAINTAIN A SET OF DISTRICT APPROVED PLANS ON SITE AT ALL TIMES WITH AS-BUILT INFORMATION THAT THE DISTRICT'S INSPECTOR CAN REQUEST TO VERIFY. UPON CONSTRUCTION COMPLETION, THE CONTRACTOR SHALL PROVIDE THE DISTRICT WITH A COPY OF ALL AS-BUILTS GENERATED THROUGHOUT THE COURSE OF THE PROJECT. PRIOR TO FINAL PLAT ACCEPTANCE, THE DEVELOPER SHALL SUBMIT STAMPED COMPLETED AS-BUILT DRAWINGS ON MYLAR TO THE DISTRICT'S ENGINEER.
6. ALL DISTRICT FACILITIES (HYDRANTS, WATER MAINS, AND METERS) SHALL BE PLACED IN THE COUNTY/CITY RIGHT OF WAY OR **IN A DISTRICT APPROVED WATER/UTILITIES EASEMENT**.
7. ALL COMMERCIAL SERVICES SHALL INSTALL AN RPBA IMMEDIATELY DOWNSTREAM OF AND ADJACENT TO THE METER. ALL IRRIGATION SERVICES SHALL INSTALL A DCVA IMMEDIATELY DOWNSTREAM OF AND ADJACENT TO THE METER. SUCH ASSEMBLY SHALL BE TESTED PRIOR TO INITIATION OF WATER SERVICE. ALL COMMERCIAL FIRE SERVICES SHALL HAVE A DCDA INSTALLED IN A VAULT IN PROXIMITY OF THE CONNECTION TO THE WATER MAIN. ALL RESIDENTAL FIRE SERVICES SHALL HAVE A DCVA INSTALLED IN PROXIMITY OF THE METER WITH THE EXCEPTION OF A POTABLE "FLOW THROUGH" RESIDENTIAL FIRE SYSTEM.
8. DISCHARGE WATERS CONTAINING CHLORINE RESIDUALS SHALL BE DISPOSED OF IN A PROPER MANNER AS DIRECTED BY THE DISTRICT'S INSPECTOR. IN NO CIRCUMSTANCES SHALL WATER CONTAINING CHLORINE BE DISCHARGED INTO NATURAL SURFACE WATERS.
9. ANY IMPACTS TO EXISTING PUD WATER FACILITIES DUE TO THE DEVELOPER'S PROPOSAL SHALL BE MITIGATED AT THE DEVELOPER'S EXPENSE.

10. THE DISTRICT WILL SECURE THE UTILITY RIGHT-OF-WAY PERMIT REQUIRED FOR INSTALLATION OF WATER MAINS AND APPURTENANCES. THE DEVELOPER SHALL SECURE ALL PERMITS REQUIRED FROM LOCAL AND STATE AGENCIES INCLUDING BUT NOT LIMITED TO LANE CLOSURE, TRAFFIC CONTROL, GRADING AND ALL MATTERS RELATED TO ASBESTOS WORK, REMOVAL AND DISPOSAL (IF APPLICABLE TO THE PROJECT). WORK ON ASBESTOS-CEMENT PIPE SHALL NOT COMMENCE WITHOUT PROPER PERMITS, CERTIFICATIONS, WORKER PROTECTIVE CLOTHING AND BREATHING APPARATUS, AND APPROVED ASBESTOS DISPOSAL BAGS.
11. ALL NEW PLATS (AND COMMERCIAL PROJECTS) WILL REQUIRE A 3-VALVE CLUSTER WITH APPROPRIATE MAIN SIZE VALVES AT **EACH** SUPPLY POINT OF CONNECTION TO THE PUD'S WATER SYSTEM. TIE-IN LOCATIONS MUST BE POT-HOLED AND VERIFIED FOR DEPTH, SIZE AND MATERIAL AT LEAST ONE DAY PRIOR TO SHUTDOWN. CONTRACTOR SHALL SCHEDULE SHUTDOWNS WITH THE DISTRICT AT LEAST FIVE (5) WORKING DAYS IN ADVANCE. CONNECTION TO PUD WATER SYSTEM INCLUDING SWABBING WITH CHLORINE DISINFECTANT SHALL NOT BE DONE WITH OUT PUD STAFF PRESENT. NO EXCEPTIONS SHALL BE MADE UNLESS SPECIFIED ON THE APPROVED PLANS BY THE PUD'S ENGINEER.
12. ALL WATER SERVICES TO BE INSTALLED ON **EXISTING PUD MAINS** SHALL BE INSTALLED BY PUD CREWS AT DEVELOPER'S COST. LIKEWISE ANY RETROFIT REQUIRED TO EXISTING PUD FACILITIES SHALL BE DONE BY PUD CREW (VIA A CUSTOMER CONTRACT) AT DEVELOPER COST.
13. PRESSURE TEST SHALL BE FOR TWO HOURS AT 250 PSI. IF THE PRESSURE AT THE END OF THE TWO HOUR TEST (WITH OUT PUMPING) IS BETWEEN 245 AND 250 PSI, THEN HYDROSTATIC TESTING ALLOWANCE SHALL BE AS DESCRIBED IN TABULAR FORM IN **AWWA C600**. IF THE PRESSURE FALLS BELOW 245 PSI, THEN THE WATER PIPE BEING TESTED HAS FAILED. PRESSURE TEST SHALL BE AGAINST HYDRANT PORTS (WITH HYDRANT FULLY OPEN), AGAINST ALL CLOSED BLOW OFF ASSEMBLY CAPS WITH VALVE FULLY OPEN AND AGAINST ALL ANGLE METER STOPS. THE CURB STOP ON AIR RELEASE VALVES SHALL BE CLOSED FOR THE PRESSURE TEST AND THEN OPENED AFTER SATISFACTORY TESTING.
14. ALL MECHANICAL JOINTS, UNLESS OTHERWISE NOTED ON THE PLANS, SHALL USE MECHANICAL THRUST RESTRAINT FOLLOWERS. MECHANICAL THRUST RESTRAINT SHALL BE EBAA IRON MEGALUG/FLANGE, ROMAC, ROMAGRIP, STAR PIPE STARGRIP, OR AS APPROVED BY THE DISTRICT. ALL DEAD ENDS (INCLUDING THOSE CREATED VIA A TEMPORARY BLOW OFF) AND ALL BENDS SHALL USE RESTRAINED JOINT. FOR 8" MAIN ANY BEND WILL BE RESTRAINED APPROXIMATELY 120' UTILIZING 2 MEGA LUGS AND 6 FIELD-LOK GASKETS (OR APPROVED EQUAL). ANY 8 INCH DEAD END (INCLUDING ALL DEAD END CREATED BY TEMPORARY BLOW-OFFS) WILL BE RESTRAINED APPROXIMATELY 60' UTILIZING 1 MEGA LUG AND 3 FIELD-LOK GASKETS. ALL JOINTS OF ANY FIRE SERVICE FROM THE MAIN INTO THE MECHANICAL ROOM SHALL BE 100% MECHANICALLY RESTRAINED. FOR 12" DI MAIN A BEND SHALL BE RESTRAINED APPROXIMATELY 160' USING 8 TOTAL FIELD-LOK GASKETS AND 2 MEGA-LUGS AND A DEAD-END RUN SHALL BE RESTRAINED 80' UTILIZING 4 FIELD-LOK GASKETS WITH 1--MEGALUG. LIKEWISE, A 16" MAIN SHALL BE RESTRAINED APPROXIMATELY 180' AT A BEND UTILIZING 10 FIELD-LOK GASKETS AND 2-MEGA-LUGS. A DEAD 16" RUN SHALL BE RESTRAINED APPROXIMATELY 90' UTILIZING 5 FIELD-LOK GASKETS AND A MEGA-LUG. PLEASE ALSO SEE STANDARD DETAIL 800.



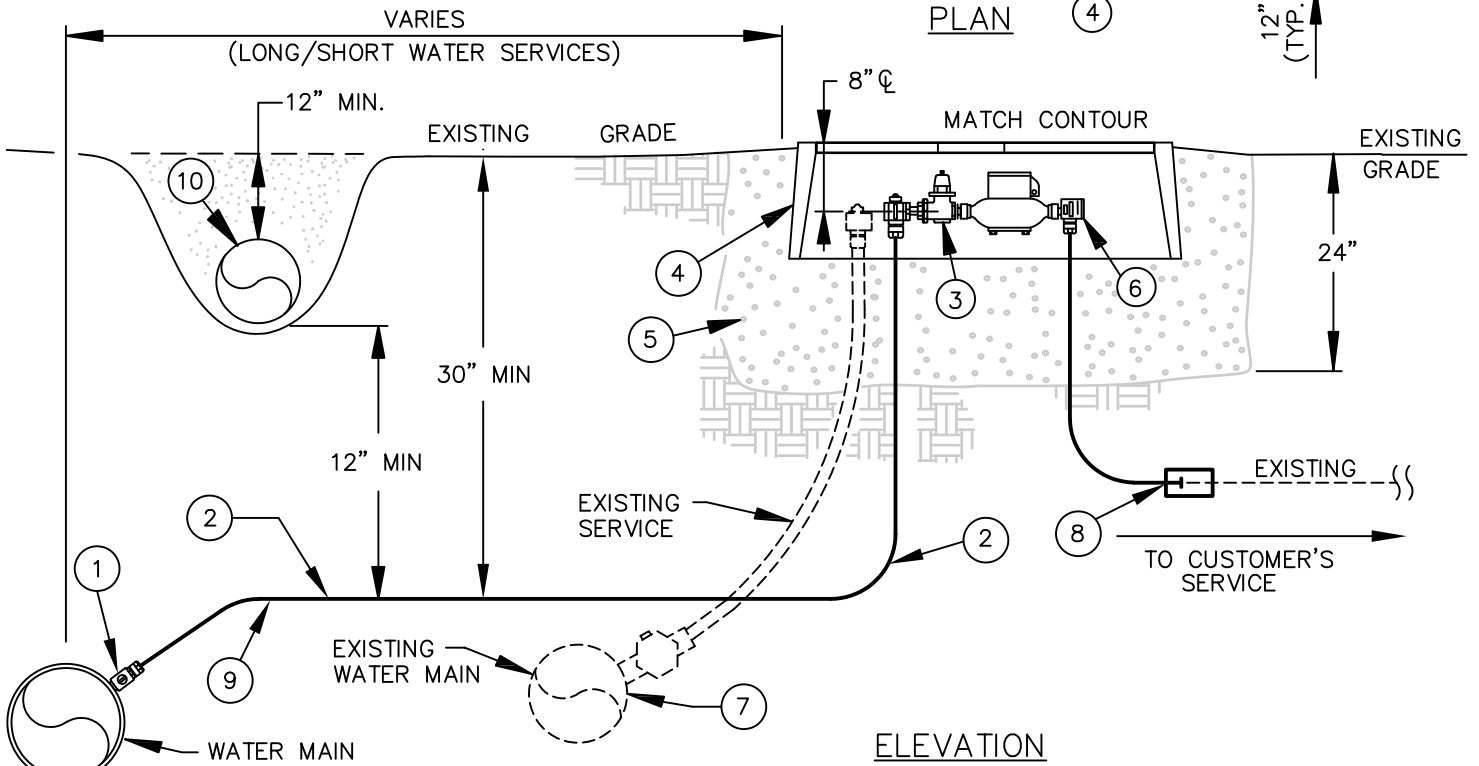
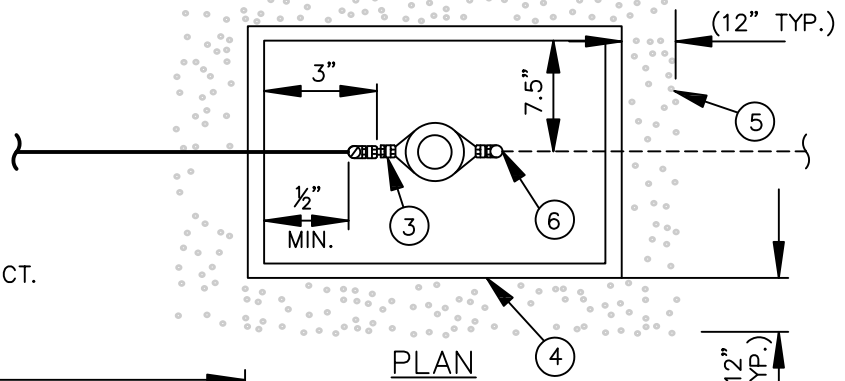


**LEGEND**

- ① 1" AWWA THREAD X MUELLER 110 (OR A.Y. MCDONALD OR FORD QUICK JOINT) BALL CORPORATION STOP.
- ② 1" TYPE "K" SOFT COPPER TUBING – CUT TO FIT–ONE CONTINUOUS LENGTH.
- ③ TRUE 1" MUELLER 110 (OR A.Y. MCDONALD OR FORD QUICK JOINT) BALL ANGLE METER STOP. INSTALL A WILKINS MODEL NR3HRSCDULU PRV AHEAD OF METER AS DIRECTED BY DISTRICT. PRV INSTALLATION WITH A 5/8" X 3/4" METER REQUIRES INSTALLATION OF A FORD A34–NL METER COUPLING ADAPTER COMPACT BODY STYLE, 3/4" PRV ADAPTOR MIP X 3/4" MALE METER THREADS AND 3/4" STRAIGHT METER SWIVEL NUT X 3/4" MIP.
- ④ METER BOX SHALL BE SIGMA/RAVEN RMB–152712 OR MID–STATES MSBCF1527–12. LID SHALL BE NICOR B65NLBLKWAThS.
- ⑤ 12" IN WIDTH AND 24" IN DEPTH OF 5/8" CRUSHED ROCK SURROUNDING THE METER BOX.
- ⑥ MARK BACK SIDE OF SERVICE WITH BLUE 8' 2x4 (5' EXPOSED)
- ⑦ MAINTAIN A MINIMUM OF 12" CLEARANCE UNDER EXISTING OR PROPOSED DRAINAGE DITCH OR CULVERTS.
- ⑧ INSTALL CULVERT (MIN. LENGTH 10') FOR ALL SERVICES UNLESS OTHERWISE DIRECTED BY DISTRICT. INSTALL CULVERT PER CITY OF LAKE STEVENS AND/OR SNOHOMISH COUNTY EDDS.

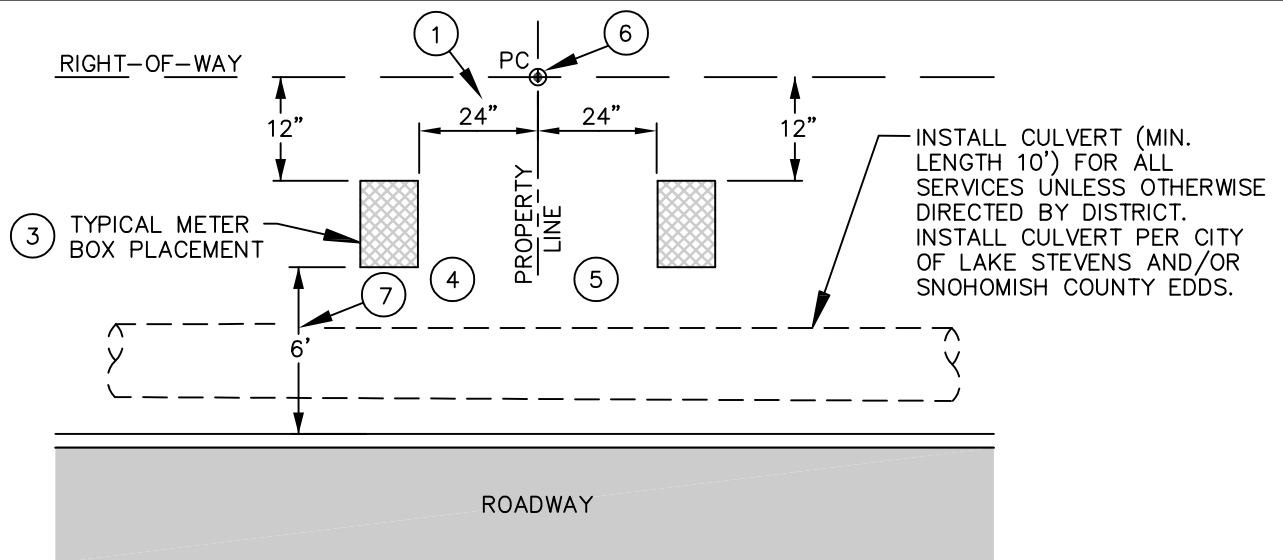
**NOTES:**

1. ALL EXISTING PRV DEVICES WILL BE TRANSFERRED OR REPLACED TO NEW SERVICE AT METER LOCATION.
2. ALL COMMERCIAL SERVICES ARE TO BE BACK FLOW PROTECTED WITH AN RPBA.
3. RELOCATE SERVICE AS DIRECTED BY DISTRICT.

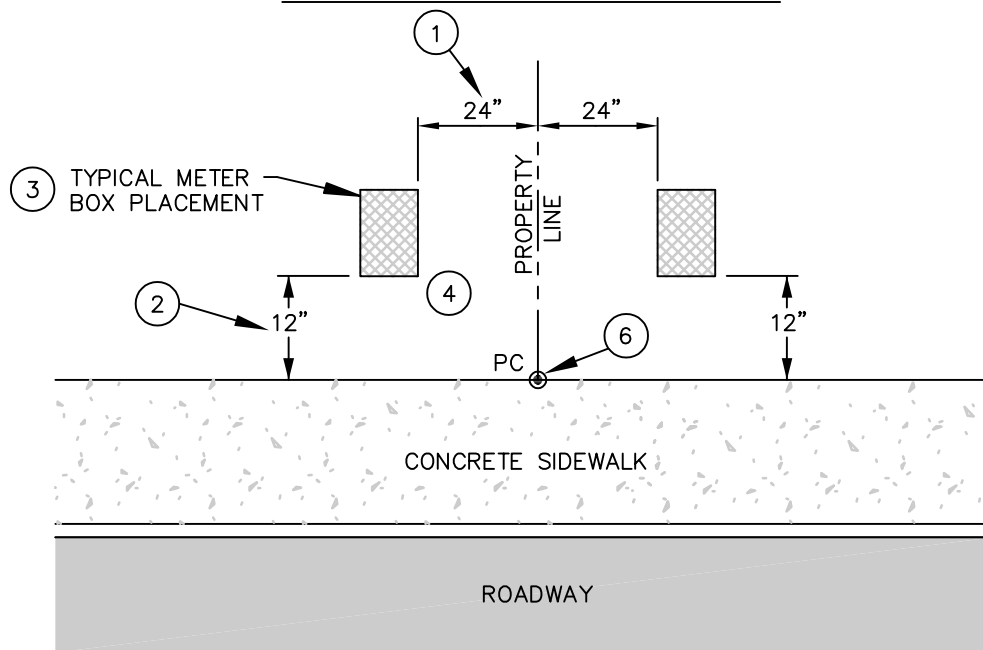


**LEGEND**

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- ② 1" TYPE "K" SOFT COPPER TUBING – CUT TO FIT–ONE CONTINUOUS LENGTH.
- ③ TRUE 1" MUELLER 110 (OR A.Y. MCDONALD OR FORD QUICK JOINT) BALL ANGLE METER STOP. INSTALL A WILKINS MODEL NR3XLHRSCDU PRV AHEAD OF METER AS DIRECTED BY DISTRICT. PRV INSTALLATION WITH A 5/8" X 3/4" METER REQUIRES INSTALLATION OF A FORD A34–NL METER COUPLING ADAPTER COMPACT BODY STYLE, 3/4" PRV ADAPTOR MIP X 3/4" MALE METER THREADS AND 3/4" STRAIGHT METER SWIVEL NUT X 3/4" MIP.
- ④ REPLACE EXISTING METER BOX WITH SIGMA/RAVEN RMB–152712 OR OLDCASTLE/CARSON HW 1527BCF HDPE W/12" BODY. REPLACE EXISTING LID WITH NICOR B65NLBLKWAThS.
- ⑤ 12" IN WIDTH AND 24" IN DEPTH OF 5/8" CRUSHED ROCK SURROUNDING THE METER BOX.
- ⑥ REPLACE EXISTING METER AND INSTALL ANGLE SINGLE CHECK UNLESS DIRECTED OTHERWISE BY THE DISTRICT'S INSPECTOR.
- ⑦ IF EXISTING WATER MAIN IS TO REMAIN IN SERVICE, CLOSE EXISTING CORPORATION STOP AND CUT EXISTING SERVICE LINE AT CORPORATION STOP.
- ⑧ 3/4" OR 1" TYPE–K COPPER PER METER SIZE. PROVIDE NECESSARY FITTINGS TO TRANSITION TO CUSTOMER SERVICE.
- ⑨ ALL NEW WATER SERVICE LINES SHALL BE INSTALLED IN A STRAIGHT LINE FROM WATER MAIN TO METER BOX.
- ⑩ INSTALL (MIN. LENGTH OF 10') CULVERT FOR ALL SERVICES UNLESS OTHERWISE DIRECTED BY DISTRICT. INSTALL CULVERT PER CITY OF LAKE STEVENS AND/OR SNOHOMISH COUNTY EDDS. SIZE DETERMINED BY SNO. COUNTY &/OR PLANS.



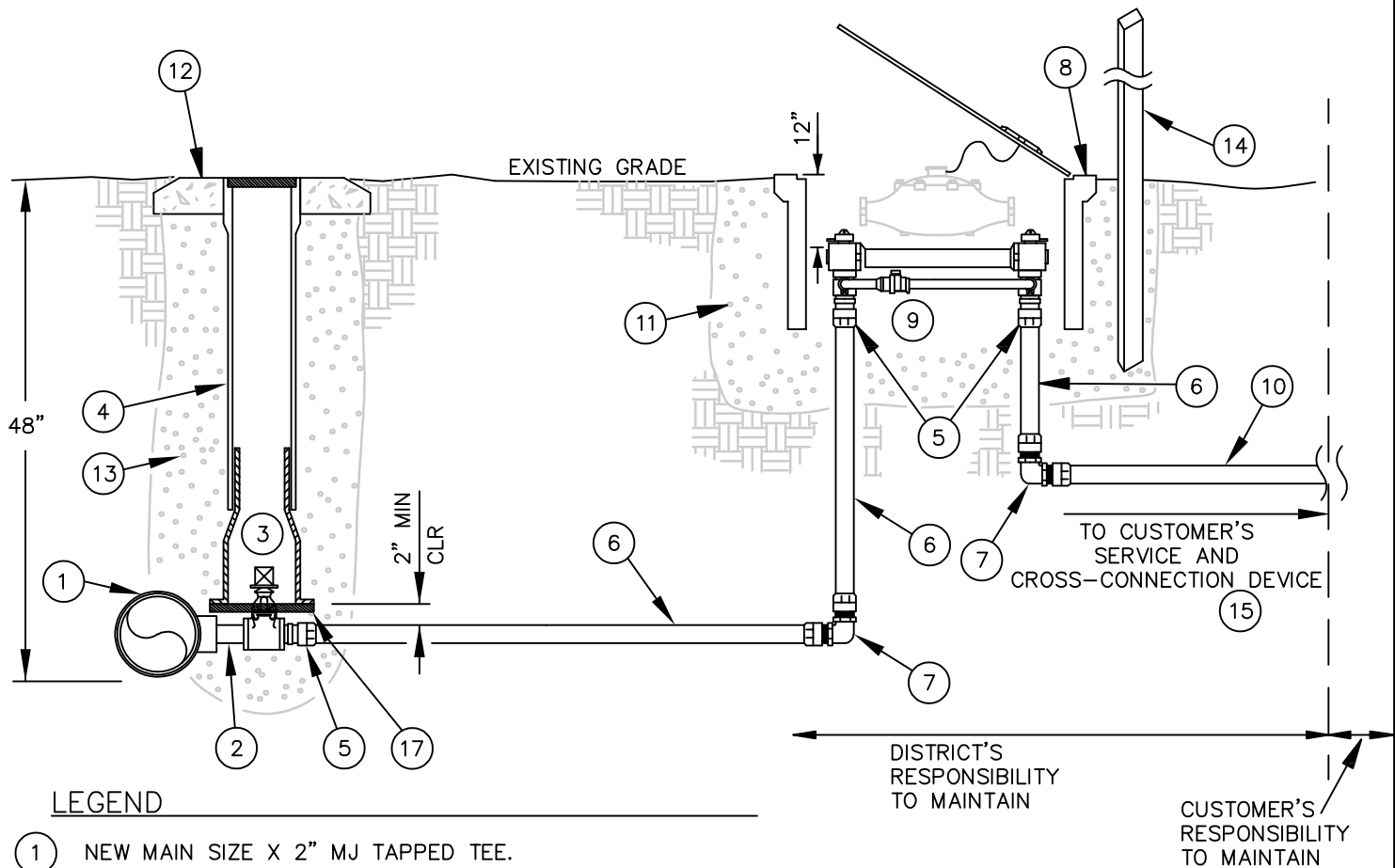
### ROADWAY WITHOUT SIDEWALK



### ROADWAY WITH SIDEWALK

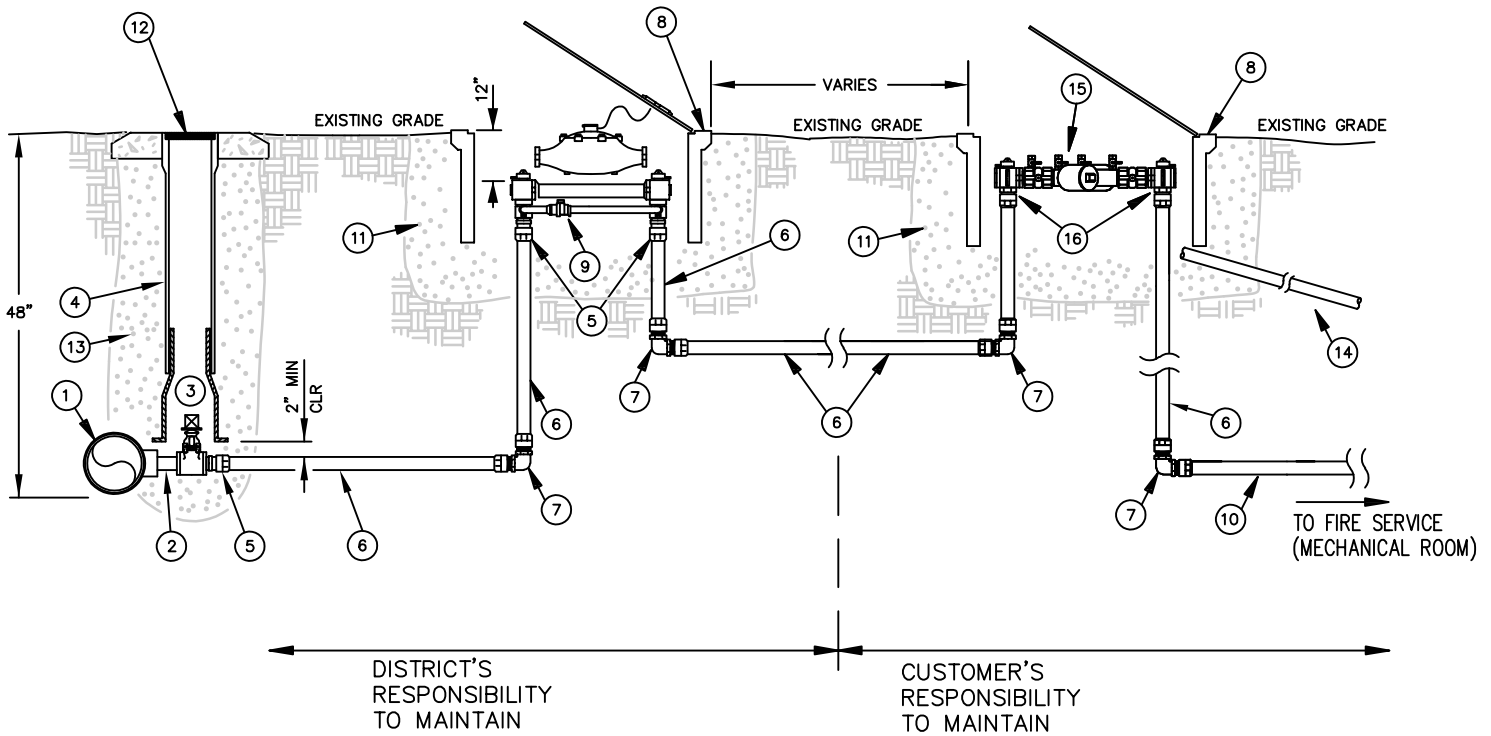
#### LEGEND

- ① ALL METER BOXES SHALL BE PLACED 2' FROM PROPERTY CORNERS.
- ② METERS SHALL BE PLACED 1' BEHIND SIDEWALK AT SIDEWALK GRADE.
- ③ METERS SHALL BE PLACED IN NON-TRAFFIC AREAS WHERE POSSIBLE.
- ④ ALL SERVICE TAPS SHALL BE A MINIMUM OF 10' UPSTREAM OF BLOW-OFF ASSEMBLY.
- ⑤ MAINTAIN A MINIMUM OF 12" CLEARANCE UNDER EXISTING OR PROPOSED DRAINAGE DITCH OR CULVERTS.
- ⑥ PROPERTY CORNERS SHALL BE CLEARLY LOCATED PRIOR TO SERVICE INSTALLATION.
- ⑦ METERS SHALL BE PLACED 6' FROM EDGE OF ASPHALT.



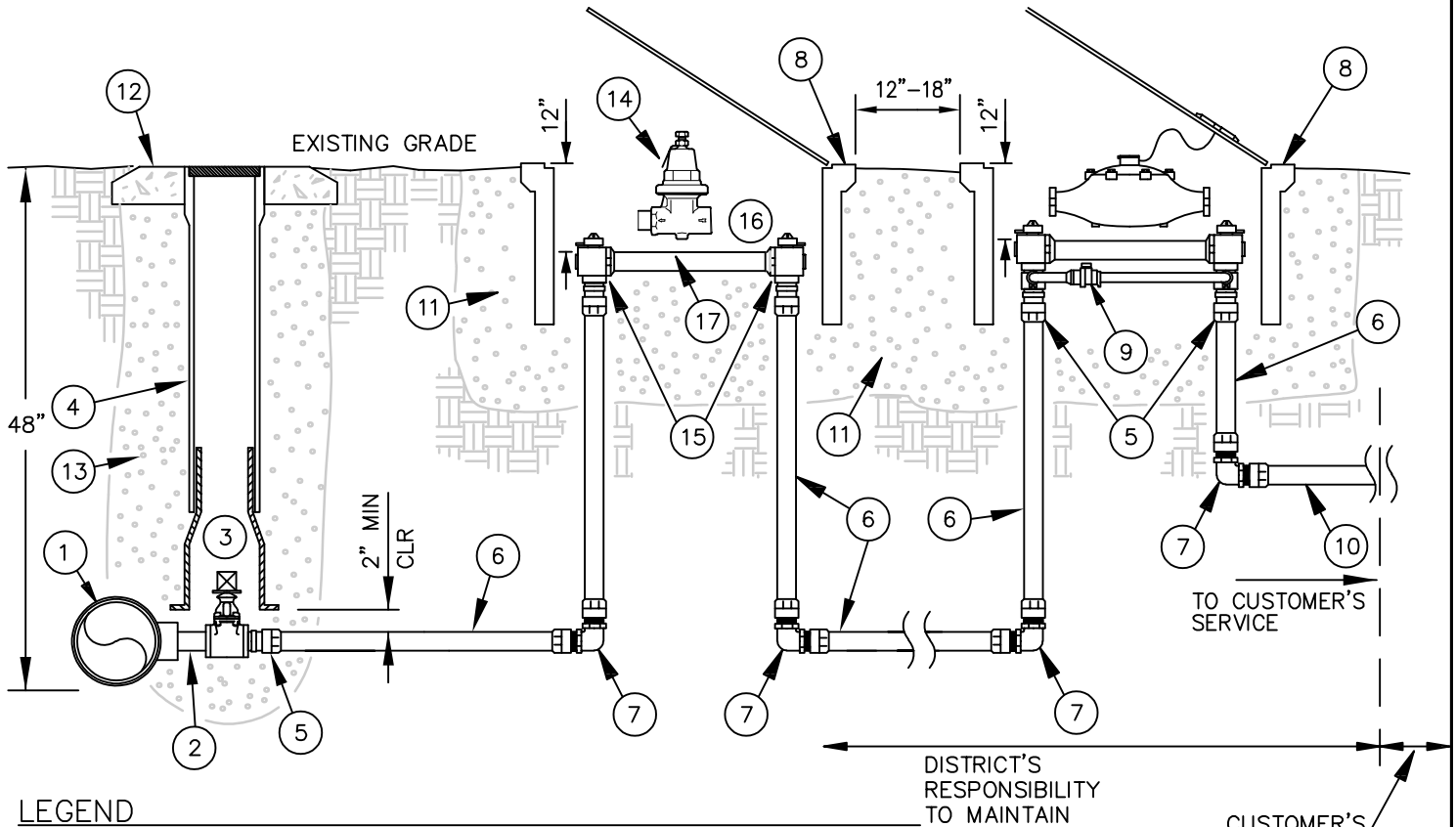
**LEGEND**

- ① NEW MAIN SIZE X 2" MJ TAPPED TEE.
- ② 2" BRASS NIPPLE (6" LONG)
- ③ 2" THREADED RESILIENT SEATED GATE VALVE.
- ④ VALVE BOX (SEE STANDARD DETAIL 407)
- ⑤ 2" MUELLER 110 (OR FORD QUICK JOINT) X M.I.P. STRAIGHT COUPLING.
- ⑥ 2" TYPE K STRAIGHT LENGTH OF SOFT COPPER OR BRASS TUBING AS APPROVED BY THE DISTRICT. PIPE SHALL BE CUT TO FIT IN ONE CONTINUOUS LENGTH.
- ⑦ 2" MUELLER 110 (OR A.Y. MCDONALD OR FORD QUICK JOINT) QUARTER BEND COUPLING.
- ⑧ MID-STATES MSBCF1527-12 OR SIGMA CORP RMB152712-SWM-[B OR W] AND NICOR LID B65NBLKWATSBU. APPROVED H2O LOAD RATING.
- ⑨ 2" METER SETTER WITH CHECK VALVE, 1" HIGH BYPASS A.Y. MCDONALD METER SETTER 30F708WDF776.
- ⑩ 3' MINIMUM STRAIGHT LENGTH OF 2" TYPE K SOFT COPPER TAIL PIECE.
- ⑪ 12" IN WIDTH AND 24" IN DEPTH OF 5/8" CRUSHED ROCK OR SAND BEDDING SURROUNDING THE METER BOX.
- ⑫ VALVE PROTECTION PAD - REFER TO DISTRICT STANDARD 404.
- ⑬ 5/8" CRUSHED ROCK OR SAND BEDDING SURROUNDING THE VALVE BOX.
- ⑭ MARK BACK SIDE OF SERVICE WITH BLUE 8' 2x4 (5' EXPOSED)
- ⑮ ALL COMMERCIAL METERS REQUIRE AN RPBA IN A HOT BOX. REFER TO DISTRICT STANDARD 604A, 604B, AND 604C.
- ⑯ SET VALVE BOX ON ETHAFOAM 2" THICK (TYP)



**LEGEND**

- ① NEW MAIN SIZE X 2" MJ TAPPED TEE.
- ② 2" BRASS NIPPLE (6" LONG).
- ③ 2" THREADED RESILIENT SEATED GATE VALVE.
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- ⑦ 2" MUELLER 110 (OR A.Y. MCDONALD OR FORD QUICK JOINT) QUARTER BEND COUPLING.
- ⑧ MID STATES MSBCF1730-18 AND MSBCF 1730-RL. APPROVED H2O LOAD RATING.
- ⑨ 2" METER SETTER WITH CHECK VALVE, 1" HIGH BYPASS A.Y. MCDONALD METER SETTER 30F708WDF776.
- ⑩ 3' MINIMUM STRAIGHT LENGTH OF 2" TYPE K SOFT COPPER TAIL PIECE.
- ⑪ 12" IN WIDTH AND 24" IN DEPTH OF 5/8" CRUSHED ROCK OR SAND BEDDING SURROUNDING THE METER BOX.
- ⑫ VALVE PROTECTION PAD - REFER TO DISTRICT STANDARD 404.
- ⑬ 5/8" CRUSHED ROCK OR SAND BEDDING SURROUNDING THE VALVE BOX.
- ⑭ 3" SCHED. 40 PVC DRAIN LINE TO DAYLIGHT OR STORM SYSTEM.
- ⑮ 2" DOUBLE CHECK VALVE ASSEMBLY. ASSEMBLY MUST BE LISTED ON CURRENT WASHINGTON STATE APPROVED LIST OF BACKFLOW PREVENTION ASSEMBLIES. ALL TEST COCKS SHALL BE EQUIPT WITH BRASS PLUGS. INSTALLATION, ANNUAL TESTING, AND MAINTENANCE OF THE ASSEMBLY SHALL BE THE RESPONSIBILITY OF THE CUSTOMER. DCVA SHALL BE TESTED BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER (BAT) AND INSPECTED BY THE DISTRICT PRIOR TO TURNING THE WATER ON. CONTACT DISTRICT FOR TEST FORMS AND TO SCHEDULE INSPECTION. DCVA SHALL HAVE 12" CLEARANCE TO PEA GRAVEL WHICH SHALL BE A MINIMUM OF 12" DEEP. REFER TO DISTRICT STANDARD DETAIL 606.
- ⑯ 2" MUELLER 300 - 110 ANGLE METER VALVE (B-24276) WITH BRASS METER FLANGE (FORD CF38-77-1.937)



**LEGEND**

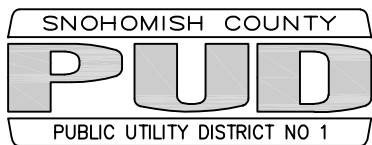
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- ⑦ 2" MUELLER 110 (OR A.Y. MCDONALD OR FORD QUICK JOINT) QUARTER BEND COUPLING.
- ⑧ MID STATES MSBCF1730-18 AND MSBCF 1730-RL. APPROVED H2O LOAD RATING.
- ⑨ 2" METER SETTER WITH CHECK VALVE, 1" HIGH BYPASS A.Y. MCDONALD METER SETTER 30F708WDF776.
- ⑩ 3' MINIMUM STRAIGHT LENGTH OF 2" TYPE K SOFT COPPER TAIL PIECE.
- ⑪ 12" IN WIDTH AND 24" IN DEPTH OF 5/8" CRUSHED ROCK OR SAND BEDDING SURROUNDING THE METER BOX.
- ⑫ VALVE PROTECTION PAD - REFER TO DISTRICT STANDARD 404.
- ⑬ 5/8" CRUSHED ROCK OR SAND BEDDING SURROUNDING THE VALVE BOX.
- ⑭ 2" WILKINS PRV MODEL NR3. 2" METER FLANGES, & 2" NIPPLES (4" IN LENGTH).
- ⑮ 2-2" COMP. X ANGLE MTR STOPS.
- ⑯ CONTRACTOR TO BUILD JUMPER FOR PURPOSE OF 250 PSI PRESSURE TEST.
- ⑰ 2" TEST SPOOL

DISTRICT'S  
RESPONSIBILITY  
TO MAINTAIN

CUSTOMER'S  
RESPONSIBILITY  
TO MAINTAIN

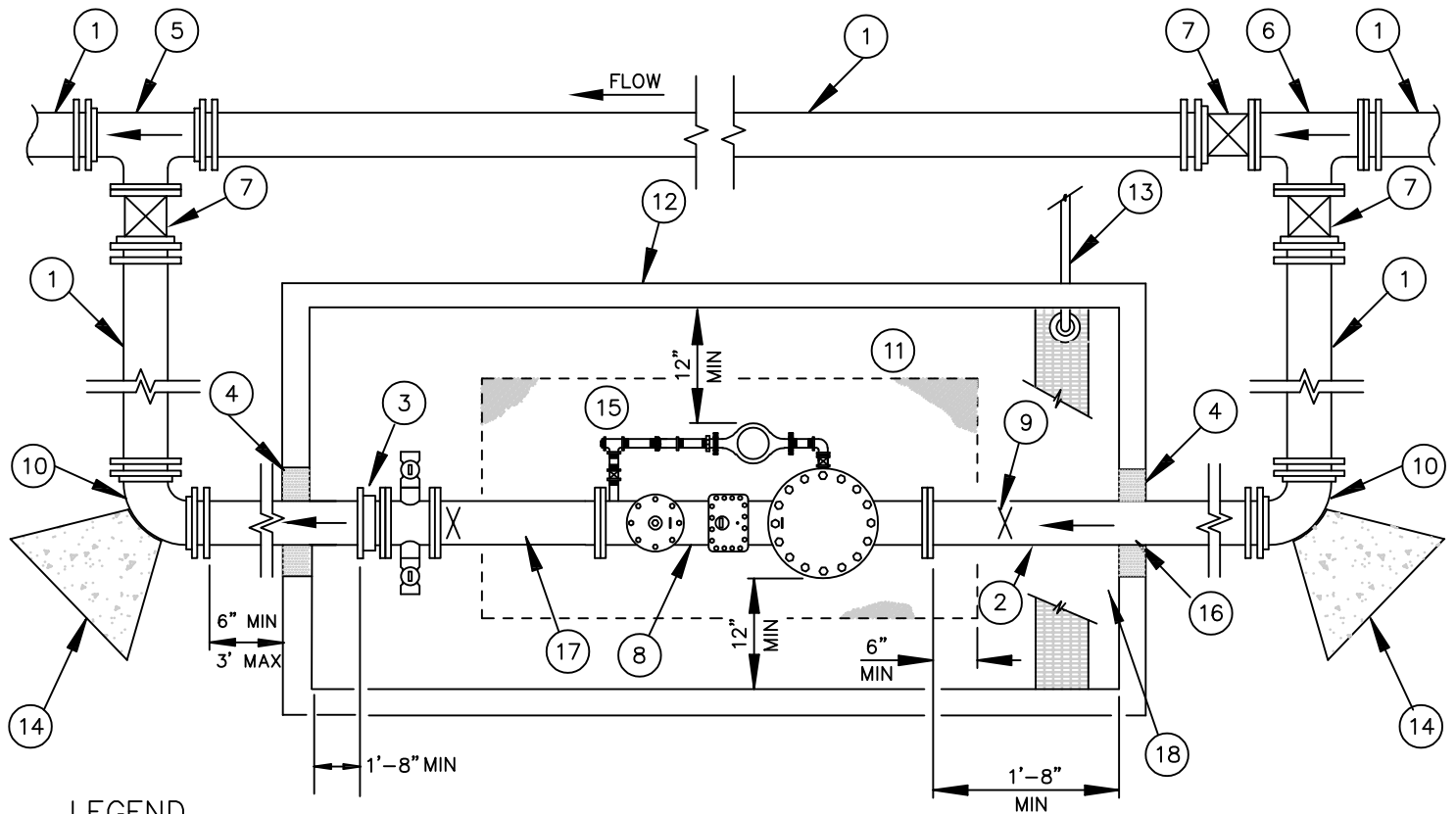
TO CUSTOMER'S  
SERVICE

2" STANDARD METER  
INSTALLATION WITH 2" PRV



DATE	2021
ENGR	
MMS	

STANDARD	
<b>113</b>	



**LEGEND**

- ① DUCTILE IRON PIPE.
- ② DUCTILE IRON PIPE (PExFL).
- ③ MEGA FLANGE.
- ④ NON-SHRINK GROUT.
- ⑤ TEE (MJxFL) W/MEGA LUGS.
- ⑥ TEE (FL) W/(FLxMJ) ADAPTOR.
- ⑦ GV (FLxMJ W/MEGA LUG).
- ⑧ METER ASSEMBLY SEE NOTES.
- ⑨ PIPE SUPPORT
- ⑩ 90 DEGREE BEND (ALL MJ W/MEGA LUGS).
- ⑪ L.W. (H-20 WHERE TRAFFIC LOADED) SHOCK ABSORBING CYLINDER ASSISTED LIDS (OR EQUAL) APPROVED BY DISTRICT.
- ⑫ UTILITY VAULT CO PRECAST VAULT. VAULT SHALL HAVE 2-COATS OF ASPHALTIC SOLUTION, GALVANIZED LADDER W/ LADDER-UP SAFETY POST.
- ⑬ 4" GRAVITY SUMP DRAIN EXTEND TO DAYLIGHT OR STORM DRAINAGE SYSTEM.
- ⑭ CONC THRUST BLOCK SEE STD DRAWING 301.
- ⑮ FLANGE SPOOL WITH TWO 2" TEST OUTLETS & 2" BALL CORPS 2-1/2" NST MALE ADAPTOR W/CAPS.
- ⑯ STRAIGHT LENGTH OF PIPE EQUIVALENT TO 6 TIMES PIPE DIAMETER FROM 90 DEG BEND TO FLANGE OF METER
- ⑰ FLANGE SPOOL LENGTH TO BE 6 TIMES DIAMETER OF PIPE
- ⑱ 6" PVC OR EQUAL DRAIN. SLOPE TO DAYLIGHT OR TIE INTO STORM DRAIN SYSTEM. ONLY WITH DISTRICT WRITTEN APPROVAL INSTALL ZOELLER SUBMERSIBLE SUMP PUMP 3/10 HP MODEL NO. M53-D OR GCS AUTOMATIC SUMP DRAIN EJECTOR ASSY MODEL #996633-51-2.

**NOTES**

1. MINIMUM VAULT INSIDE HEIGHT SHALL BE 78".
2. METER SHALL BE NEPTUNE PROTECTUS AND HAVE A 6" MINIMUM CLEARANCE BETWEEN FLOOR AND LOWEST PART OF METER.
3. MINIMUM CLEARANCE BETWEEN METER AND TOP OF VAULT SHALL BE 36".
4. MINIMUM CLEARANCE BETWEEN METER AND SIDE WALL SHALL BE 12".
5. PIPING SHALL BE COATED WITH 1-COAT OF RUST RED PRIMER AND 2-COATS SAFETY BLUE ENAMEL.
6. PIPING AND VALVES SHALL BE SUPPORTED BY "STAND-ON" PIPE SUPPORTS (OR APPROVED EQUAL). THE NUMBER OF AND PLACEMENT OF SUPPORT STANDS TO BE DETERMINED BY THE ENGINEER ACCORDING TO SIZE OF PIPE AND METER.
7. METER SHALL BE EQUIPPED W/T-10 REMOTE READS. READER PADS SHALL BE MOUNTED TO THE EXTERIOR OF THE VAULT LID.

## HYDRANT PORT SCHEDULE

NOTES: ALL HYDRANTS SHALL BE FURNISHED WITH 4-1/2" NST PUMPER PORT.

SIZE OF STORZ ADAPTOR DEPENDENT UPON FIRE DISTRICT JURISDICTION OF INSTALLATION.

FIRE DISTRICT 4	(SNOHOMISH)	4" STORZ ADAPTER
FIRE DISTRICT 8	(LAKE STEVENS)	4" STORZ ADAPTER
FIRE DISTRICT 14	(NORTH COUNTY FIRE & EMS)	4" STORZ ADAPTER
FIRE DISTRICT 17	(GRANITE FALLS)	4" STORZ ADAPTER
FIRE DISTRICT 16	(LAKE ROESIGER)	NO STORZ REQUIRED
FIRE DISTRICT 22	(CORBIN)	4" STORZ ADAPTER
FIRE DISTRICT 26	(GOLD BAR)	NO STORZ REQUIRED
MARYSVILLE FIRE DISTRICT		5" STORZ ADAPTER

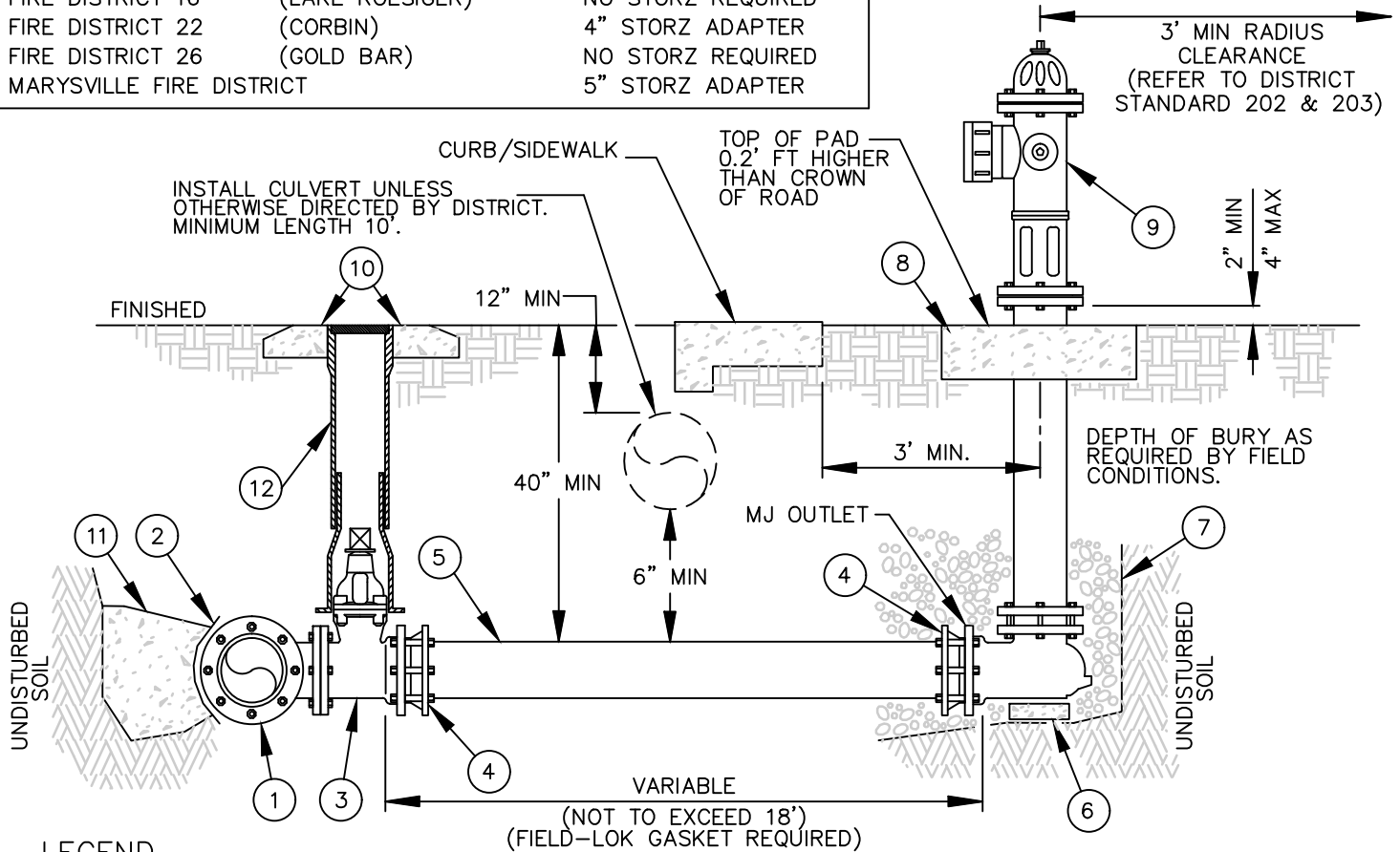
## HYDRANT PAINT SCHEME

BODY-SAFETY YELLOW

BONNET-SAFETY COLOR AS FOLLOWS:

COLOR	CAPACITY (GPM)
LIGHT BLUE	1500 OR GREATER
GREEN	1000 TO 1499
ORANGE	500 TO 999

NOTES: PAINT SHALL BE OIL BASED AND HAND BRUSH APPLIED



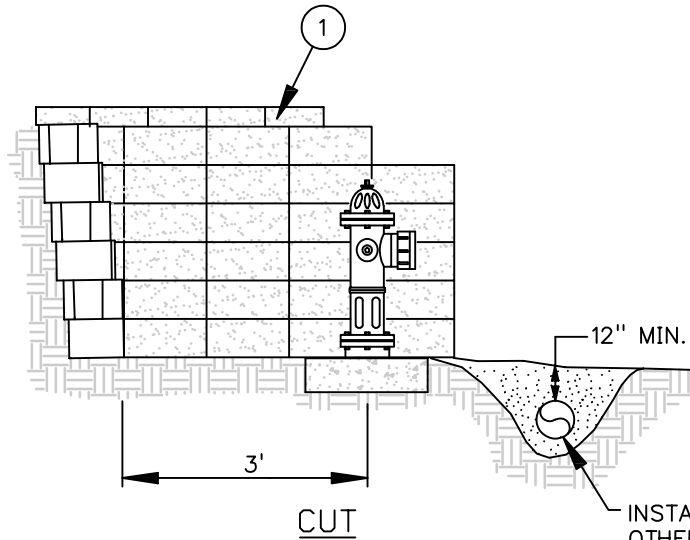
### LEGEND

- |  |   |
|--|---|
| <p>① MAIN SIZE X 6" TEE (MJXFL) OR AS NOTED ON THE DISTRICT PLANS.</p> <p>② 2-LAYERS OF 6-MIL POLY WRAP AROUND FITTINGS.</p> <p>③ 6" RESILIENT SEATED GATE VALVE (FLXMJ).</p> <p>④ 6" MEGA-LUG.</p> <p>⑤ 6" CL-52 DUCTILE IRON PIPE.</p> <p>⑥ 1-18"x18"x4" CONCRETE SUPPORT BLOCK.</p> | <p>⑦ 1/4-CUBIC YARD OF 7/8" WASHED DRAIN ROCK AROUND BASE. WRAP IN 6-MIL PLASTIC SHEETING.</p> <p>⑧ 36"x36"x8" CONCRETE COLLAR ADJUSTED TO FINISH GRADE WITH BROOM FINISH.</p> <p>⑨ APPROVED FIRE HYDRANT (REFER TO APPROVED LIST BELOW).</p> <p>⑩ VALVE PROTECTION PAD - REFER TO DISTRICT STANDARD 404.</p> <p>⑪ CONCRETE THRUST BLOCK - REFER TO DISTRICT STANDARD 301.</p> <p>⑫ VALVE BOX - REFER TO DISTRICT STANDARD 407.</p> |
|--|---|

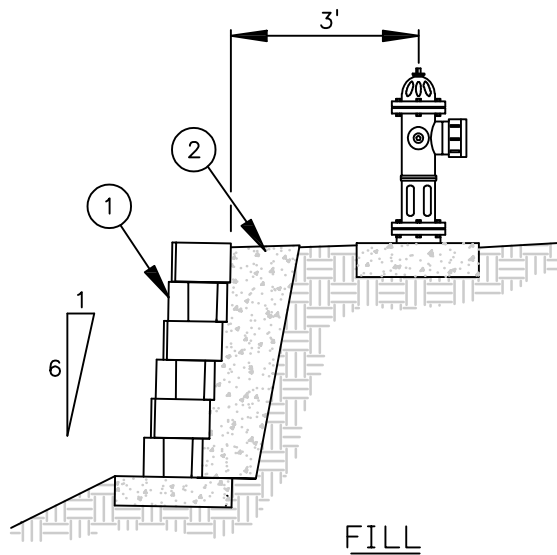
### NOTES

1. APPROVED HYDRANTS:  
MUELLER CENTURION A-423; M&H STYLE 929T;  
CLOW MEDALLION; AMERICAN AVK SERIES 2780  
WATROUS.
2. DEPTH OF HYDRANT BURY SHALL BE AS REQUIRED BY FIELD CONDITIONS.
3. WHERE 6" PIPE LENGTH EXCEEDS 17 FEET ONE JOINT MAY BE ALLOWED WITH A FIELD-LOK GASKET. DISTRICT INSPECTION IS REQUIRED DURING THE INSTALLATION OF FIELD-LOK GASKET. 8" MAIN REQUIRED ON NEW CONSTRUCTION.
4. BLUE TOP TRAFFIC REFLECTOR SHALL BE INSTALLED IN ACCORDANCE WITH FIRE DISTRICT STANDARDS.





INSTALL 12"  $\phi$  CULVERT UNLESS OTHERWISE DIRECTED BY DISTRICT. INSTALL CULVERT PER CITY OF LAKE STEVENS AND/OR SNOHOMISH COUNTY EDDS. MINIMUM CULVERT LENGTH 10'.



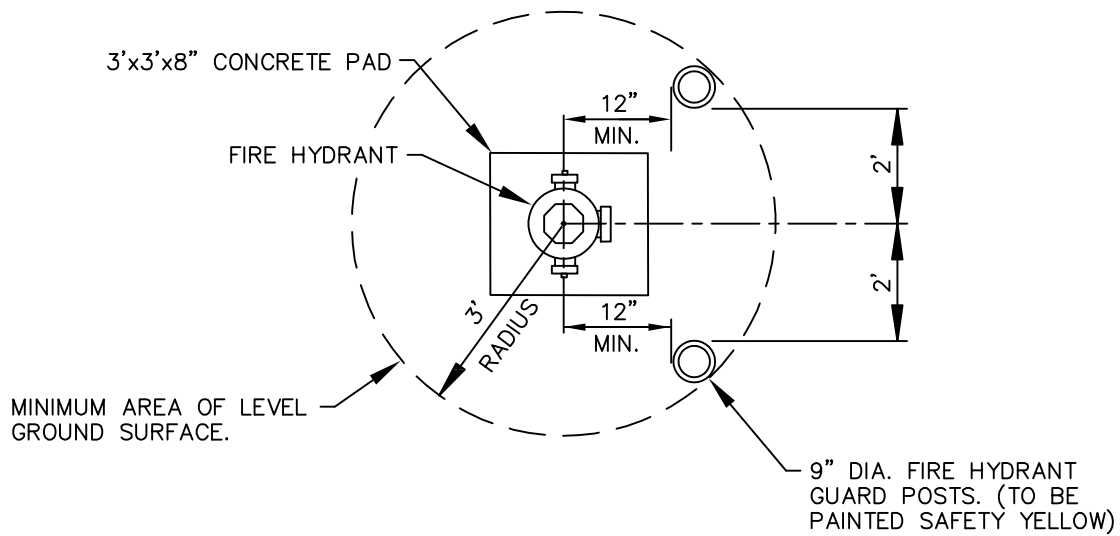
FILL

### LEGEND

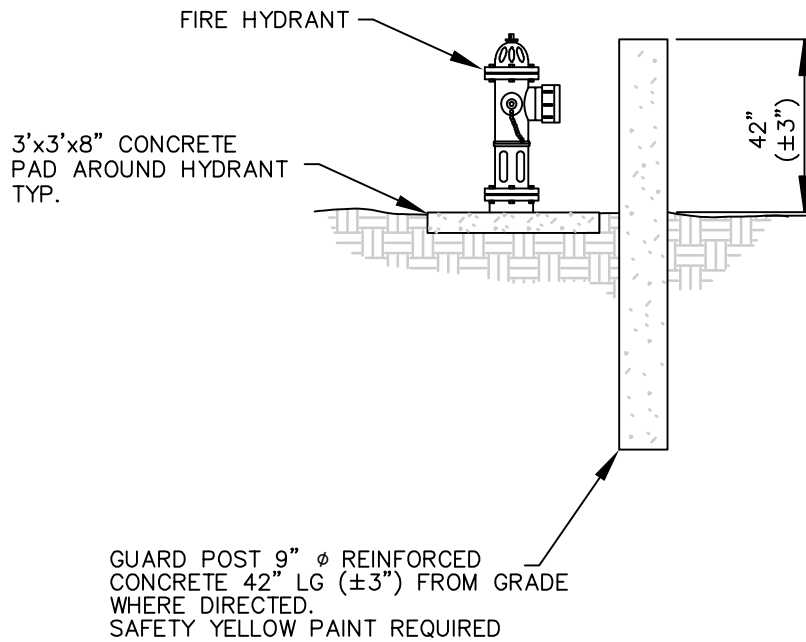
- ① INSTALL CORNERSTONE F100 BLOCK UNITS. ESTABLISH A COMPACTED AGGREGATE LEVELING PAD. PLACEMENT OF FIRST COURSE BLOCKS ON LEVELING SAND. BACKFILL TO PROPER DENSITY. STACK TO DESIRED HEIGHT (4' MAX HEIGHT). ON THE FINAL COURSE CLEAN THE TOP OF THE BLOCK UNITS BY REMOVING THE NUBS AND SWEEPING DEBRIS. ADHERE CAPS TO THE BLOCK UNITS WITH A CONCRETE ADHESIVE.
- ② COMPACTED SELECT FILL MATERIAL AS REQUIRED BY THE DISTRICTS INSPECTOR.

### NOTES

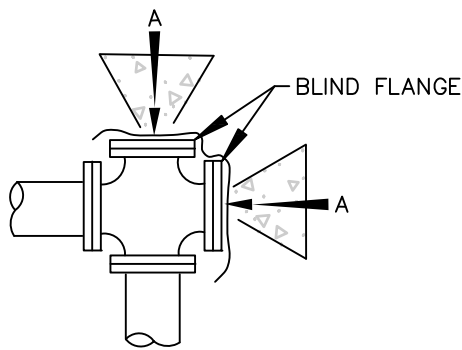
1. IN THE EVENT THAT CUT OR FILL SLOPES EXCEED 3:1, A WALL SHALL BE REQUIRED AS SHOWN ABOVE.
2. MAXIMUM WALL HEIGHT OF 4- FEET.
3. 3- FEET MINIMUM CLEARANCE IS REQUIRED AROUND THE HYDRANT IN ALL DIRECTIONS.



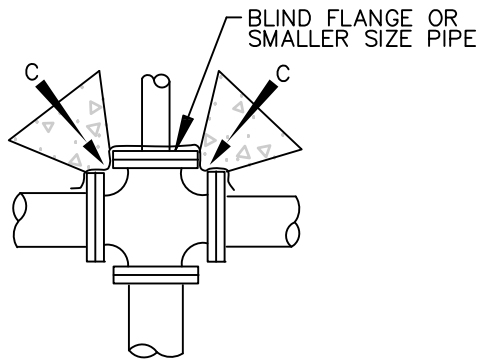
PLAN



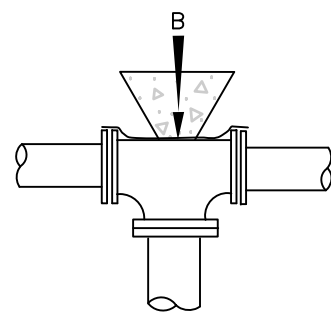
ELEVATION



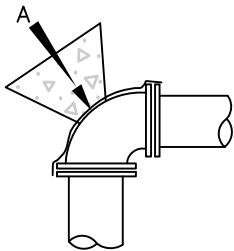
CAPPED CROSS



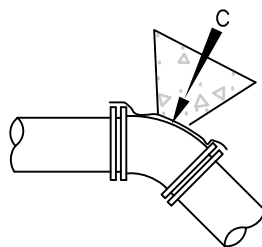
CROSS



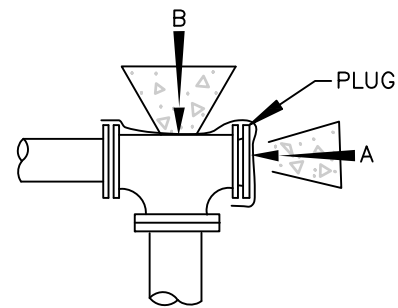
TEE



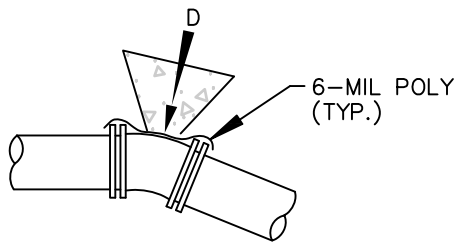
90° BEND



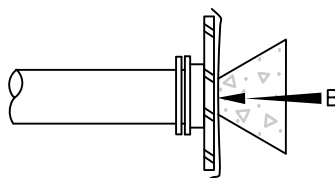
45° BEND



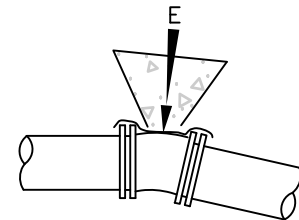
TEE



22-1/2° BEND



CAP



11-1/4° END

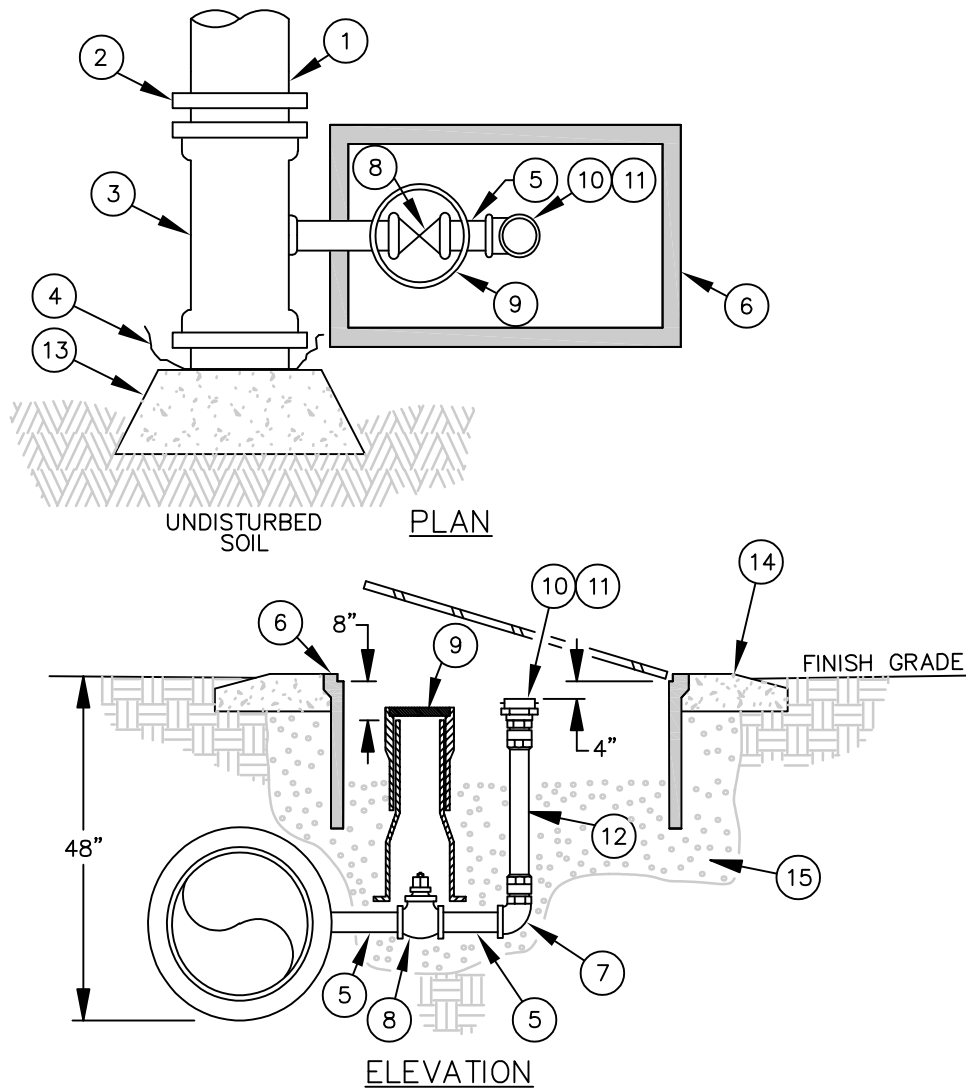
**NOTES**

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.
2. BEARING AREA OF CONCRETE THRUST-BLOCK BASED ON 200 PSI PRESSURE AND SAFE SOIL BEARING LOAD OF 2,000 POUND PER SQUARE FOOT.
3. AREAS MUST BE ADJUSTED FOR OTHER PIPE SIZES, PRESSURES AND SOIL CONDITIONS.
4. CONCRETE BLOCKING SHALL BE CAST IN PLACE AND HAVE A MINIMUM OF 1/4 SQUARE FOOT BEARING AGAINST THE FITTING.
5. NO CONCRETE SHALL BE PLACED NEAR BOLTS.
6. BLOCK SHALL BEAR AGAINST FITTINGS ONLY AND SHALL BE CLEAR OF JOINTS TO PERMIT TAKING UP OR DISMANTLING OF JOINT.
7. CONTRACTOR SHALL INSTALL BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS UNDER ALL CONDITIONS OF SERVICE.
8. CONTRACTOR SHALL PLACE A 6-MIL FILM BETWEEN THE CONCRETE AND THE FITTING.

**THRUST BLOCK - TABLE  
MIN. BEARING AREA AGAINST UNDISTURBED SOIL  
SQUARE FEET**

PIPE Size	A(ft.) <sup>2</sup>	B(ft.) <sup>2</sup>	C(ft.) <sup>2</sup>	D(ft.) <sup>2</sup>	E(ft.) <sup>2</sup>
4"	3	1	1	1	1
6"	4	4	2	1	1
8"	7	6	4	2	1
10"	11	10	6	3	2
12"	16	14	9	5	3
14"	22	19	12	6	3
16"	29	25	16	8	4
18"	36	31	20	10	5
20"	45	39	24	13	6
22"	54	47	29	15	8
24"	64	56	35	18	9
28"	87	76	48	24	12
30"	101	87	55	28	14
36"	145	125	78	40	20
42"	197	171	107	55	27
48"	257	223	140	71	36





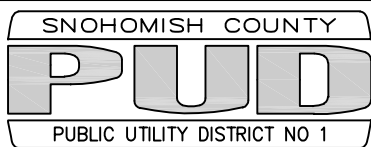
**LEGEND**

- |  |  |
|--|--|
| <p>① CLASS-52 DUCTILE IRON WATER MAIN. MECHANICALLY RESTRAINED (SEE DISTRICT GENERAL NOTE 14 FOR TOTAL LENGTH OF RESTRAINED PIPE).</p> <p>② MEGA-LUG</p> <p>③ MAIN SIZE X 2" I.P. TEE (MJ); 1-MAIN SIZE SOLID PLUG (MJ)</p> <p>④ 6-MIL POLY WRAP AROUND FITTINGS</p> <p>⑤ 2" BRASS NIPPLES (6" LONG)</p> <p>⑥ MID STATES MSBCF1730-18 AND MSBCF 1730-L. APPROVED H2O LOAD RATING.</p> <p>⑦ MUELLER 110 (OR FORD OR AY MCDONALD QUICK JOINT) X F.I.P. 90° (FIP x COMP) BEND COUPLING. NO DRAIN HOLE SHALL BE DRILLED.</p> | <p>⑧ 2" THREADED RESILIENT SEATED GATE VALVE</p> <p>⑨ 18" X 30" VALVE BOX (STYLE 940) 6" SOIL PIPE SHALL BE USED IF EXTRA DEPTH IS REQUIRED</p> <p>⑩ 2" MUELLER 110 (OR FORD OR AY MCDONALD QUICK JOINT) X F.I.P. THREAD STRAIGHT COUPLING</p> <p>⑪ 2" X 2-1/2" BRASS NST HOSE ADAPTOR AND CAP</p> <p>⑫ 2" STRAIGHT TYPE "K" COPPER</p> <p>⑬ CONCRETE THRUST BLOCKING AS REQUIRED REFER TO DISTRICT STANDARD 301</p> <p>⑭ CONCRETE PROTECTION PAD - REFER TO DISTRICT STANDARD 404.</p> <p>⑮ 12" IN WIDTH AND 24" IN DEPTH OF 5/8" CRUSHED ROCK OR SAND BEDDING SURROUNDING THE BOX.</p> |
|--|--|

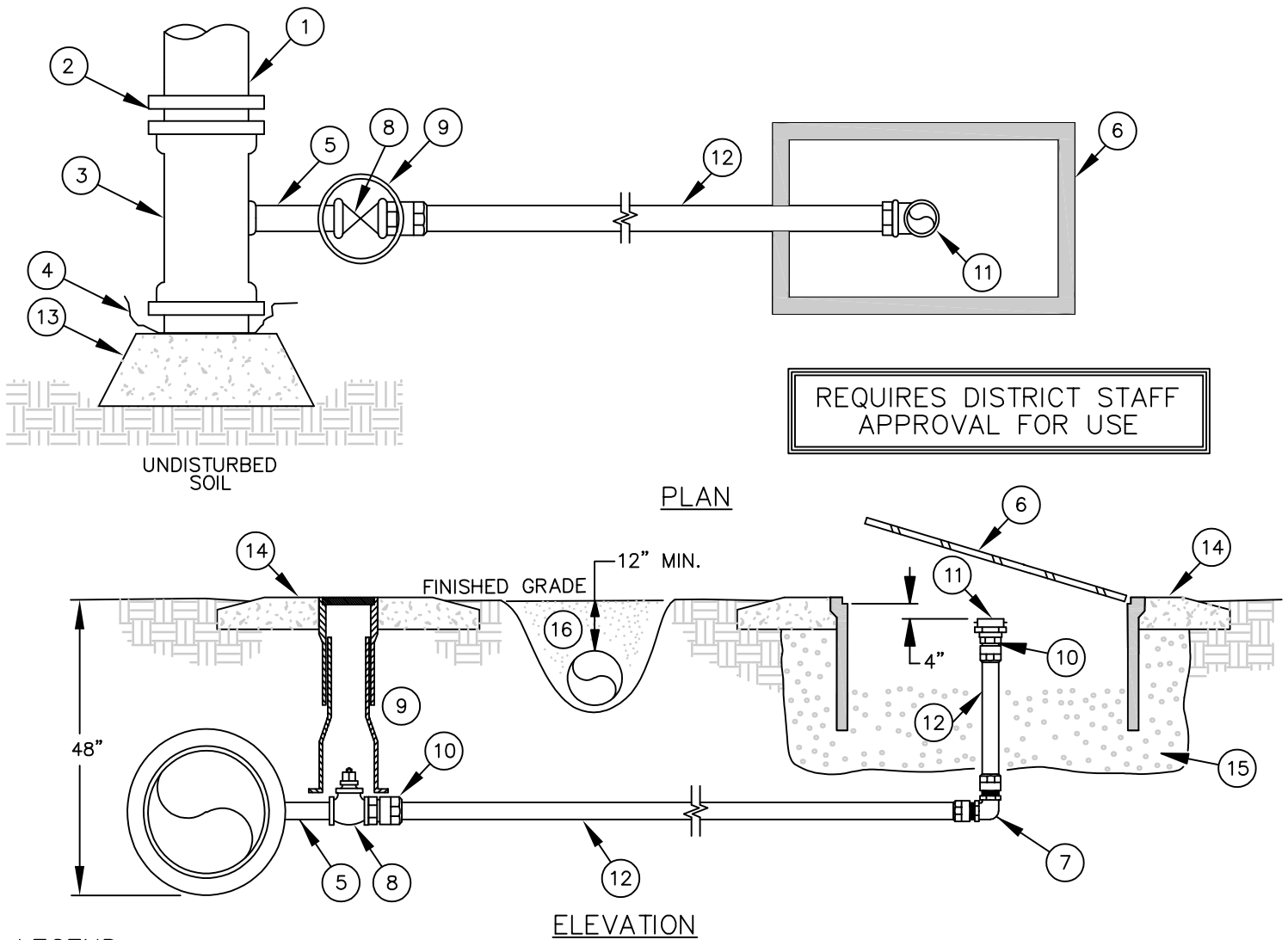
**NOTES**

1. PAINT METER BOX LID WITH (2) COATS SAFETY BLUE, OIL BASED ENAMEL (HAND BRUSH APPLIED).
2. CONTRACTOR MAY USE 2" THREADED BRASS NIPPLES AND 2" BRASS F.I.P. FITTINGS IN LIEU OF COMPRESSION FITTINGS.
3. LOCATE BLOW-OFF IN NON-TRAFFIC AREAS WHERE POSSIBLE (REFER TO STANDARD 403 AS NECESSARY).

**2" FLUSH STYLE  
BLOW-OFF ASSEMBLY**



DATE	STANDARD
2021	
ENGR	<b>402</b>
MMS	



REQUIRES DISTRICT STAFF APPROVAL FOR USE

PLAN

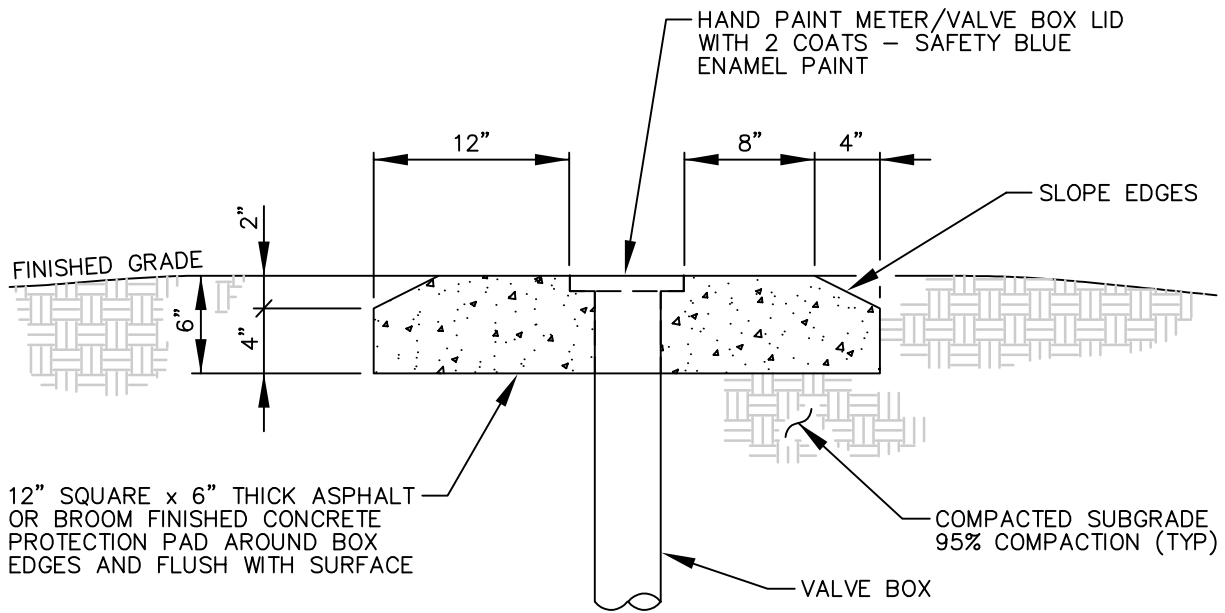
ELEVATION

LEGEND

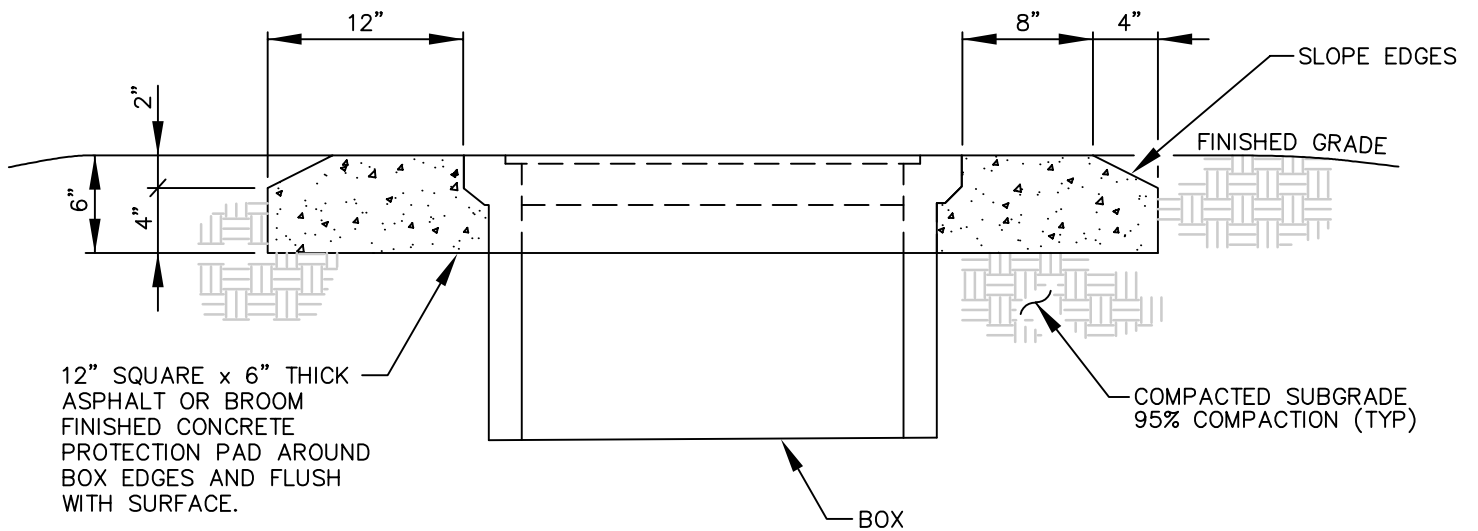
- |  |   |
|--|---|
| <p>(1) CL-52 DUCTILE IRON WATER MAIN. MECHANICALLY RESTRAINED (SEE DISTRICT ENGINEER FOR TOTAL LENGTH OF RESTRAINED PIPE).</p> <p>(2) MEGA-LUG</p> <p>(3) MAIN SIZE X 2" I.P. TEE (MJ); 1-MAIN SIZE SOLID PLUG (MJ)</p> <p>(4) 6-MIL POLY WRAP AROUND FITTINGS</p> <p>(5) 2" BRASS NIPPLES (6" LONG)</p> <p>(6) MID STATES MSBCF1730-18 AND MSBCF 1730-L. APPROVED H2O LOAD RATING.</p> <p>(7) 2" MUELLER 110 (OR FORD OR AY MCDONALD QUICK JOINT) (90° BEND COMP X COMP) NO DRAIN HOLE SHALL BE DRILLED.</p> <p>(8) 2" THREADED RESILIENT SEATED GATE VALVE</p> | <p>(9) 18" X 30" VALVE BOX (STYLE 940)</p> <p>(10) 2" MUELLER 110 (OR FORD OR AY MCDONALD QUICK JOINT) X F.I.P. THREAD STRAIGHT COUPLING</p> <p>(11) 2" X 2-1/2" BRASS NST HOSE ADAPTOR AND CAP</p> <p>(12) 2" STRAIGHT TYPE "K" COPPER</p> <p>(13) CONCRETE THRUST BLOCKING AS REQUIRED REFER TO DISTRICT STANDARD 301</p> <p>(14) CONCRETE PROTECTION PAD - REFER TO DISTRICT STANDARD 404.</p> <p>(15) 12" IN WIDTH AND 24" IN DEPTH OF 5/8" CRUSHED ROCK OR SAND BEDDING SURROUNDING THE BOX.</p> <p>(16) INSTALL (MIN. LENGTH OF 10') 12" Ø CULVERT. INSTALL CULVERT PER SNOHOMISH COUNTY EDDS OR CITY OF LAKE STEVENS EDDS.</p> |
|--|---|

NOTES

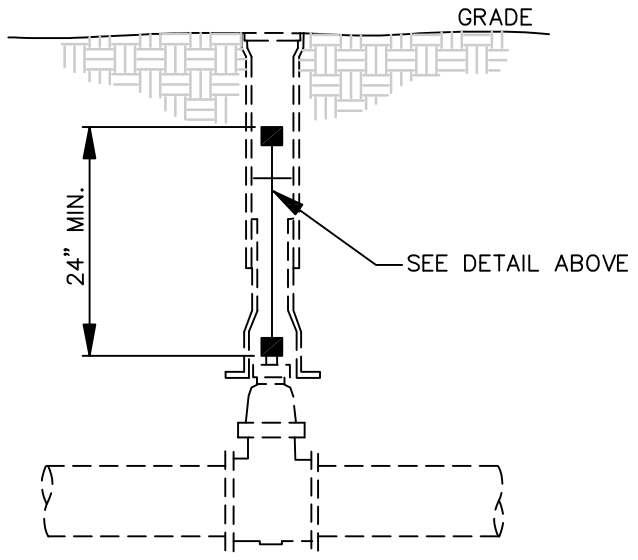
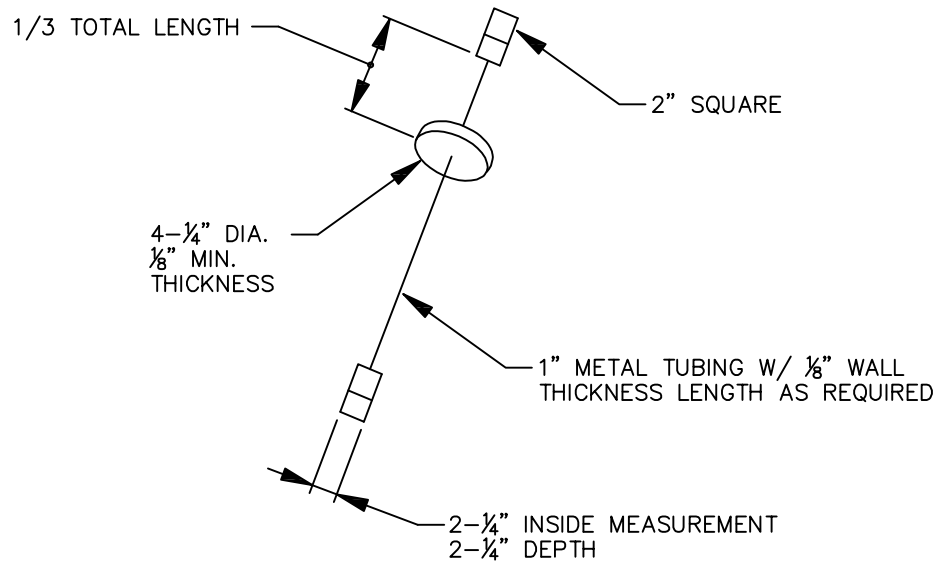
1. PAINT METER BOX LID WITH (2) COATS SAFETY BLUE, OIL BASED ENAMEL (HAND BRUSH APPLIED).
2. CONTRACTOR MAY USE 2" THREADED BRASS NIPPLES AND 2" BRASS F.I.P. FITTINGS IN LIEU OF COMPRESSION FITTINGS.
3. LOCATE BLOW-OFF IN NON-TRAFFIC AREAS WHERE POSSIBLE (REFER TO STANDARD 402 AS NECESSARY).



VALVE BOX ELEVATION



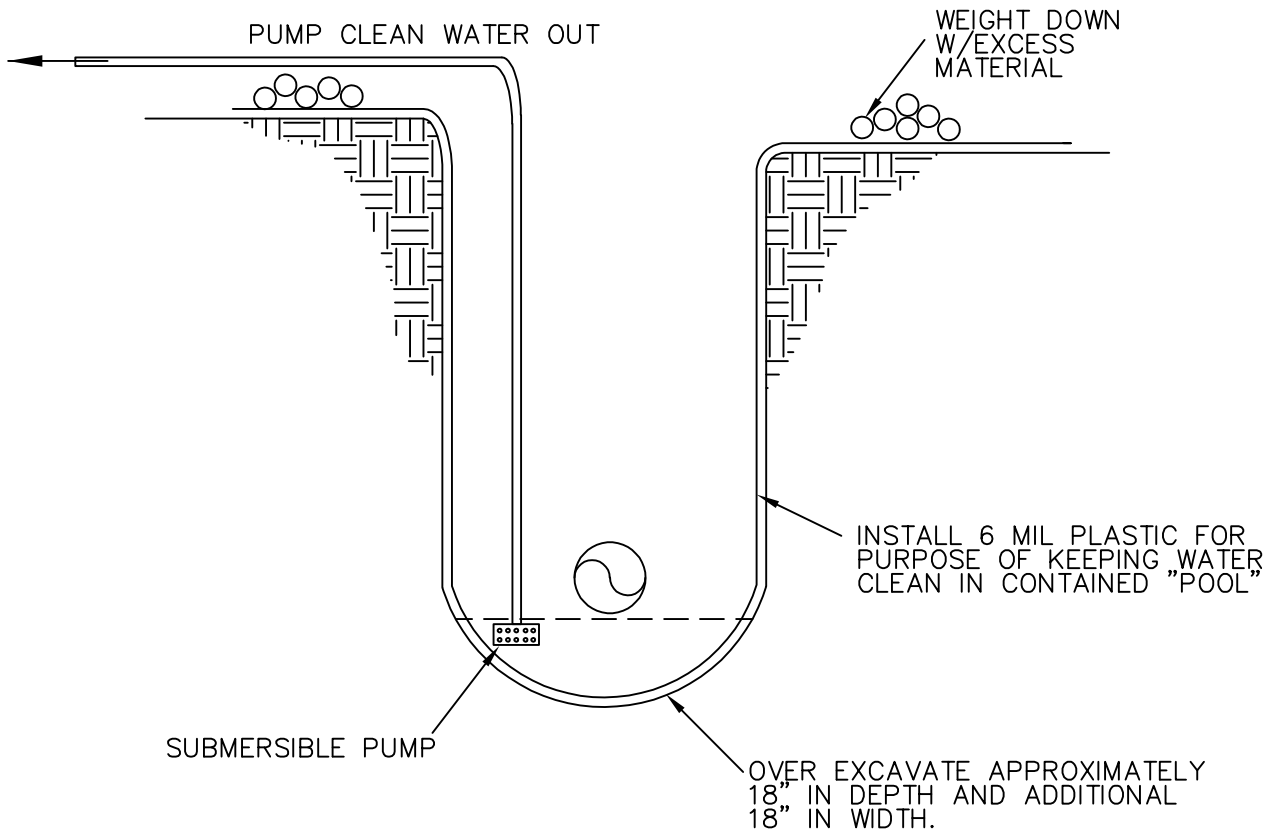
BOX ELEVATION

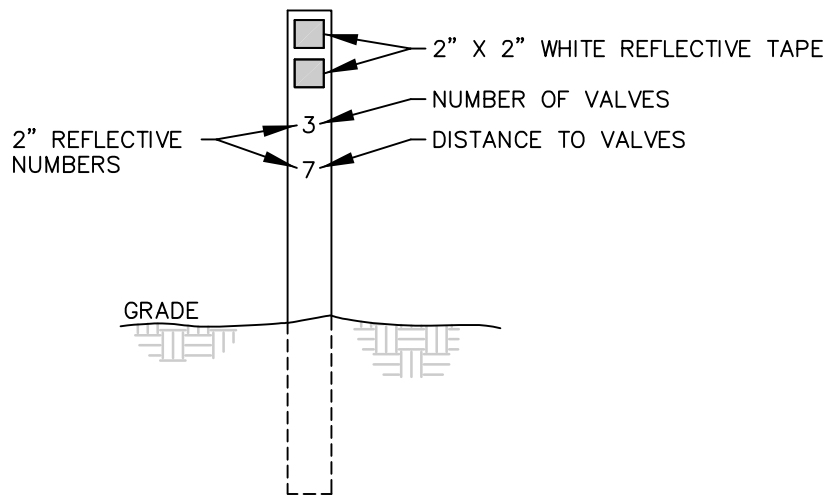


NOTES

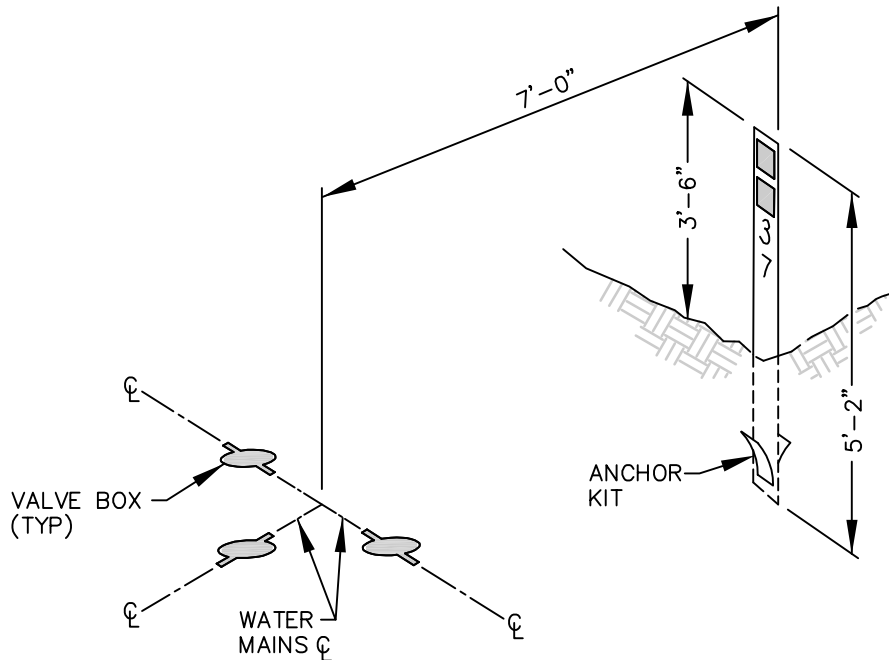
- EXTENSIONS ARE REQUIRED WHEN THE VALVE NUT IS MORE THAN 36" INCHES BELOW FINISHED GRADE. EXTENSIONS ARE TO BE A MINIMUM OF 24" LONG. ONLY ONE EXTENSION TO BE USED PER VALVE. VALVE EXTENSION TO BE WITHIN 24" OF FINISHED GRADE.







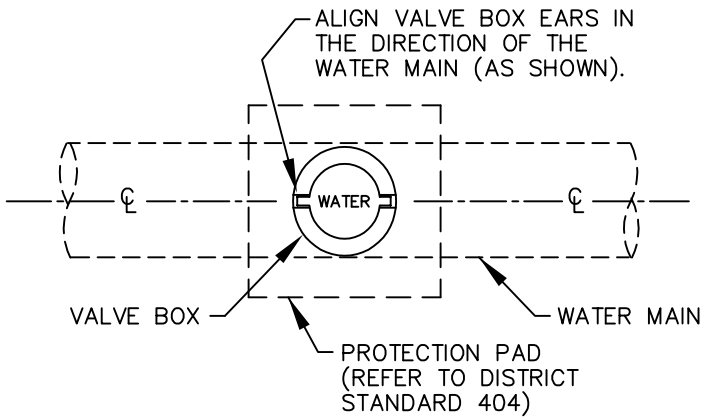
MARKER POST DETAIL



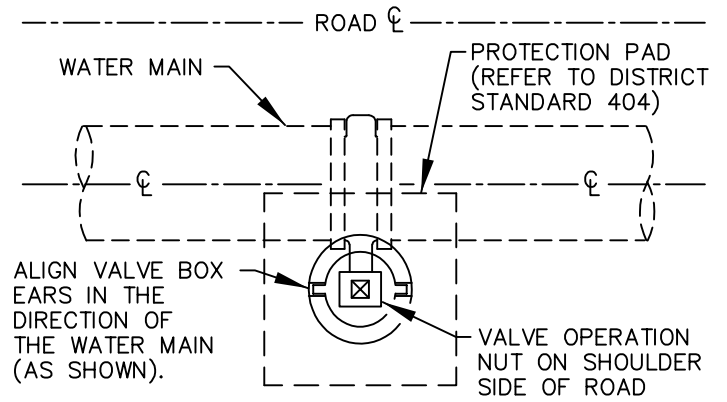
MARKER POST INSTALLATION DETAIL

NOTES

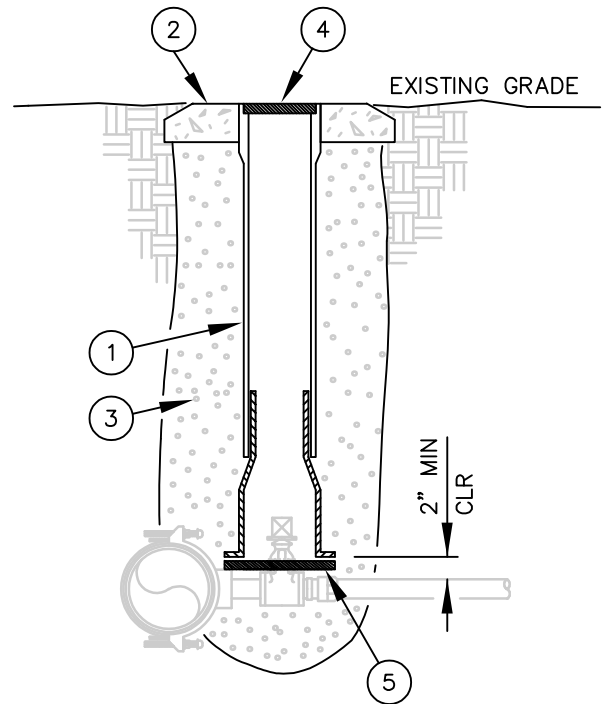
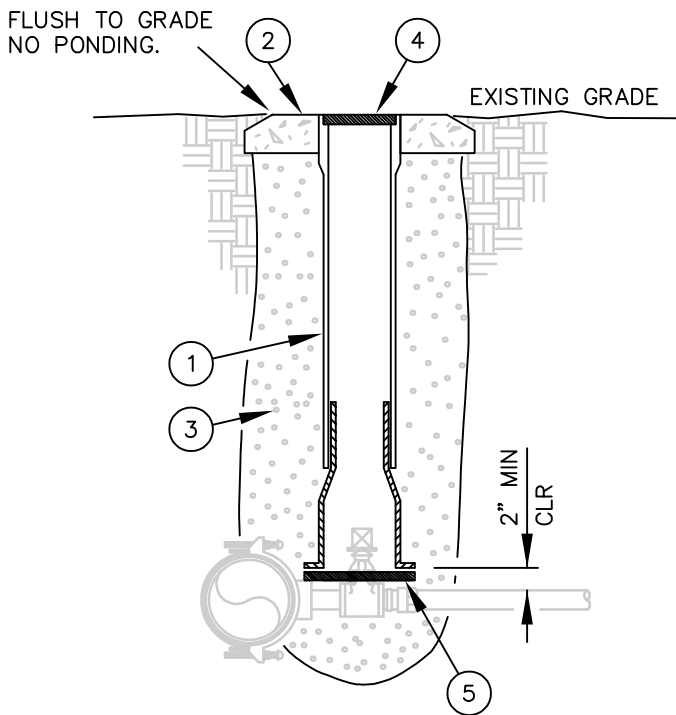
1. VALVE MARKER SHALL BE CARSONITE CRM3-066-08 BLUE WITH 2-ANCHORS (ANCHOR BARB KIT) AT BOTTOM OF MARKER.
2. MARKER SHALL BE SITUATED IN A SAFE AND LOGICAL LOCATION.
3. THE POST SHALL BE SET AT RIGHT ANGLES TO THE ROADWAY FROM THE VALVE USE APPROPRIATE INSTALLATION TOOLS AND METHODS.



VALVE BOX EAR DETAIL

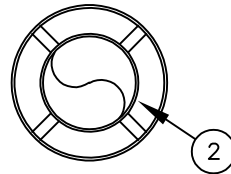


BUTTERFLY VALVE BOX DETAIL

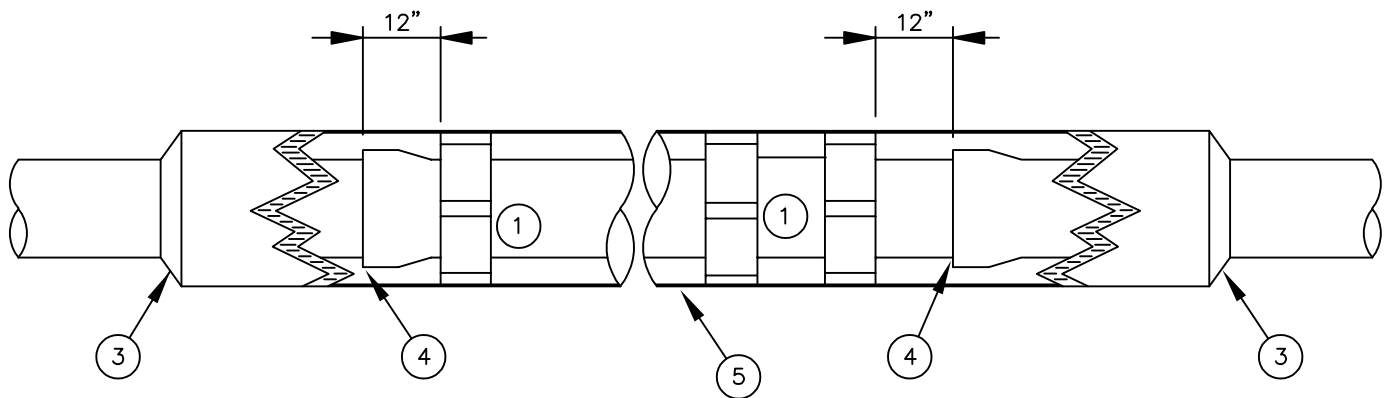


LEGEND

- ① 18" OR 30" VALVE BOX (STYLE 940) 6" SOIL PIPE SHALL BE USED IF EXTRA DEPTH IS REQUIRED.
- ② VALVE PROTECTION PAD – REFER TO DISTRICT STANDARD 404.
- ③ 5/8" CRUSHED ROCK OR SAND BEDDING SURROUNDING THE VALVE BOX COMPACTED TO 95%. COMPACTION TEST REQUIRED AT ALL VALVE CLUSTER LOCATIONS.
- ④ USE EAST IRON VALVE BOX OR APPROVED EQUAL. ITEM # VBST940L.
- ⑤ SET VALVE BOX ON ETHAFOAM 2" THICK (TYP)
- ⑥ HAND PAINT METER/VALVE BOX LID WITH 2 COATS – SAFETY BLUE ENAMEL PAINT



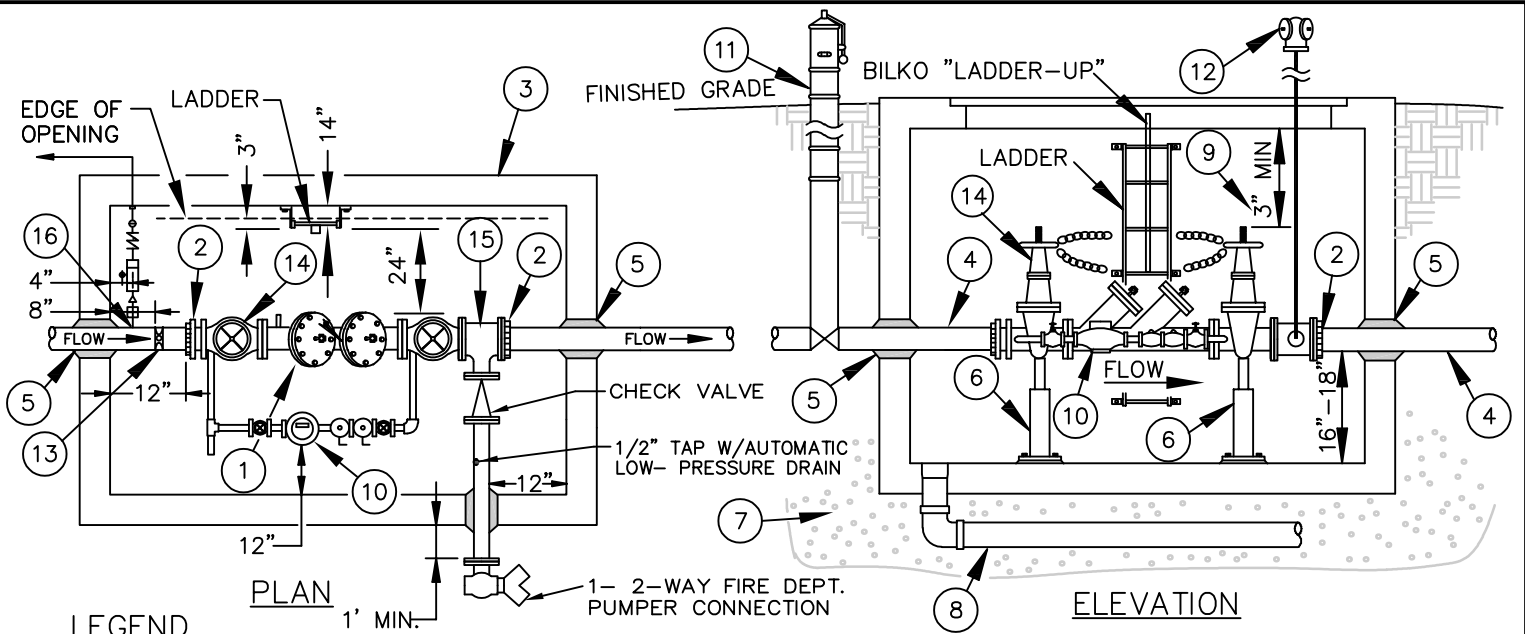
PLAN



ELEVATION

LEGEND

- ① 3 CALPICO MODEL M-8-SS OR M-12-SS (3 SPACERS PER JOINT OF PIPE) CASING INSULATORS. INSULATORS TO BE LOCATED APPROX. 18" FROM BELL, 18" FROM SPIGOT END AND CENTER OF EACH JOINT OF PIPE
- ② D.I. PIPE CENTERED IN CASING
- ③ MODEL "C" LINX-SEAL MODULAR SEAL
- ④ FIELD LOK GASKETS SHALL BE USED ON ALL JOINTS OF PIPE IN CASING
- ⑤ CASING PIPE PER PLAN

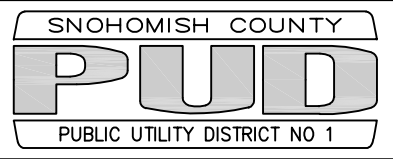


**LEGEND**

- 1 UL-FM LISTED SOFTSEATED STATE APPROVED DOUBLE DETECTOR VALVE (FLxFL) ASSEMBLY INCLUDING 2-O.S.&Y RESILIENT SEATED GATE VALVES, TEST COCKS, 3/4" BRASS OR COPPER BYPASS WITH IN LINE VALVES.
- 2 MEGAFLANGE (ADDITIONAL OR ALTERNATIVE METHODS OF RESTRAINT MAY BE REQUIRED).
- 3 PRECAST CONCRETE VAULT WITH LW PRODUCTS OR HALLIDAY SERIES W2S ALUMINUM HYDRAULIC LIFT ASSISTED LIDS (H-20 TRAFFIC LOADED). PROVIDE GALVANIZED STEEL LADDER W/ BILKO LADDER-UP SAFETY POST INSTALLED IN SUCH A WAY THAT VAULT ACCESS DOES NOT INTERFERE WITH INSTALLED EQUIPMENT MAINTENANCE. VAULT SHALL HAVE 2-COATS OF ASPHALTIC SOLUTION (SIZE AND STYLE APPROVED BY THE PUD'S ENGINEER).
- 4 CL-52 DUCTILE IRON PIPE (SIZED AS REQUIRED).
- 5 WATER TIGHT GROUT SHALL BE USED IN ALL VAULT PENETRATIONS.
- 6 TWO (2) GALVANIZED ADJUSTABLE PIPE SUPPORTS FOR 2-1/2" φ AND LARGER PIPE.
- 7 FOUNDATION GRAVEL AS REQUIRED.
- 8 INSTALL A 6" PVC OR EQUAL DRAIN W/GRATING ON INLET. SLOPE TO DAYLIGHT OR TIE INTO STORM DRAIN SYSTEM.
- 9 3" MIN. CLEARANCE FROM UNDERSIDE OF VAULT LID TO STEM OF OS&Y WHEN FULLY OPEN.
- 10 3/4" METER (METER PROVIDED BY DISTRICT AT DEVELOPER'S EXPENSE), METER SHALL BE EQUIPPED WITH T-10 OMR.
- 11 POST INDICATOR VALVE, LOCATED WITHIN 4' OF VAULT.
- 12 FIRE DEPARTMENT CONNECTION (FDC) AND CHECK VALVE (PER SNOHOMISH COUNTY FIRE AND PLUMBING CODES)
- 13 2" ROMAC 202N SADDLE, 2" FORD BALLCORP, 2" X 2-1/2" HOSE ADAPTOR W/CAP
- 14 INSTALL ALARM FOR OS+Y VALVES PER FIRE DISTRICT STANDARD IF REQUIRED.
- 15 FL X FL TEE (MAIN SIZE X MAIN SIZE)
- 16 AT PUD'S SOLE DISCRETION IN LIEU OF 6" DRAIN INSTALL 1" TAP UPSTREAM OF DCDA, 1" COPPER OR BRASS TO ELECTRIC SUMP PUMP; AT DEVELOPER COST (NOTE THIS INCLUDES GFC AND CUSTOMER SERVICE AGREEMENT FOR WATER USAGE) PUD METER TO BE PURCHASED AND INSTALLED; DISCHARGE PIPING 1-1/2" SCHEDULE 40 PVC, ORIENT VAULT SUCH THAT SUMP IS LOCATED UPSTREAM OF ASSEMBLY WHERE EJECTOR TAP IS LOCATED. INSTALL GALVANIZED STEEL STANDOFF BRACKET WITH 2" CHANNEL BY 12"-16" STANDOFF FOR MOUNTING OF EJECTOR PUMP; LAG TO CONCRETE WALL; NOTE DCVA INTEGRAL TO EJECTOR ASSEMBLY MUST BE TEST BY BAT.

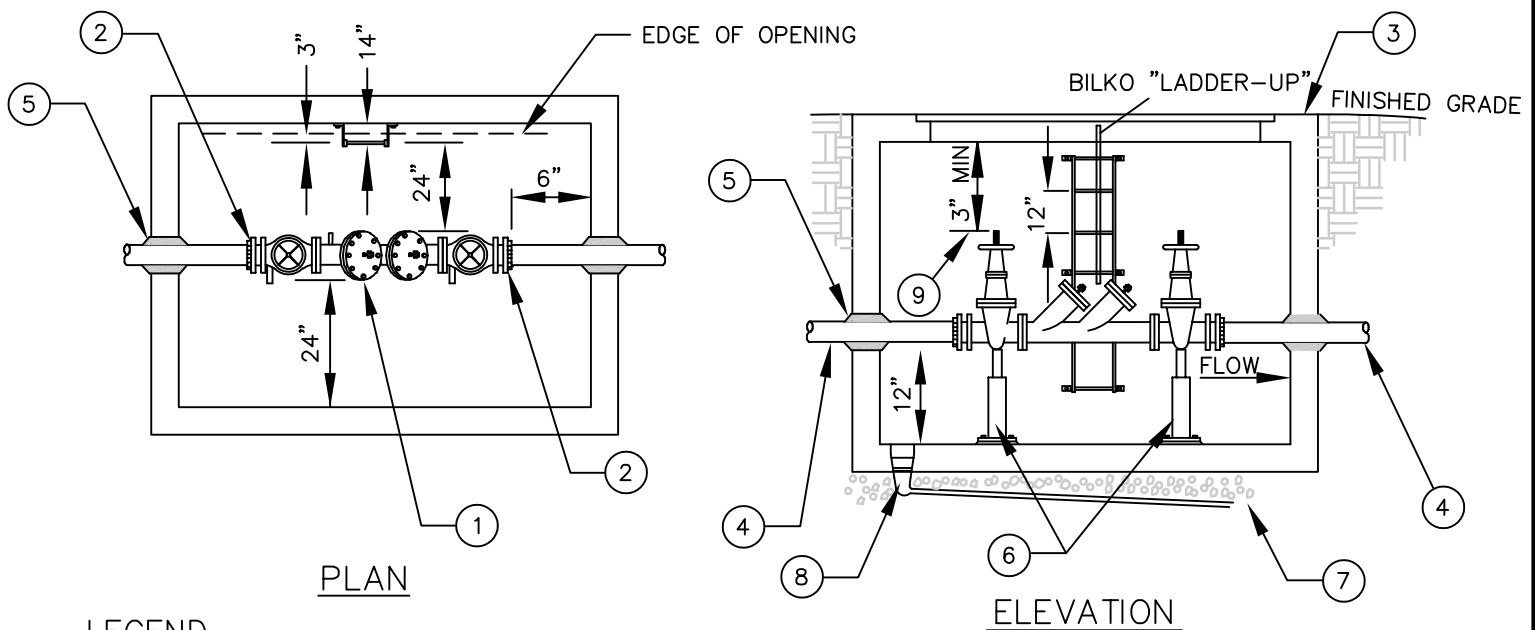
**NOTES**

- 1. TEE AND GATE VALVE REQUIRED ON MAIN. WITH AMPRO LOCKING BOX LID.
- 2. TEST COCKS ARE REQUIRED TO BE PLUGGED IF ASSEMBLY IS INSTALLED UNDERGROUND.
- 3. MAXIMUM HEIGHT OF ASSEMBLY IS FIVE FEET UNLESS AN OSHA APPROVED PLATFORM IS PROVIDED.
- 4. MINIMUM INSIDE VAULT HEIGHT AS APPROVED BY THE ENGINEER, FOR 3" SERVICE AND LARGER.
- 5. ALL DIMENSIONS ARE MINIMUM CLEARANCE REQUIREMENTS.
- 6. ASSEMBLY REQUIRES CERTIFICATION UPON INSTALLATION AND RECERTIFICATION ANNUALLY BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER. (BAT TEST SHALL BE WITNESSED BY DISTRICT CROSS-CONNECTION CONTROL SPECIALIST)
- 7. FIRE DEPARTMENT CONNECTION (FDC) MUST BE DOWNSTREAM OF ASSEMBLY.



DOUBLE DETECTOR CHECK ASSEMBLY (DCDA) "FIRE SYSTEM"

DATE	STANDARD
2021	<b>601</b>
ENGR	
MMS	



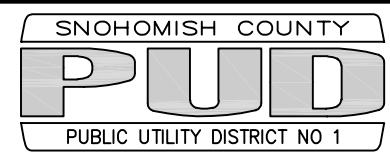
**LEGEND**

- ① UL-FM LISTED SOFTSEATED STATE APPROVED DOUBLE CHECK VALVE ASSEMBLY INCLUDING: 2-O.S.& Y RESILIENT SEATED GATE VALVES, AND TEST COCKS WITH PLUGS.
- ② UNI-FLANGE (ADDITIONAL OR ALTERNATIVE METHODS OF RESTRAINT MAY BE REQUIRED)
- ③ PRECAST CONCRETE VAULT WITH LW PRODUCTS OR HALLIDAY SERIES W2S ALUMINUM LIFT ASSISTED LIDS (H-20 TRAFFIC LOADED). PROVIDE GALVANIZED STEEL LADDER W/ BILKO LADDER-UP SAFETY POST INSTALLED IN SUCH A WAY THAT VAULT ACCESS DOES NOT INTERFERE WITH INSTALLED EQUIPMENT MAINTENANCE. VAULT SHALL HAVE 2-COATS OF ASPHALTIC SOLUTION (SIZE AND STYLE APPROVED BY THE PUD'S ENGINEER).
- ④ DUCTILE IRON PIPE (SIZED AS REQUIRED) CLASS 52.
- ⑤ WATER TIGHT GROUT SHALL BE USED IN ALL VAULT PENETRATIONS.
- ⑥ 2 - GALVANIZED ADJUSTABLE STAND-ON PIPE SUPPORTS FOR 2-1/2" DIM AND LARGER PIPE.
- ⑦ FOUNDATION GRAVEL AS REQUIRED.
- ⑧ INSTALL A 6" PVC OR EQUAL DRAIN W/GRATING ON INLET. SLOPE TO DAYLIGHT OR TIE INTO STORM DRAIN SYSTEM.
- ⑨ 3" MIN CLEARANCE FROM UNDERSIDE OF VAULT LID TO STEM AND OS&Y WHEN FULLY OPEN.
- ⑩ 3/4" METER (METER PROVIDED BY DISTRICT AT DEVELOPER'S EXPENSE), METER SHALL BE EQUIPPED WITH T-10 OMR.

**NOTES**

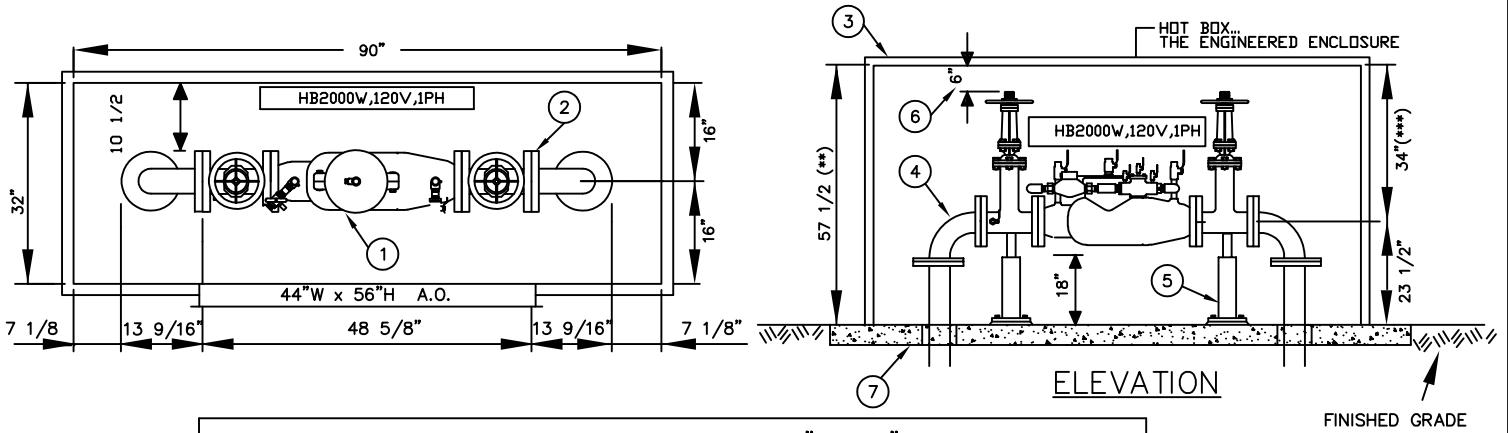
- 1. TEE AND GATE VALVE REQUIRED ON MAIN. SINGLE DETECTOR CHECKS ARE NOT APPROVED BACKFLOW PREVENTION DEVICES.
- 2. ASSEMBLY REQUIRES CERTIFICATION UPON INSTALLATION AND RECERTIFICATION ANNUALLY.
- 3. TEST COCKS ARE REQUIRED TO BE PLUGGED IF ASSEMBLY IS INSTALLED UNDERGROUND.
- 4. MAXIMUM HEIGHT OF ASSEMBLY IS FIVE FEET UNLESS AN OSHA APPROVED PLATFORM IS PROVIDED.
- 5. MINIMUM INSIDE VAULT HEIGHT IS 78", OR AS APPROVED BY THE ENGINEER, FOR 3" SERVICE AND LARGER.
- 6. ALL DIMENSIONS ARE MIN CLEARANCE REQUIREMENTS.
- 7. THE PURPOSE OF THIS STANDARD IS TO SERVE AS A GUIDELINE FOR MEETING THE DISTRICT'S REQUIREMENTS. VARIATIONS AND CHANGES ARE LIKELY DEPENDING ON SITE CONDITIONS ETC.

PER DISTRICT APPROVAL ONLY



**DOUBLE CHECK VALVE ASSEMBLY  
(DCVA) 3" & LARGER SERVICES  
FOR IRRIGATION SERVICE**

DATE	STANDARD
2021	<b>602</b>
ENGR	
MMS	



NOTE: DIMENSIONS ABOVE ARE FOR A TYPICAL 3" OR 4" ASSEMBLY. DIMENSIONS OF ACTUAL ASSEMBLY MAY DIFFER.

LEGEND

- ① UL-FM LISTED SOFTSEATED WASHINGTON STATE APPROVED REDUCED PRESSURE DETECTOR ASSEMBLY INCLUDING: 2-O.S.& Y RESILIENT SEATED GATE VALVES, TEST COCKS.
- ② MEGA-FLANGE (ADDITIONAL OR ALTERNATE METHODS OF RESTRAINT MAY BE REQUIRED)
- ③ HEATED ENCLOSURE (AS MANUFACTURED BY HOT BOX CO OR AN APPROVED EQUAL). ABOVE GROUND INSTALLATIONS. ENCLOSURE WALL SHALL BE " THICK MARINE GRADE ALUMINUM. EXTERIOR WILL BE PAINTED WITH AN APPROVED PAINT, PROVIDED WITH SUFFICIENT INSULATION TO PREVENT FREEZING.
- ④ DUCTILE IRON PIPE (SIZED AS REQUIRED) CLASS 52.
- ⑤ GALVANIZED ADJUSTABLE STAND-ON PIPE SUPPORT FOR 2-1/2" DIAM AND LARGER PIPE.
- ⑥ 6" MIN CLEARANCE FROM UNDERSIDE OF VAULT LID TO STEM OF OS&Y WHEN FULLY OPEN.
- ⑦ CONCRETE SLAB; DIMENSIONS ARE A MINIMUM 4" GREATER THAN AS DEFINED BY PERIMETER OF BOX.

NOTES

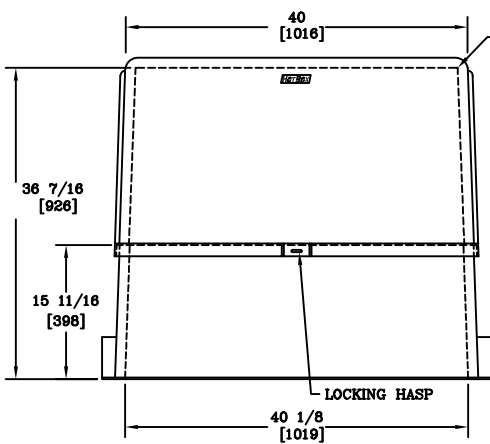
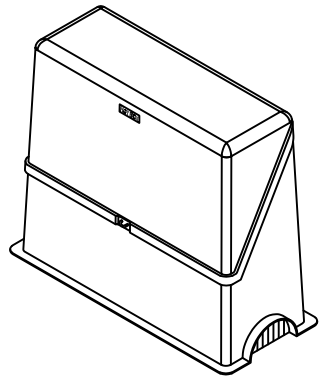
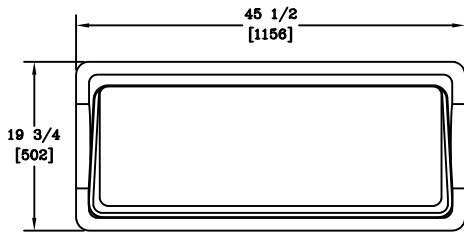
- 1. TEE AND GATE VALVE REQUIRED ON MAIN.
- 2. ALL DIMENSIONS ARE MINIMUM CLEARANCE REQUIREMENTS.
- 3. ASSEMBLY REQUIRES CERTIFICATION UPON INSTALLATION AND RECERTIFICATION ANNUALLY.
- 4. REFER TO STATE AND LOCAL PLUMBER/BUILDING CODES AND STANDARDS FOR PROPER INSTALLATION.

BACKFLOW INSTALLATION NOTES:

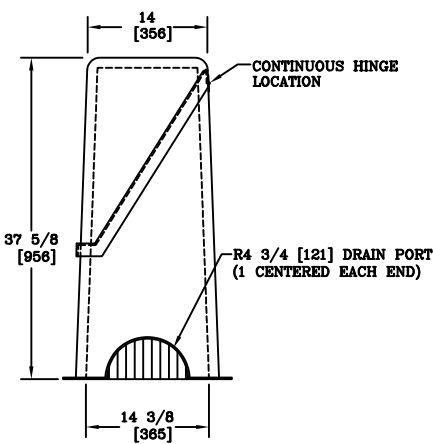
1. All commercial services shall require premise isolation. Backflow assemblies for purposes of premise isolation shall be located immediately downstream of the water service connection (or water meter box), within 1 to 2 feet, and prior to any branch connections. Alternate installation locations must be pre-approved by the District.
2. Double Check Valve Assemblies for puposes of Irrigation may be installed immediately after branch connection.
3. Installation of approved backflow assemblies shall be in accordance with the Accepted Procedure and Practice in Cross-Connection Control Manual, of the Pacific Northwest Section of the American Water Works Association latest edition.
4. Backflow assemblies selected for installation must appear on the most current listing on University of Sourthern California backflow assemblies approved for installation.
5. Prior to installation of a backflow assembly, the installer or developer or property owner must call the District at 425-397-3000 to schedule an inspection.
6. Following an installation inspection approval by a District Inspector, the backflow assembly must be scheduled for an initial test by a Washington State Department of Health certified Backflow Assembly Tester. A District Cross-Connection Specialist (CCS) in the Water Resources Department must witness the initial testing of the backflow assembly.
7. The property owner is responsible for initial and annual testing of any backflow assembly.
8. The property owner is responsible for freeze protection of any backflow assembly.
9. The installer or developer or property owner must provide backflow assembly test cock protection with plugs, caps, or covers.
10. The water meter must be installed in order to test the backflow assembly.
11. Assembly to be tagged with a laminated card having the following information: Tester 's name or company name, date tested, and a phone number the tester can be contacted at. For more information or technical assistance, please contact 425-397-3000.

 <p>SNOHOMISH COUNTY <b>PUD</b> PUBLIC UTILITY DISTRICT NO 1</p>	BACKFLOW INSTALLATION NOTES	DATE	STANDARD
		2021	<b>604A</b>
		ENGR MMS	





INSULATION:  
1 [25] THICK



CONTINUOUS HINGE  
LOCATION

R4 3/4 [121] DRAIN PORT  
(1 CENTERED EACH END)

LOCKING HASP

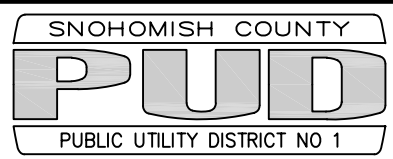
**NOTES:**

1. HEAT IS PROVIDED BY A 90WATT, 120V SINGLE PHASE HEAT TRACE TAPE. FOR UNHEATED VERSION REPLACE THE PREFIX "H" WITH AN "L".
2. FOUR INTERNAL BRACKETS AND CONCRETE ANCHORS ARE SUPPLIED WITH THE ENCLOSURE. (NOT SHOWN)
3. STANDARD COLOR IS BEIGE. (OPTIONS AVAILABLE)
4. FOR RECOMMENDED SLAB SIZE ADD 9" [229] TO THE ENCLOSURE EXTERIOR.
5. INTERIOR DIMENSIONS ARE NOMINAL.
6. OLD P/N: HB2T

DIMENSIONS ARE IN INCHES OR MILLIMETERS IN BRACKETS UNLESS OTHERWISE NOTED.				HOT BOX® 924 LANE AVENUE JACKSONVILLE, FL 32254 904-788-0204 www.hot-box.com		LOC
BY	DATE	WEIGHT	SCALE	DRAWING DESCRIPTION	HOT BOX® FIBERGLASS FLIP TOP ENCLOSURE	LC
DRN	9/15/09	65# 20kg	1 1/8"=1'			S
CHK	12/15/10					B
ENG						12/10
APR						
APR						
PROJECT NUMBER 09906				DRAWING NUMBER HF013039036		

THE ABOVE 2" WATTS 009 RPBA WITH A STANDARD NO. HB2T FIBERGLASS ENCLOSURE AS MANUFACTURED BY HOT BOX IS AN ACCEPTABLE INSTALLATION.

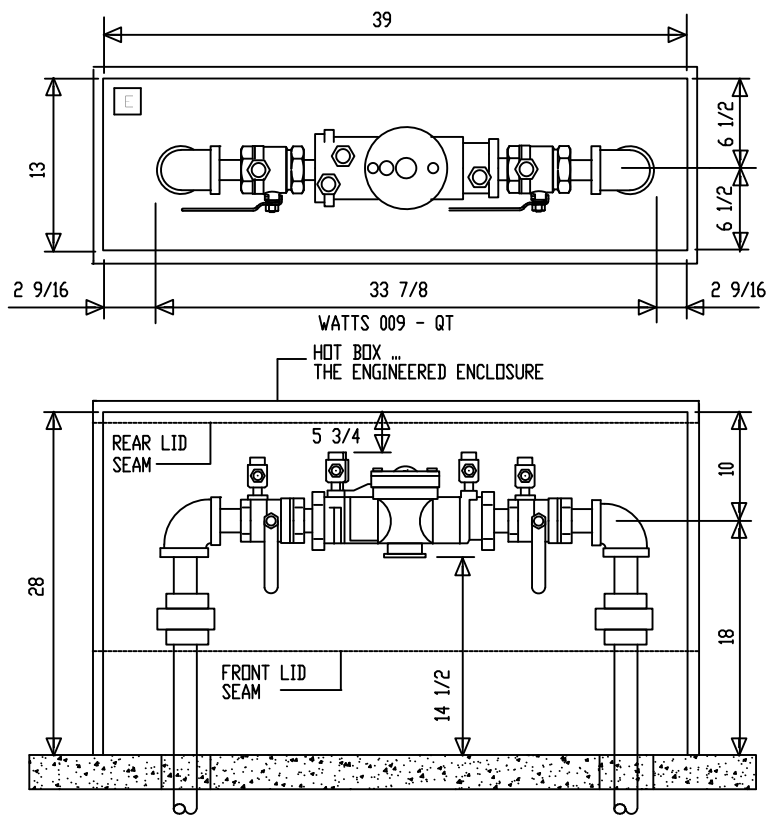
OTHER EQUIVALENT INSTALLATION (SUBJECT TO DISTRICT APPROVAL) SHALL BE CONSIDERED.



REDUCED PRESSURE BACKFLOW  
ASSEMBLY (RPBA) 2"  
"HOT BOX DETAIL 1 OF 2"

DATE  
2022  
ENGR  
MMS

STANDARD  
**604B**



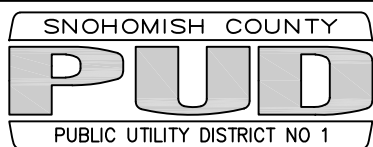
- 1.
2. ALL DIMENSIONS ARE APPROXIMATED IN INCHES.  
RECOMMENDED SLAB SIZE : 50"L x 24"W x 4" MINIMUM THICKNESS.  
"E" INDICATES THE ELECTRICAL RECEPTACLE. IT SHALL BE MOUNTED A MINIMUM OF 18" ABOVE THE SLAB.
- 3.
4. THE ENCLOSURE IS DESIGNED AS A FLIP-TOP TO ASSURE EASIER ACCESS AND MAINTENANCE.
5. THE BACKFLOW PREVENTER SHALL BE HEATED BY AN 18'-0", 90W, 120V, SINGLE PHASE HEAT TRACE TAPE.
6. THE UNIT IS A LB2 WHEN INSTALLED WITHOUT THE HEAT.

RESTRICTED DRAWING.  
PATENT # 4,726,394.

Hot Box 924 LANE AVE. N. JACKSONVILLE, FLORIDA 32254 (904) 786-0204 (800) 736-0238 FAX (904) 783-6965 HTTP: WWW.HOT-BOX.COM		TITLE: 2" WATTS 009-QT (STANDARD #HB2 FIBERGLASS FLIP-TOP)		BY/DATE/DWG: SBT / 10-2-97 2WCO--11	
ENGINEER / CONTRACTOR :		LOCATION :		APPROVED/DATE :	
REV. 1 :	REV. 2 :	REV. 3 :	SCALE :	REP. / DISTRIBUTOR :	QUOTE NO.:

THE ABOVE 2" WATTS 009 RPBA WITH A STANDARD NO. HB2T FIBERGLASS ENCLOSURE AS MANUFACTURED BY HOT BOX IS AN ACCEPTABLE INSTALLATION.

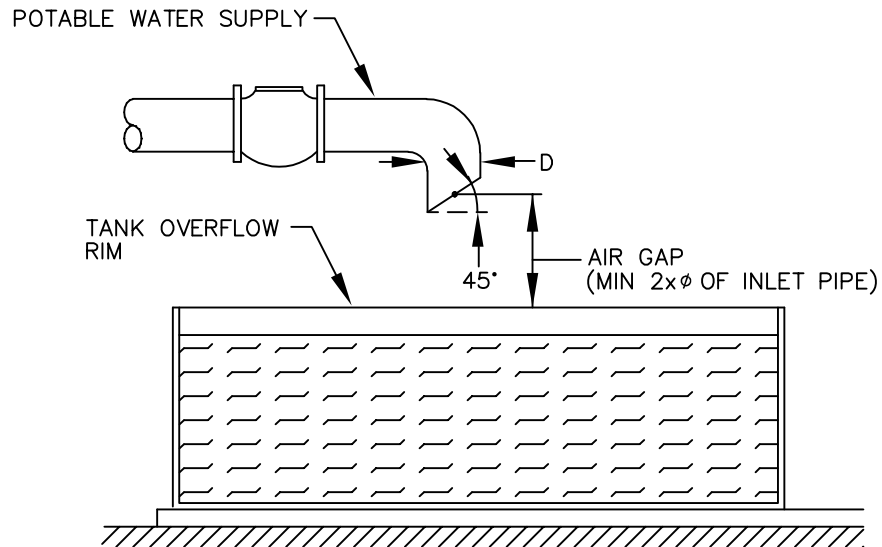
OTHER EQUIVALENT INSTALLATION (SUBJECT TO DISTRICT APPROVAL) SHALL BE CONSIDERED.



REDUCED PRESSURE BACKFLOW  
ASSEMBLY (RPBA) 2"  
"HOT BOX DETAIL 2 OF 2"

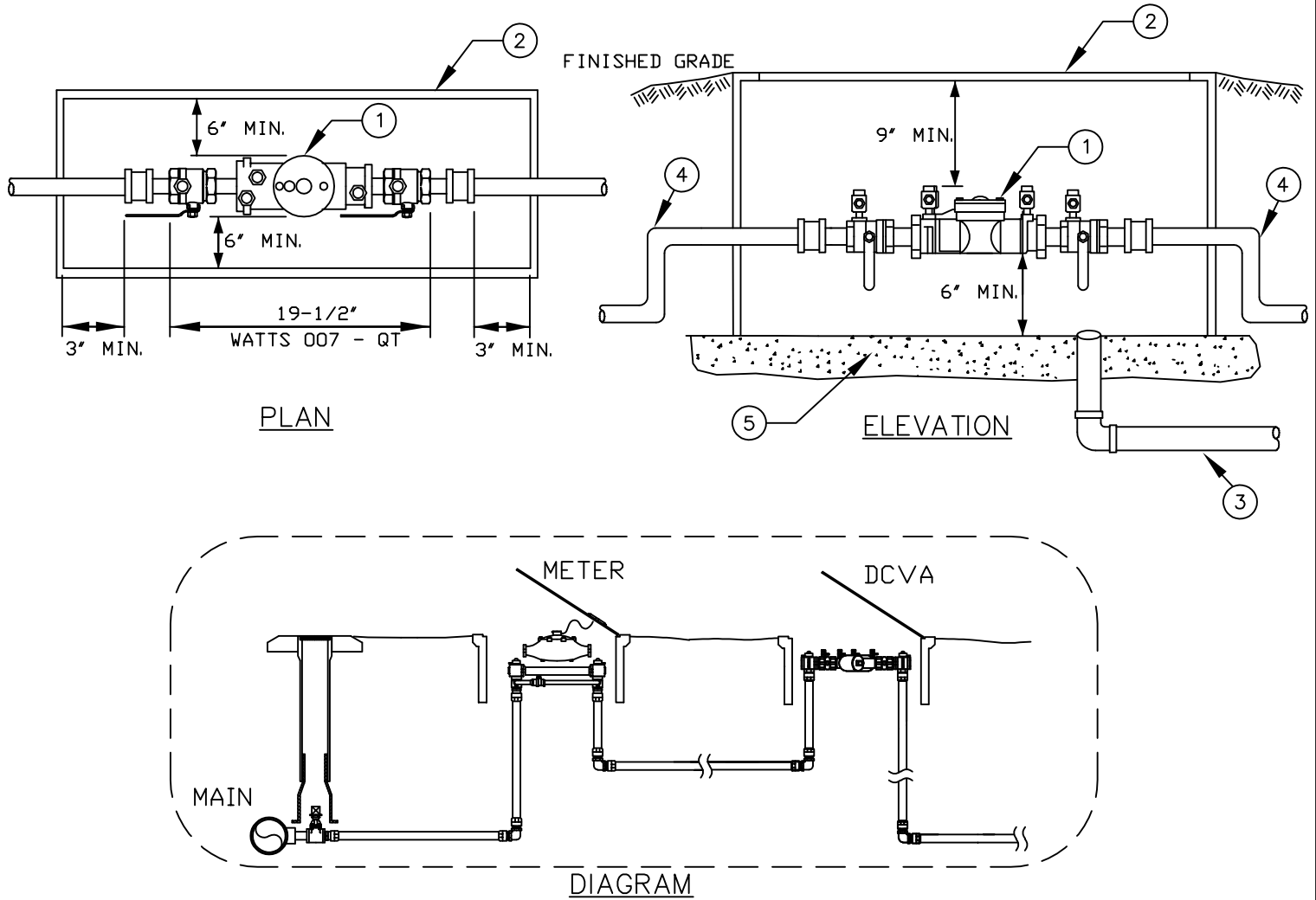
DATE  
2013  
ENGR  
BEW

STANDARD  
**604C**



### APPROVED AIR GAP SEPARATION

AN APPROVED AIR GAP IS A PHYSICAL SEPARATION BETWEEN THE FREE FLOWING DISCHARGE END OF A POTABLE WATER SUPPLY PIPELINE AND THE OVERFLOW RIM OF AN OPEN OR NON- PRESSURE RECEIVING VESSEL. THESE VERTICAL, PHYSICAL SEPARATIONS MUST BE AT LEAST TWICE THE DIAMETER OF THE INLET PIPE BUT NEVER LESS THAN ONE INCH. IF SPLASHING IS A PROBLEM, TUBULAR SCREENS MAY BE ATTACHED OR THE SUPPLY LINE OUTLET MAY BE CUT AT A 45° ANGLE. IF SUPPLY LINE IS CUT AT A 45° ANGLE THE AIR GAP DISTANCE IS MEASURED FROM THE CENTER OF THE ANGLE. HOSES ARE NOT ALLOWED. BYPASSES ARE NOT ALLOWED. THE INSPECTION OF AIR GAPS SHALL BE INCLUDED IN THE YEARLY TESTING PROGRAM FOR BACKFLOW DEVICES.

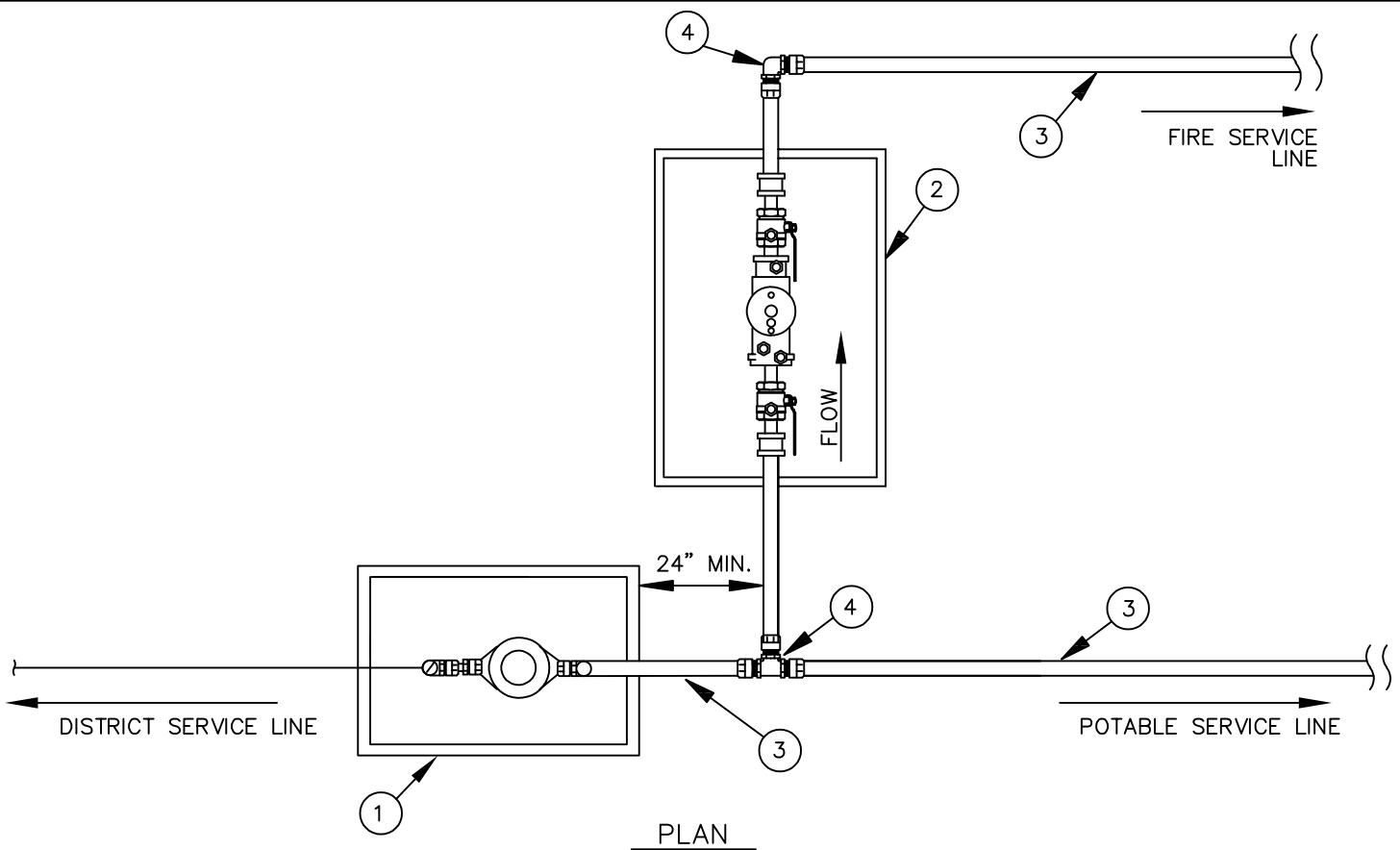


## LEGEND

- ① WASHINGTON STATE APPROVED DOUBLE CHECK VALVE ASSEMBLY.
- ② IN NON-TRAFFIC AREAS USE:  
MID STATES 1527-18 AND MSBCF 1527-RL IF ALL CLEARANCES ARE SATISFIED OR APPROVED EQUAL.  
IN TRAFFIC AREAS:  
A TRAFFIC LOADED BOX MUST BE USED AND LOCATION APPROVED BY THE THE DISTRICT PRIOR TO INSTALLATION.
- ③ DRAIN TO DAYLIGHT OR INSTALLATION OF DRAIN ROCK (PEA GRAVEL) 6" WIDE BY 12" DEEP REQUIRED.
- ④ ANGLES MAY BE IN OR OUT OF BOX SO LONG AS SUFFICIENT ROOM IS ALLOWED AT EACH END FOR VALVE OPERATOR AND DCVA REPAIR OR MAINTENANCE.
- ⑤ PROVIDE FREE 100% DRAIN ROCK (PEA GRAVEL--SEE NOTE 3 ABOVE)

## NOTES

1. ALL TEST COCKS MUST HAVE BRASS PLUGS.
2. TEST COCKS MUST FACE AS PRESCRIBED BY THE MANUFACTURER AND THE USC FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH SPECIFICATIONS.



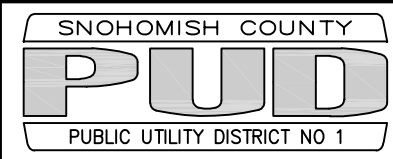
PLEASE NOTE THAT THE CONFIGURATION OF THE BRANCH FEED FOR THE FIRE SERVICE AND DOMESTIC SERVICE MAY BE OPPOSITE OF THAT SHOWN ABOVE.

LEGEND

- ① 1" STANDARD DOMESTIC WATER SERVICE. REFER TO PUD STANDARD 101.
- ② DOUBLE CHECK VALVE ASSEMBLY (DCVA). SEE PUD STANDARD 606. SIZING AND MATERIAL AS DETERMINED BY THE APPROPRIATE FIRE PREVENTION AUTHORITY. (CUSTOMER RESPONSIBILITY)
- ③ SERVICE LINE SIZING AND MATERIAL AS DETERMINED BY CUSTOMER.
- ④ FITTING SIZE AND MATERIAL AS DETERMINED BY CUSTOMER.

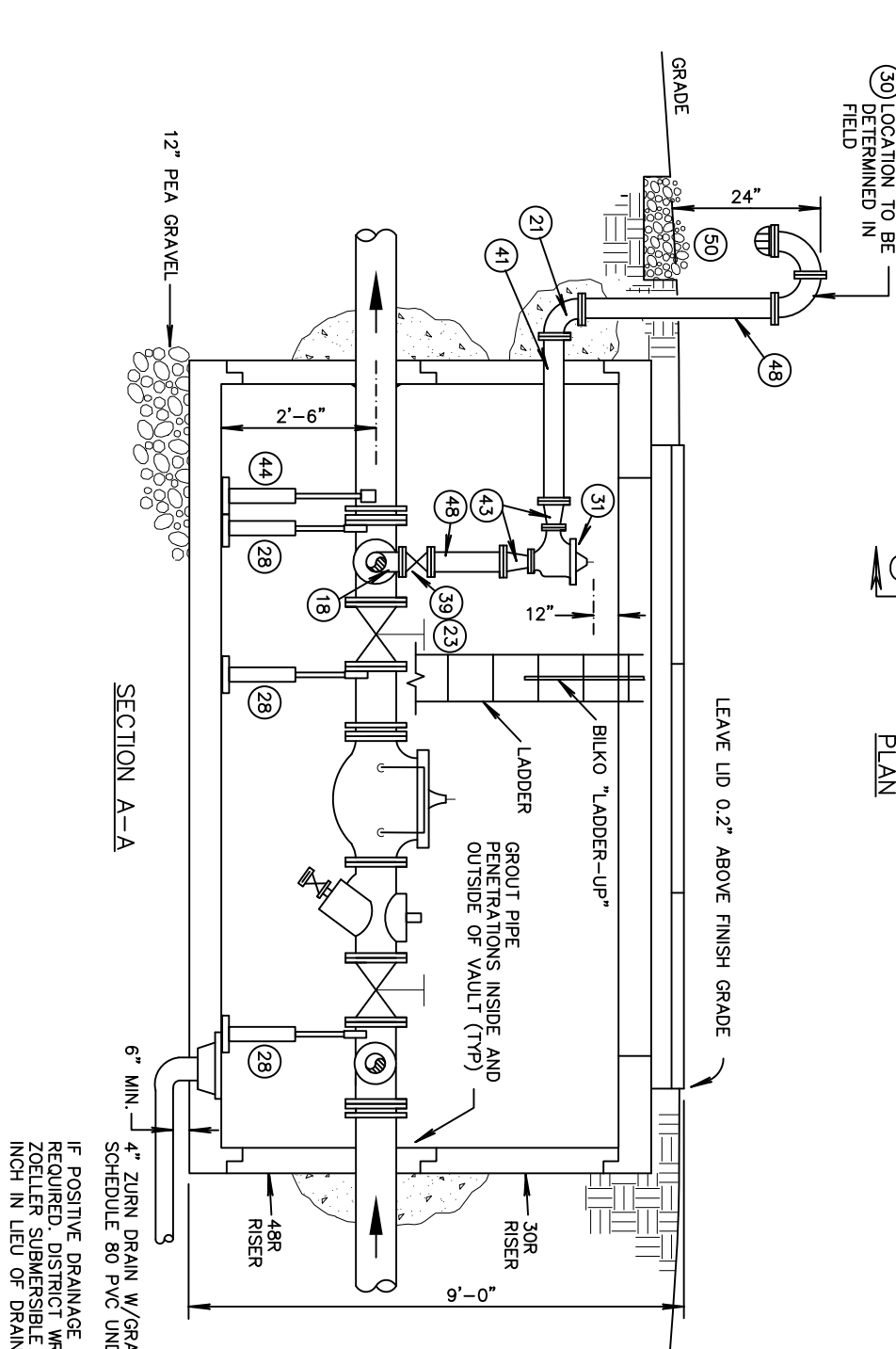
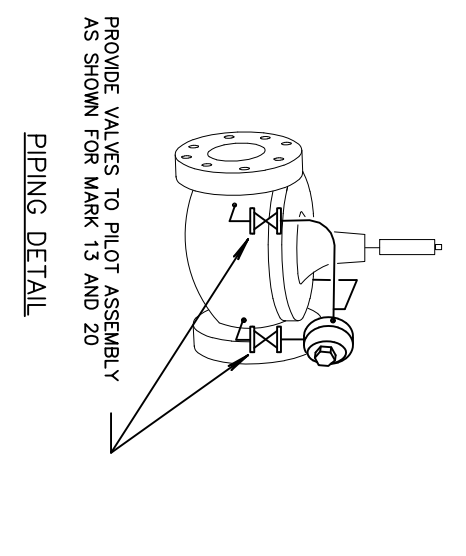
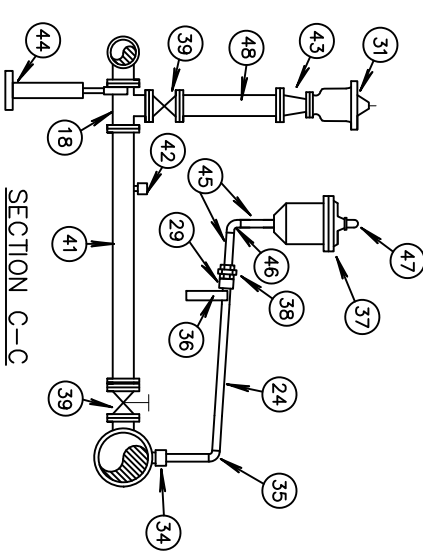
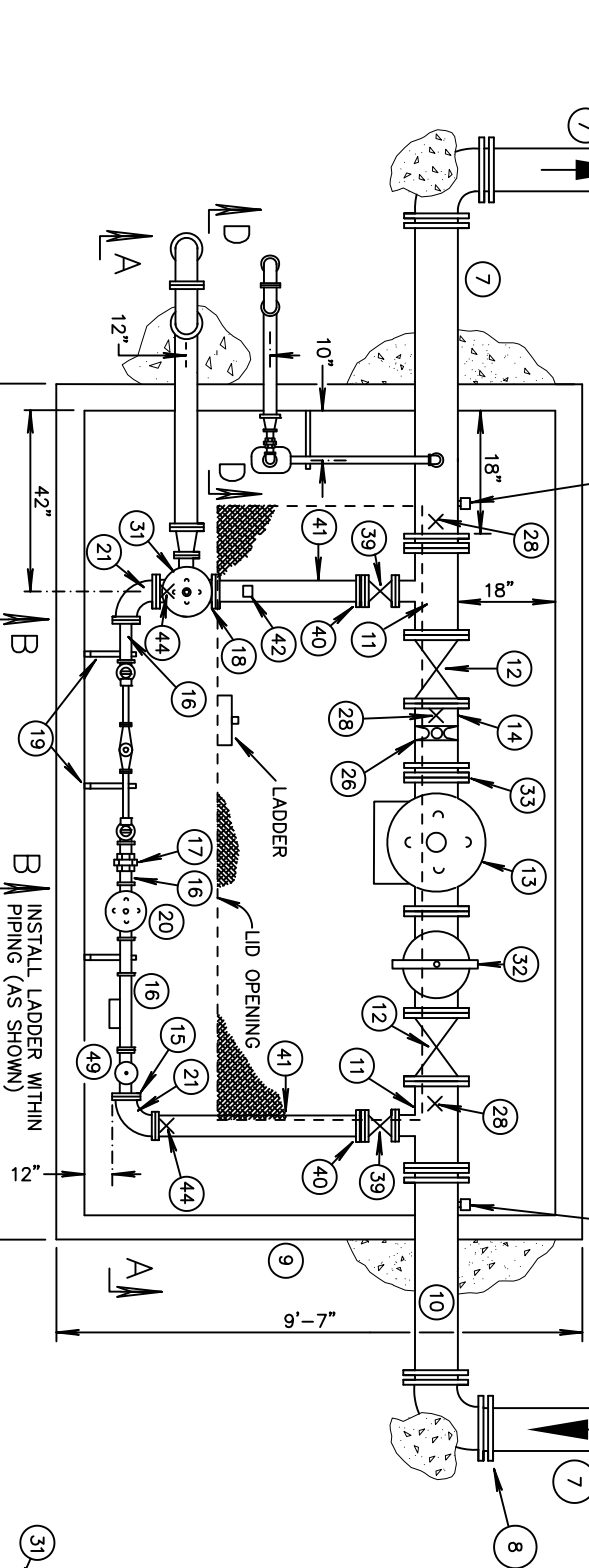
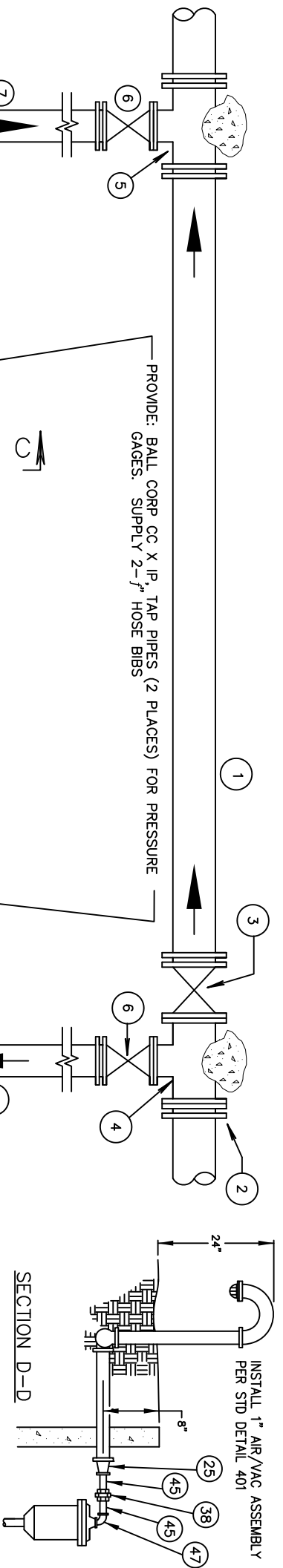
NOTES

- 1. FOR SYSTEMS DESIGNED AS FLOW THROUGH – A SINGLE SERVICE LINE MAY BE USED AND NO DCVA WILL BE REQUIRED.
- 2. FOR DOMESTIC PLUS FIRE SYSTEMS OVER 40 GPM – A SEPARATE FIRE SERVICE WILL BE REQUIRED FOR THE FIRE LINE WITH DCVA.
- 3. INSTALLATION, ANNUAL TESTING, AND MAINTAINING OF THE BACKFLOW PREVENTION ASSEMBLY SHALL BE THE RESPONSIBILITY OF THE CUSTOMER. D.C.VA. SHALL BE TESTED BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER (B.A.T.) AND INSPECTED BY DISTRICT PRIOR TO TURNING THE WATER ON. CONTACT DISTRICT FOR TEST REPORT FORMS.



1" SINGLE FAMILY RESIDENTIAL  
FIRE SERVICE  
DCVA

DATE 2021	STANDARD <b>607</b>
ENGR MMS	



**VAULT MATERIAL LIST**

- UTILITY VAULT MODEL 814-9-LA
- LW PRODUCTS ALUMINUM HYDRAULIC ASSISTED LIDS
- (H-20 TRAFFIC LOADED) MODEL HTD-1A 36" X 108" CLEAR OPENING
- GALVANIZED STEEL LADDER W/ LADDER-UP SAFETY POST
- COATS ASPHALTIC SOLUTION APPLIED TO VAULT EXTERIOR

**PAINT SCHEDULE**

EXTERIOR OF VAULT BELOW GRADE TWO COATS OF BLACK BITUMASTIC SOLUTION VAULT SHOULD BE DRIED WITH NO MOISTURE PRESENT PRIOR TO APPLICATION OF COATINGS.

PAINT INTERIOR PIPING AND SUPPORTS:

- 1 - COAT RUST RESISTOR PRIMER RED
- 2 - COATS SAFETY BLUE; OIL BASED ENAMEL

PAINT STANDPIPE PIPING:

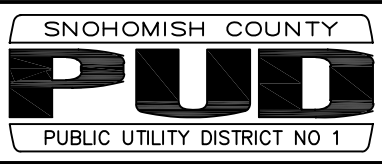
- 1 - COAT RUST RESISTOR PRIMER RED
- 2 - COATS SAFETY BLUE; OIL BASED ENAMEL

**NOTES**

1. ALL TEST COCKS SHOULD HAVE APPROPRIATE PLUGS INSTALLED.
2. FLEXIBLE FITTING WHEN ENTERING AND EXITING VAULT SLEEVE WITHIN 5 FEET OF VAULT. IF (M/J) BELL CONNECTION IS WITHIN 5 FEET VAULT, FITTING MAY BE OMITTED (TYPICAL).
3. ADJUST COVER TO MATCH EXISTING GRADE OR 6" ABOVE GRADE IN UNIMPROVED AREA
4. ALL MJ FITTINGS SHALL USE APPROPRIATE THRUST RESTRAINTS.
5. EACH FLOW CONTROL VALVE SHALL REQUIRE THE FOLLOWING: A 316 STAINLESS STEEL SEAT, STEM & EXTERNAL FASTENERS, EPOXY COATED INSIDE AND OUT, AND FACTORY PRE-SET FOR VALVE TO FAIL OPEN. (CALLOUT 13, 20, & 31 BELOW).

**LEGEND**

1. PRV SIZE TO MAIN SIZE DI CL 52 (LENGTH TO SUIT)
2. PRV SIZE TO MAIN SIZE FCA
3. PRV SIZE TO MAIN SIZE FL X MJ VALVE W/2" OPERATING NUT (PRV SIZE TO MAIN SIZE X PRV SIZE) FL TEE
4. PRV SIZE TO MAIN SIZE X PRV SIZE) MJ X FL TEE
5. PRV SIZE FL X MJ VALVE W/2" OPERATING NUT
6. PRV SIZE DI CL 52 (LENGTH TO SUIT)
7. PRV SIZE 90° MJ BEND
8. UTILITY VAULT SIZE SHOWN ON PLAN
9. SPOOL (LENGTH TO SUIT)
10. PRV SIZE X 4" FL TEE
11. PRV SIZE GV (FL) W/HAND WHEEL
12. PRV CLA-VALVE W/POSITION INDICATOR (30-300 PILOT SYSTEM INDICATOR) SINGER PRV OR APPROVED EQUAL
13. PRV SIZE SPOOL PIECE FLANGED ON ONE END (LENGTH TO SUIT)
14. 4" BLIND FLANGE W/2" TAP THREADED
15. 2" BRASS NIPPLE (LENGTH TO SUIT)
16. 2" BRASS STRAIGHT UNION
17. 4" FL TEE
18. 2" PIPE SUPPORT (OFF WALL)
19. 2"-4" PRV CLA-VALVE W/POSITION INDICATOR (30-300 PILOT SYSTEM INDICATOR) SINGER PRV OR APPROVED EQUAL. SIZE DETERMINED BY DISTRICT ENGINEER.
20. 4" 90° FL BEND
21. 2" GATE BRASS VALVE W/HAND WHEEL
22. 2" X 1" BRASS TEE
23. 1" TYPE "K" COPPER TUBING (LENGTH TO SUIT)
24. MUELLER 110 ANGLE METER STOP
25. 2" ROMAC 202N SADDLE, 2" X 2-1/4" HOSE ADAPTOR W/CAP
26. 1" METER
27. 8" "STANDON" PIPE SUPPORT W/2" STEEL PIPE
28. 1" MUELLER 110 X MIP STRAIGHT COUPLING
29. 4" FL 90° BENDS W/LAP JOINT FL W/ 1/4" GALV. WIRE MESH
30. 3" PRESSURE RELIEF VALVE CLA-VALVE
31. (30-300) PSI RANGE W/POSITION INDICATOR
32. PRV SIZE "Y" STRAINER W/STAINLESS STEEL BASKET, 2" BRASS NIPPLE, 2" BRASS BALL VALVE W/MALE NTS ADAPTER WITH CAP
33. MEGA-FLANGE (EBBA OR APPROVED EQUAL)
34. 1" AWMA TAPER THREAD X 110 BALL CORP. STOP
35. 1" MUELLER 110 QUARTER BEND COUPLING
36. 1" PIPE SUPPORT GRINNELL
37. 1" AIR AND VAC RELIEF VALVE
38. 1" BRASS UNION
39. 4" FL VALVE W/HAND WHEEL
40. 4" MEGA FLANGE ADAPTER
41. 4" DI. CL 52 PIPE FL X PE SPOOL (LENGTH AS REQUIRED)
42. DIRECT TAP W/1" THREADED OUTLET, 1" FORD BALL CORP. & HOSE BIB
43. 4" X 3" FL RED.
44. 4" "STAND-ON" PIPE SUPPORT WITH 2" STEEL PIPE
45. 1" BRASS NIPPLE (LENGTH AS REQUIRED)
46. 1" BRASS 90° BEND
47. 1" BRASS STREET ELBOW
48. 4" FL SPOOL
49. 2"-4" "Y" STRAINER W/BRASS BALL VALVE. SIZE ACCORDING TO NOTE 20 (PER DISTRICT ENGINEER).
50. 36"x36"x12" DEEP SPLASH BLOCK



6" - 8" PRESSURE REDUCING VALVE (PRV)

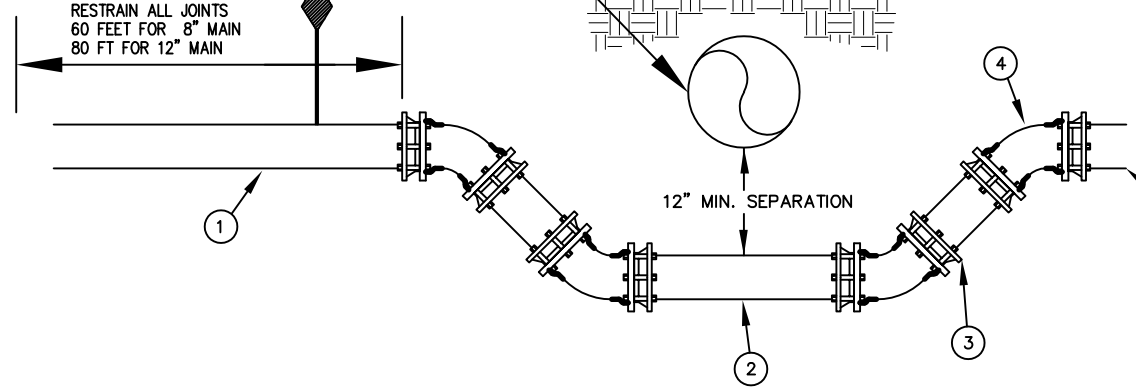
STANDARD	DATE
701	2020
	ENGR
	MMS

INSTALL: AIR-VAC PER  
DETAIL 401. FIELD  
LOCATE AS DIRECTED  
BY PUD INSPECTOR.

CROSS CULVERT  
OR OTHER UTILITIES  
(STORM, SEWER, GAS,  
POWER, CONDUIT ETC.)

EXISTING GRADE

RESTRAIN ALL JOINTS  
60 FEET FOR 8" MAIN  
80 FT FOR 12" MAIN



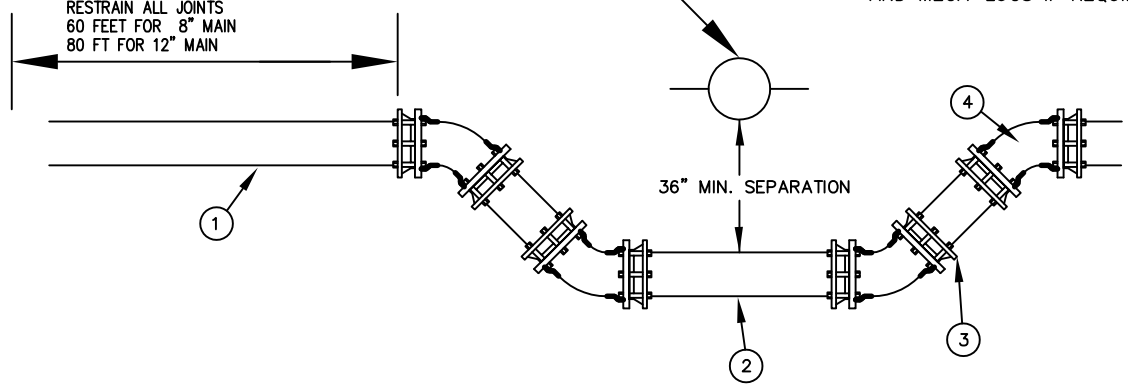
PROFILE VIEW OF VERTICAL UTILITY CROSSING

FOR 8" MAIN RESTRAIN ALL JOINTS 60FT  
BEFORE AND AFTER (120 FT TOTAL)  
(APPROX. 6-8 FIELD LOK GASKETS TOTAL  
AND MEGA-LUGS IF REQUIRED)

FOR 12" MAIN RESTRAIN JOINTS 80 FT  
BEFORE AND AFTER (160 FT TOTAL)  
(APPROX. 8-10 FIELD LOK GASKETS TOTAL  
AND MEGA-LUGS IF REQUIRED)

UTILITY POLE  
OR ABOVE GRADE OBSTRUCTION.

RESTRAIN ALL JOINTS  
60 FEET FOR 8" MAIN  
80 FT FOR 12" MAIN



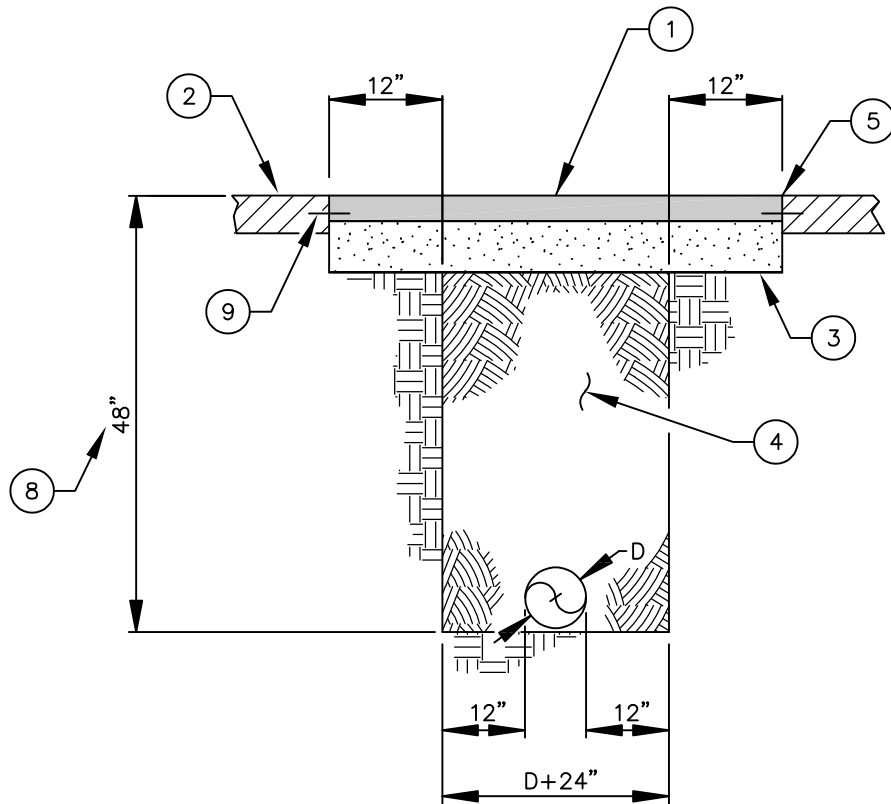
PLAN VIEW OF UTILITY POLE  
OR ABOVE GRADE OBSTRUCTION CROSSING

NOTE:

ORIENTATION CAN BE VERTICAL OR LATERAL AS  
REQUIRED. FOR ILLUSTRATION PURPOSES ONLY THE  
DEFLECTION IS SHOWN AS UNDER POTENTIAL CONFLICT;  
HOWEVER DEFLECTION CAN BE UP, DOWN LEFT, RIGHT OR  
ANY ITERATION IN ROTATION AS REQUIRED TO AVOID  
CONFLICT AREA.

LEGEND

- ① 8" OR 12" D.I. MAIN
- ② 8" OR 12" D.I. NIPPLE TO LENGTH (TYP)
- ③ 8- 8" OR 12" MEGA LUGS (TYP)
- ④ 4- 8" OR 12" 45 DEG. BEND (TYP)

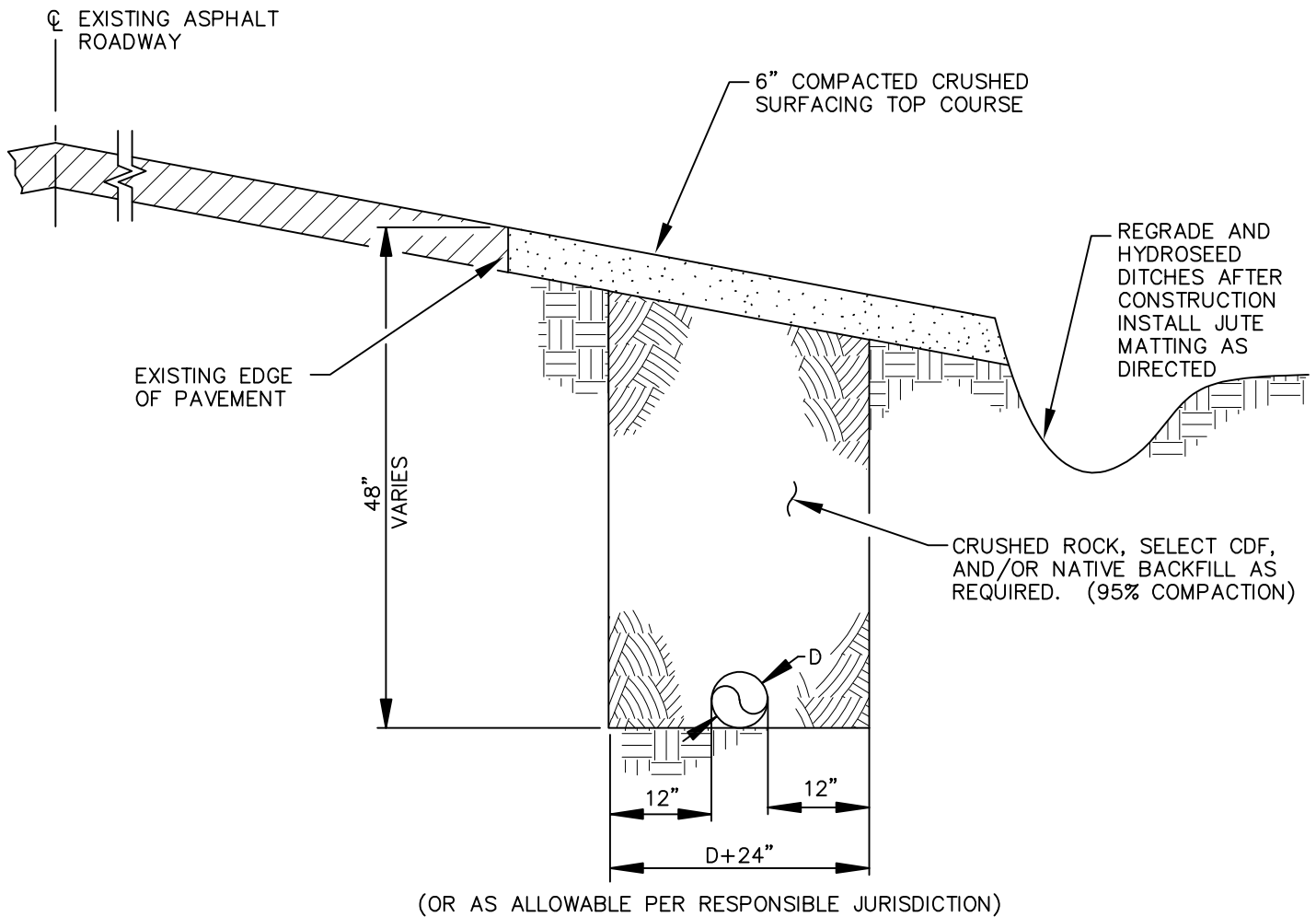


(OR AS ALLOWABLE PER RESPONSIBLE JURISDICTION)

## LEGEND

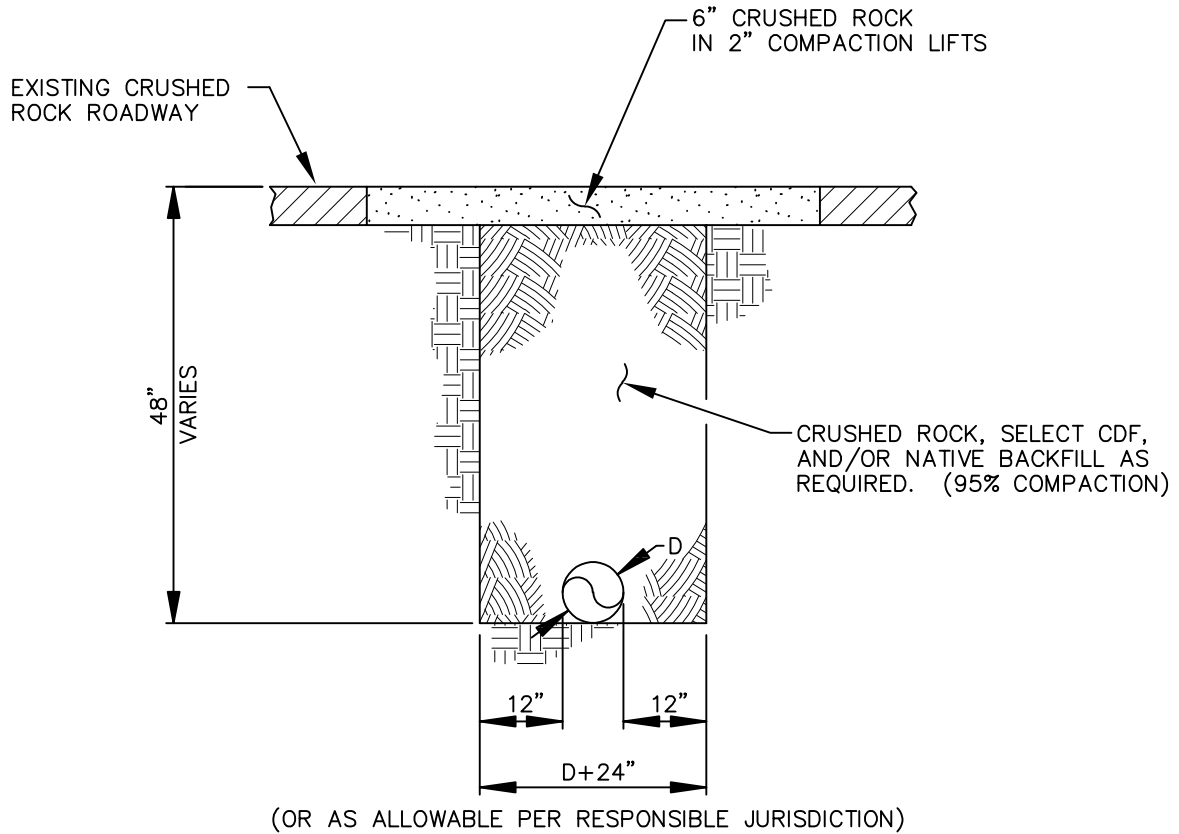
- ① LONGITUDINAL TRENCH – 2" ASPHALT CLASS B OVERLAY. TRANSVERSE TRENCH – 2" ASPHALT CLASS B OVERLAY WHERE MULTIPLE CROSSINGS BY SAME UTILITY.
- ② EXISTING PAVEMENT.
- ③ LONGITUDINAL TRENCH – 6" ACP OR 2" ACP + 4" ATB. TRANSVERSE TRENCH – 8" ACP OR 2" ACP + 6" ATB. IF CONCRETE, RESTORATION SHALL BE IN ACCORDANCE WITH THE GOVERNING BODIES OF JURISDICTION OVER THE WORK
- ④ NATIVE MATERIAL (IF SUITABLE). IMPORTED GRAVEL BORROW OR CRUSHED ROCK, AS REQUIRED, COMPACTED TO 95% MAXIMUM DENSITY. CDF AS REQUIRED BY THE ENGINEER. CONTRACTOR HAS THE OPTION TO BACKFILL THE ENTIRE EXCAVATION TO THE SUBGRADE WITH CSTC.
- ⑤ NEAT LINE CUT, CLEAN, HEAT & TACK EDGES WITH SEALER CSS-1 IMMEDIATELY COVERED WITH SAND & SEAL WITH HOT ASPHALT CEMENT.
- ⑥ TEMPORARY RESTORATION OF TRENCHES FOR OVERNIGHT USE SHALL BE ACCOMPLISHED BY USING COLD MIX, ATB, OR PINNED STEEL PLATES WITH ASPHALTED EDGES.
- ⑦ PATCH SHALL BE MACHINE ROLLED FLUSH WITH EXISTING PAVEMENT AND SHALL BE PLACED IN ACCORDANCE WITH THE GOVERNING BODIES OF JURISDICTION OVER THE WORK.
- ⑧ TRENCH DEPTH OVER UNDERGROUND UTILITIES SHALL CONFORM TO SECTION 3.3.1.
- ⑨ TRENCHES IN CONCRETE PAVEMENT SHALL BE RESTORED USING TIE BARS OR DOWEL BARS IN ACCORDANCE WITH THE GOVERNING BODIES OF JURISDICTION OVER THE WORK.
- ⑩ ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE GOVERNING BODIES WITH JURISDICTION OVER THE WORK
- ⑪ VERTICAL TRENCH WALLS SHALL CONFORM TO OSHA REGULATIONS.





TYPICAL ROADWAY CONSTRUCTION GENERAL NOTES

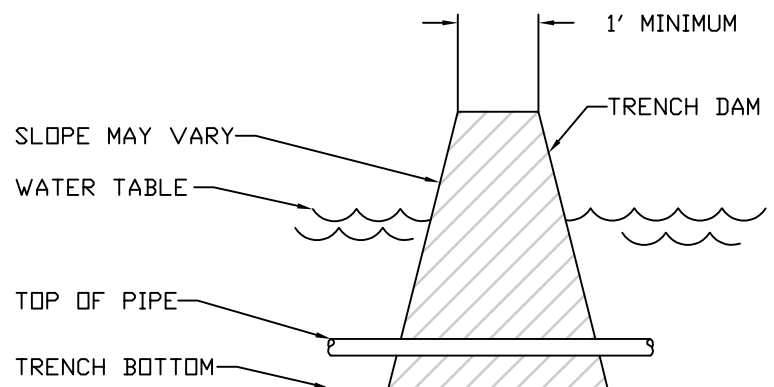
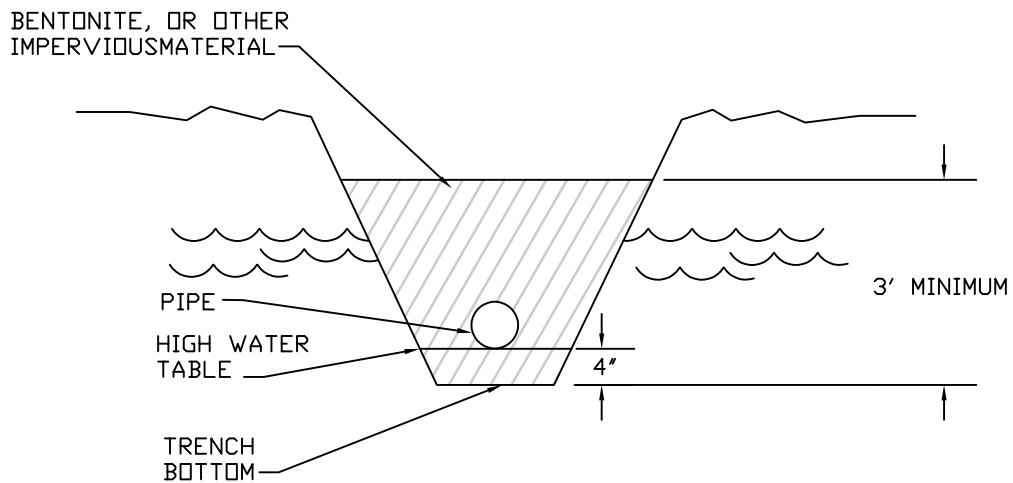
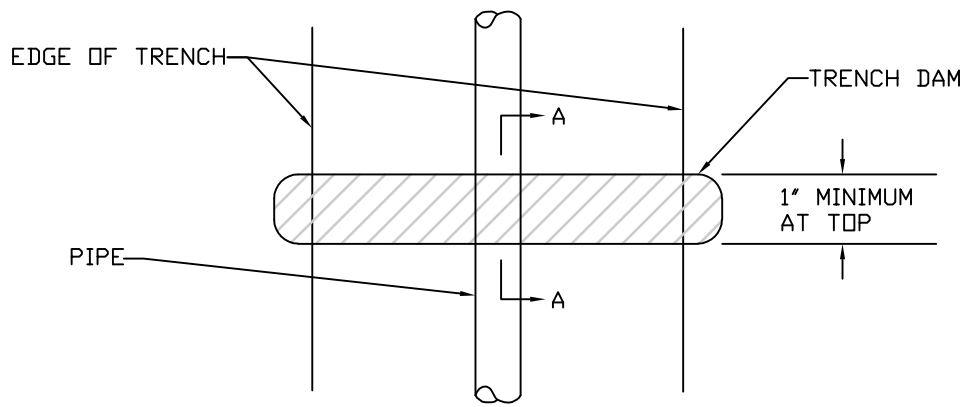
1. SELECT AND/OR NATIVE BACKFILL MATERIAL SHALL BE FREE FROM MUD, MUCK, ORGANIC MATTER, BROKEN BITUMINOUS SURFACING, AND STONES LARGER THAN 2" IN DIAMETER.
2. COMPACTION SHALL BE 95% OF MAXIMUM DENSITY.



TYPICAL ROADWAY CONSTRUCTION GENERAL NOTES

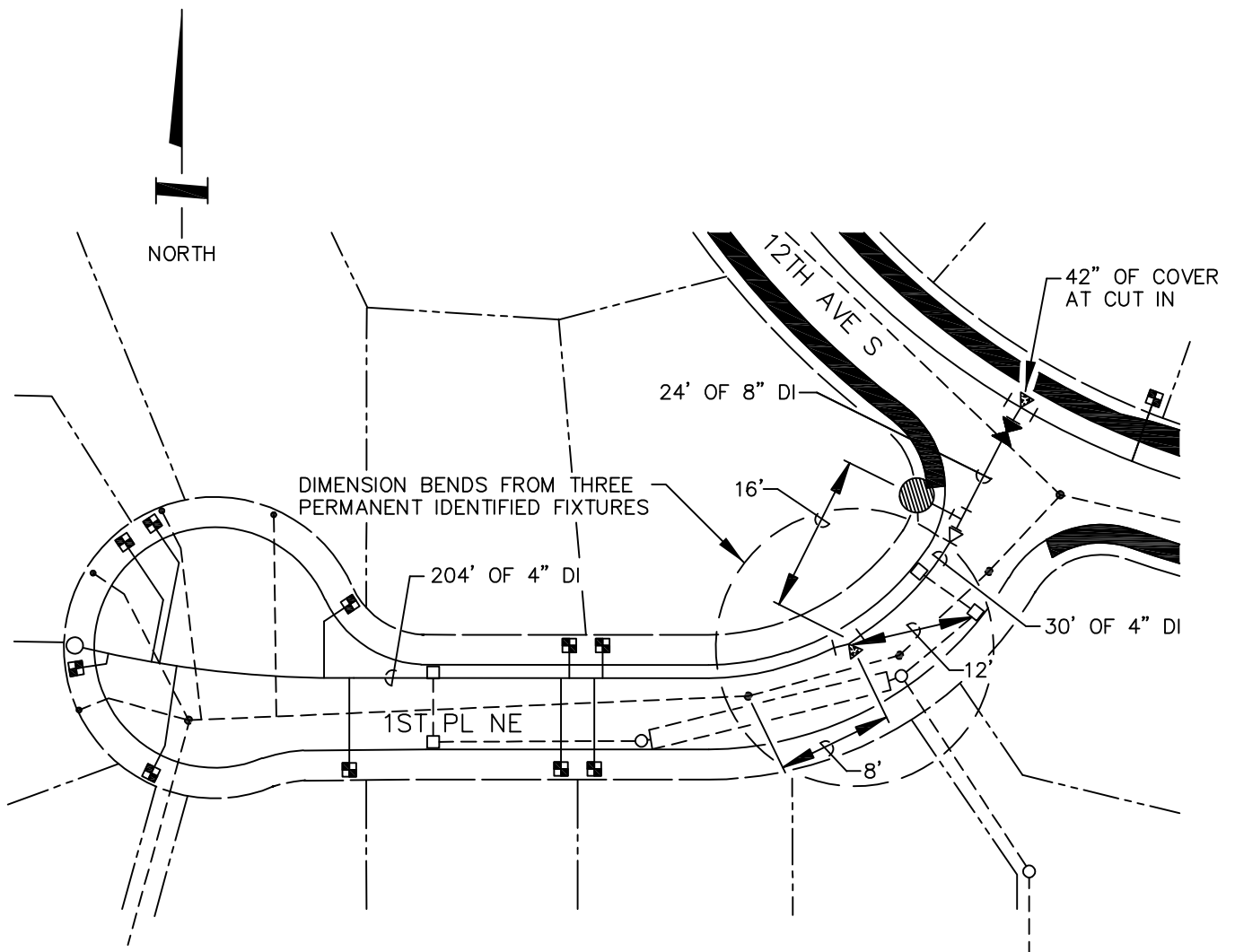
1. SELECT AND/OR NATIVE BACKFILL MATERIAL SHALL BE FREE FROM MUD, MUCK, ORGANIC MATTER, BROKEN BITUMINOUS SURFACING.
2. COMPACTION SHALL BE 95% OF MAXIMUM DENSITY.

TYPICAL CRUSHED ROCK  
TRENCH DETAIL



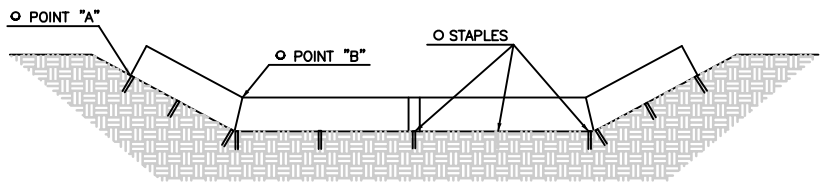
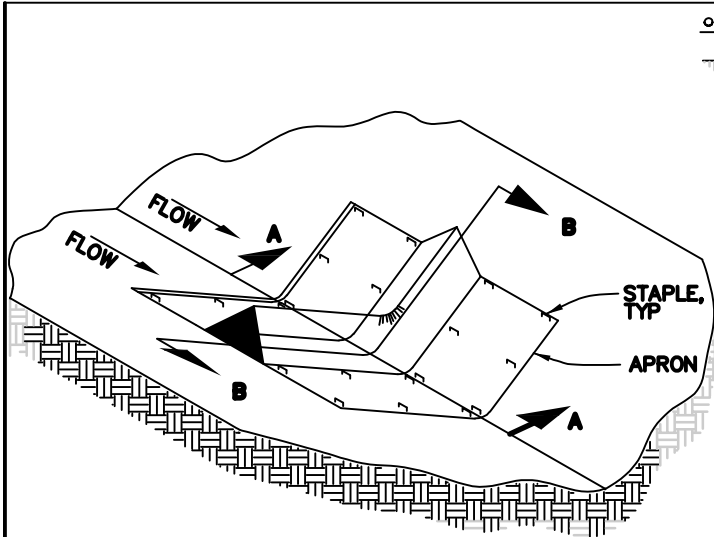
**NOTES:**

1. INSTALL IN HIGH GROUND WATER AREAS, ADJACENT TO WETLANDS AND STREAM CROSSINGS OR AS SHOWN ON PLANS OR AS DIRECTED BY THE DISTRICT.
2. ELEVATION AT TOP OF TRENCH DAM TO VARY BASED ON WATER TABLE AS DIRECTED BY THE DISTRICT.

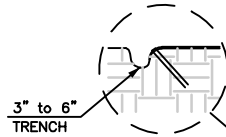


AS-BUILT THE FOLLOWING:

- LOCATION OF ANY BENDS USED
- LENGTH OF PIPE
- DISTANCE FROM CENTERLINE
- DEPTH OF MAIN
- STREET NAME
- NORTH ARROW
- HORIZONTAL SCALE: 1"=20'



○ POINT "A" MUST BE HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.



○ STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF THE 7' UNIT AS SHOWN ON THE DIAGRAMS

**NOTES:**

**MATERIALS:** TEMPORARY SILT DIKES SHALL BE TRIANGULAR-SHAPED, HAVING A HEIGHT OF AT LEAST EIGHT TO TEN INCHES (8" - 10") IN THE CENTER WITH EQUAL SIDES AND A SIXTEEN- TO TWENTY-INCH (16" - 20") BASE. THE TRIANGULAR-SHAPED INNER MATERIAL SHALL BE URETHANE FOAM. THE OUTER COVER SHALL BE A WOVEN GEOTEXTILE FABRIC PLACED AROUND THE INNER MATERIAL AND ALLOWED TO EXTEND BEYOND BOTH SIDES OF THE TRIANGLE TWO TO THREE (2' - 3') FEET. STANDARD LENGTH OF EACH DIKE WILL BE SEVEN FEET (7') UNLESS OTHERWISE INDICATED ON THE PLANS. THE DIKES SHALL BE ATTACHED TO THE GROUND WITH WIRE STAPLES. THE STAPLES SHALL BE NO. 11 GAUGE WIRE AND BE AT LEAST SIX TO EIGHT (6" - 8") INCHES LONG. STAPLES SHALL BE PLACED AS INDICATED ON THE INSTALLATION DETAIL.

THE CONTRACTOR SHALL INSPECT ALL DIKES AFTER EACH RAINFALL EVENT OF AT LEAST 0.5 INCHES OR GREATER. ANY DEFICIENCIES OR DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR. ACCUMULATED SILT OR DEBRIS SHALL BE REMOVED AND RELOCATED AS DIRECTED BY THE ENGINEER. IF THE DIKES ARE DAMAGED OR INADVERTENTLY MOVED DURING THE SILT REMOVAL PROCESS, THE CONTRACTOR SHALL IMMEDIATELY REPLACE DIKES AFTER DAMAGE OCCURS.

**13 ELEMENTS OF REQUIRED SWIPPP BMPs:**

NOTE THAT IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL DEPARTMENT OF ECOLOGY STATUTES INCLUDING ALL STORM WATER MONITORING (BY A CERTIFIED CESCL).

COVERAGE UNDER THE CONSTRUCTION STORMWATER GENERAL PERMIT HAS BEEN APPLIED FOR BY THE DISTRICT, AND WILL BE TRANSFERRED TO THE CONTRACTOR PRIOR TO NOTICE TO PROCEED.

ELEMENT#1- PRESERVE VEGETATION / MARK CLEARING LIMITS

ELEMENT#2 ESTABLISH CONSTRUCTION ACCESS:  
ACCESS FROM COUNTY ROAD NO CONSTRUCTION ACCESS NEEDED

ELEMENT#3- CONTROL FLOW RATES:  
NONE IS PROPOSED

ELEMENT#4 INSTALL SEDIMENT CONTROLS:  
INSTALL JUTE MATTING IN DITCH LINE &/OR SHOULDER SLOPES AS REQUIRED AND/OR AS SHOWN ON THE CONTRACT PLANS

ELEMENT#5 STABILIZE SOILS:  
SOIL STABILIZATION IS ACHIEVED BY STRAW AND COVERING AS NEED.

ELEMENT#6 PROTECT SLOPES:  
NONE IS PROPOSED

ELEMENT#7 PROTECT DRAIN INLETS:  
INSTALL DRAIN IF REQUIRED.

ELEMENT#8 STABILIZE CHANNELS AND OUTLETS:  
NONE IS PROPOSED

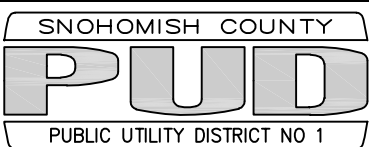
ELEMENT#9 CONTROL POLLUTANTS:  
ALL VEHICLES, EQUIPMENT AND PETROLEUM PRODUCT STORAGE/DISPERSING AREAS WILL BE INSPECTED REGULARLY TO DETECT ANY LEAKS OF SPILLS AND TO IDENTIFY MAINTENANCE NEEDS AND PREVENT LEAKS OF SPILLS.

ELEMENT#10 CONTROL DE WATERING:  
DE-WATERING AS REQUIRED BY GROUND WATER CONDITIONS

ELEMENT#11 MAINTAIN BMP'S:  
ALL BMPS SHALL BE MAINTAINED AND REPAIRED AS NEEDED.

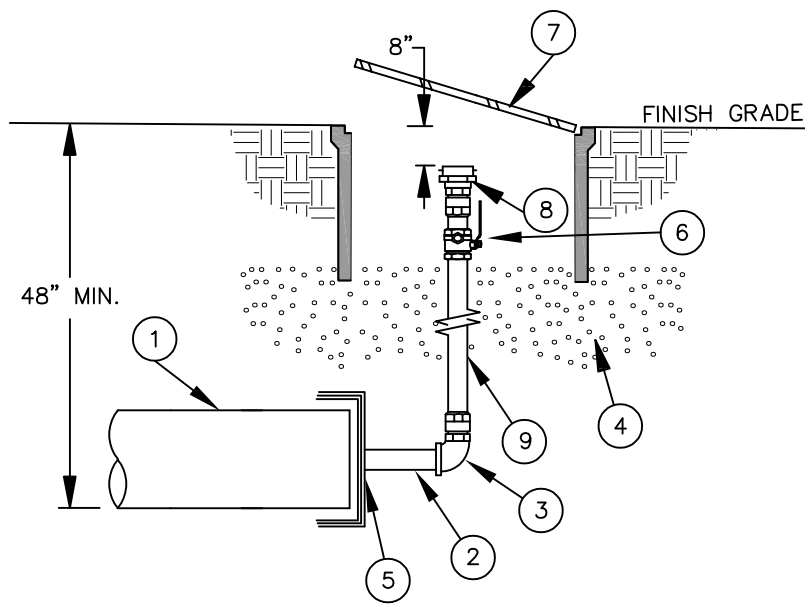
ELEMENT#12 MANAGE THE PROJECT:  
MAXIMUM OF 60' OF TRENCH LEFT OPEN PRIOR TO BACKFILL. UNSUITABLE REPLACED WITH 100% CRUSHED ROCK BACKFILL.

ELEMENT #13 PROTECT LOW IMPACT DEVELOPMENT BMPs.



13 ELEMENTS OF REQUIRED SWIPPP BMPs:

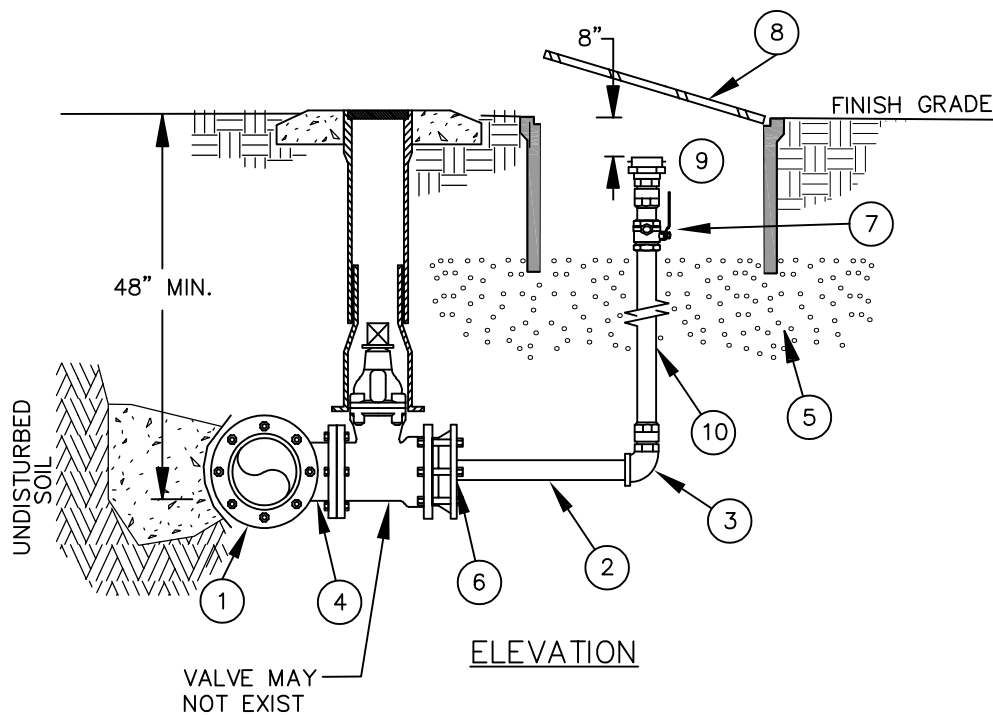
DATE	STANDARD
2021	<b>1002</b>
ENGR	
MMS	



ELEVATION

CONSTRUCTION NOTES:

- ① CL-52 DUCTILE IRON WATER MAIN. MECHANICALLY RESTRAINED (SEE DISTRICT ENGINEER FOR TOTAL LENGTH OF RESTRAINED PIPE).
- ② 2" BRASS NIPPLE (6" LONG)
- ③ 2" MUELLER 110 (OR FORD OR AY MCDONALD QUICK JOINT) X F.I.P. 90° (FIP X COMP) BEND COUPLING. NO DRAIN HOLE SHALL BE DRILLED.
- ④ 12" IN WIDTH AND 24" IN DEPTH OF 5/8" CRUSHED ROCK OR SAND BEDDING SURROUNDING THE BOX.
- ⑤ 12" MJ CAP TAPPED 2" I.P.
- ⑥ 1- 2" 1/4 TURN BALL VALVE (FIP X FIP)
- ⑦ TEMPORARY BOX WITH LID OR ENCLOSURE.
- ⑧ 1-2" (MIP X COMP) COUPLING  
1-2" COMP X FIP COUPLING  
1-2" X 2 1/2" BRASS NST HOSE ADAPTER AND CAP
- ⑨ APPROX. 5' OF 2" STRAIGHT TYPE K COPPER PIPE



CONSTRUCTION NOTES:

- ① CL-52 DUCTILE IRON WATER MAIN PER PLAN.
- ② 2" BRASS NIPPLE (12" LONG)
- ③ 2" MUELLER 110 (OR FORD OR AY MCDONALD QUICK JOINT) X F.I.P. 90° (FIP X COMP) BEND COUPLING. NO DRAIN HOLE SHALL BE DRILLED.
- ④ CL-52 TEE
- ⑤ 12" IN WIDTH AND 24" IN DEPTH OF 5/8" CRUSHED ROCK OR SAND BEDDING SURROUNDING THE BOX.
- ⑥ MJ PLUG TAPPED 2"
- ⑦ 1- 2" 1/4 TURN BALL VALVE (FIP X FIP)
- ⑧ TEMPORARY BOX WITH LID OR ENCLOSURE.
- ⑨ 1-2" (MIP X COMP) COUPLING  
1-2" COMP X FIP COUPLING  
1-2" X 2 1/2" BRASS NST HOSE ADAPTER AND CAP
- ⑩ APPROX. 5' OF 2" STRAIGHT TYPE K COPPER PIPE

**Appendix 1-2**

DOH Water Facility Inventory Forms



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# WATER FACILITIES INVENTORY (WFI) FORM

Quarter: 1  
Updated: 12/13/2019

ONE FORM PER SYSTEM

Printed: 4/23/2020  
WFI Printed For: On-Demand  
Submission Reason: Pop/Connect Update

RETURN TO: Central Services - WFI, PO Box 47822, Olympia, WA, 98504-7822

<b>1. SYSTEM ID NO.</b> 80907 1	<b>2. SYSTEM NAME</b> SNO PUD 1 - LAKE STEVENS	<b>3. COUNTY</b> SNOHOMISH	<b>4. GROUP</b> A	<b>5. TYPE</b> Comm
<b>6. PRIMARY CONTACT NAME &amp; MAILING ADDRESS</b>  BRETT A. GEHRKE [SUPERINTENDENT] SNOHOMISH COUNTY PUD PO BOX 1107 EVERETT, WA 98206		<b>7. OWNER NAME &amp; MAILING ADDRESS</b>  SNOHOMISH COUNTY PUD 1 BRANT WOOD PO BOX 1107 EVERETT, WA 98206  ASST GENERAL MANAGER		
<b>STREET ADDRESS IF DIFFERENT FROM ABOVE</b> ATTN WATER RESOURCES ADDRESS 3301 OLD HARTFORD ROAD CITY LAKE STEVENS STATE WA ZIP 98258		<b>STREET ADDRESS IF DIFFERENT FROM ABOVE</b> ATTN WATER RESOURCES ADDRESS 3301 OLD HARTFORD ROAD CITY LAKE STEVENS STATE WA ZIP 98258		
<b>9. 24 HOUR PRIMARY CONTACT INFORMATION</b>		<b>10. OWNER CONTACT INFORMATION</b>		
Primary Contact Daytime Phone: (425) 397-3005		Owner Daytime Phone: (425) 397-3003		
Primary Contact Mobile/Cell Phone: (425) 359-0403		Owner Mobile/Cell Phone: (425) 231-5643		
Primary Contact Evening Phone: (xxx)-xxx-xxxx		Owner Evening Phone: (xxx)-xxx-xxxx		
Fax: (425)267-6776 E-mail: xxxxxxxxxxxxxxxxxxxxxx		Fax: (425) 267-6202 E-mail: xxxxxxxxxxxxxxxxxxxxxx		
<b>11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)</b>				
<input type="checkbox"/> Not applicable (Skip to #12) <input checked="" type="checkbox"/> Owned and Managed SMA NAME: SNOHOMISH COUNTY PUD 1 SMA Number: 104 <input type="checkbox"/> Managed Only <input type="checkbox"/> Owned Only				
<b>12. WATER SYSTEM CHARACTERISTICS (mark all that apply)</b>				
<input type="checkbox"/> Agricultural <input checked="" type="checkbox"/> Commercial / Business <input checked="" type="checkbox"/> Day Care <input checked="" type="checkbox"/> Food Service/Food Permit <input type="checkbox"/> 1,000 or more person event for 2 or more days per year <input checked="" type="checkbox"/> Hospital/Clinic <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Licensed Residential Facility <input type="checkbox"/> Lodging <input checked="" type="checkbox"/> Recreational / RV Park <input checked="" type="checkbox"/> Residential <input checked="" type="checkbox"/> School <input type="checkbox"/> Temporary Farm Worker <input checked="" type="checkbox"/> Other (church, fire station, etc.):				
<b>13. WATER SYSTEM OWNERSHIP (mark only one)</b>				<b>14. STORAGE CAPACITY (gallons)</b>
<input type="checkbox"/> Association <input type="checkbox"/> City / Town <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> Investor <input type="checkbox"/> Private <input checked="" type="checkbox"/> Special District <input type="checkbox"/> State				14,100,000

- SEE NEXT PAGE FOR A COMPLETE LIST OF SOURCES -



# WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
80907 1	SNO PUD 1 - LAKE STEVENS	SNOHOMISH	A	Comm

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS
<b>25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)</b>		20306	Unspecified
A. Full Time Single Family Residences (Occupied 180 days or more per year)	18899		
B. Part Time Single Family Residences (Occupied less than 180 days per year)	0		
<b>26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)</b>			
A. Apartment Buildings, condos, duplexes, barracks, dorms	344		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	1407		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied less than 180 days/year	0		
<b>27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)</b>			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	469	469	
<b>28. TOTAL SERVICE CONNECTIONS</b>		20775	

<b>29. FULL-TIME RESIDENTIAL POPULATION</b>
A. How many residents are served by this system 180 or more days per year? <span style="float: right; text-decoration: underline;">51625</span>

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	60	60	60	60	60	60	60	60	60	60	60	60

<b>34. NITRATE SCHEDULE</b>	<b>QUARTERLY</b>	<b>ANNUALLY</b>	<b>ONCE EVERY 3 YEARS</b>
(One Sample per source by time period)			

**35. Reason for Submitting WFI:**

Update - Change   
  Update - No Change   
  Inactivate   
  Re-Activate   
  Name Change   
  New System   
  Other \_\_\_\_\_

**36. I certify that the information stated on this WFI form is correct to the best of my knowledge.**

**SIGNATURE:** \_\_\_\_\_ **DATE:** \_\_\_\_\_  
**PRINT NAME:** \_\_\_\_\_ **TITLE:** \_\_\_\_\_

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# WATER FACILITIES INVENTORY (WFI) FORM

Quarter: 1  
Updated: 06/21/2018

ONE FORM PER SYSTEM

Printed: 2/5/2021  
WFI Printed For: On-Demand  
Submission Reason: No Change

RETURN TO: Central Services - WFI, PO Box 47822, Olympia, WA, 98504-7822

<b>1. SYSTEM ID NO.</b> 04515 Q	<b>2. SYSTEM NAME</b> SNO PUD 1 - 212 MARKET & DELI	<b>3. COUNTY</b> SNOHOMISH	<b>4. GROUP</b> A	<b>5. TYPE</b> TNC																						
<b>6. PRIMARY CONTACT NAME &amp; MAILING ADDRESS</b>  BRETT A. GEHRKE [WATER SUPERINTENDENT] PO BOX 1107 EVERETT, WA 98206		<b>7. OWNER NAME &amp; MAILING ADDRESS</b>  SNOHOMISH COUNTY PUD 1 ASST GENERAL MANAGER BRANT WOOD PO BOX 1107 EVERETT, WA 98206																								
<b>STREET ADDRESS IF DIFFERENT FROM ABOVE</b> ATTN WATER RESOURCES ADDRESS 3301 OLD HARTFORD ROAD CITY LAKE STEVENS STATE WA ZIP 98258		<b>STREET ADDRESS IF DIFFERENT FROM ABOVE</b> ATTN WATER RESOURCES ADDRESS 3301 OLD HARTFORD ROAD CITY LAKE STEVENS STATE WA ZIP 98258																								
<b>9. 24 HOUR PRIMARY CONTACT INFORMATION</b>		<b>10. OWNER CONTACT INFORMATION</b>																								
Primary Contact Daytime Phone: (425) 397-3005		Owner Daytime Phone: (425) 397-3003																								
Primary Contact Mobile/Cell Phone: (425) 359-0403		Owner Mobile/Cell Phone: (425) 231-5643																								
Primary Contact Evening Phone: (xxx)-xxx-xxxx		Owner Evening Phone: (xxx)-xxx-xxxx																								
Fax: (425)267-6776   E-mail: xxxxxxxxxxxxxxxxxxxx		Fax: (425) 267-6202   E-mail: xxxxxxxxxxxxxxxxxxxx																								
<b>11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)</b>																										
<input type="checkbox"/> Not applicable (Skip to #12) <input checked="" type="checkbox"/> Owned and Managed      SMA NAME: SNOHOMISH COUNTY PUD 1      SMA Number: 104 <input type="checkbox"/> Managed Only <input type="checkbox"/> Owned Only																										
<b>12. WATER SYSTEM CHARACTERISTICS (mark all that apply)</b>																										
<input type="checkbox"/> Agricultural <input type="checkbox"/> Hospital/Clinic <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial / Business <input type="checkbox"/> Industrial <input type="checkbox"/> School <input type="checkbox"/> Day Care <input type="checkbox"/> Licensed Residential Facility <input type="checkbox"/> Temporary Farm Worker <input checked="" type="checkbox"/> Food Service/Food Permit <input type="checkbox"/> Lodging <input type="checkbox"/> Other (church, fire station, etc.): _____ <input type="checkbox"/> 1,000 or more person event for 2 or more days per year <input type="checkbox"/> Recreational / RV Park																										
<b>13. WATER SYSTEM OWNERSHIP (mark only one)</b>				<b>14. STORAGE CAPACITY (gallons)</b>																						
<input type="checkbox"/> Association <input type="checkbox"/> County <input type="checkbox"/> Investor <input checked="" type="checkbox"/> Special District <input type="checkbox"/> City / Town <input type="checkbox"/> Federal <input type="checkbox"/> Private <input type="checkbox"/> State				3,357																						
15 Source Number	16 SOURCE NAME	17 INTERTIE	18 SOURCE CATEGORY									19 USE	20	21 TREATMENT			22 DEPTH	23	24 SOURCE LOCATION							
	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456  IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL IN A WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN TERTVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP
S01	ABD001 WELL 1		X									X			Y	X					93	4	NE NW	25	32N	04E

# WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
04515 Q	SNO PUD 1 - 212 MARKET & DELI	SNOHOMISH	A	TNC

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS
<b>25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)</b>		0	Unspecified
A. Full Time Single Family Residences (Occupied 180 days or more per year)	0		
B. Part Time Single Family Residences (Occupied less than 180 days per year)	0		
<b>26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)</b>			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied less than 180 days/year	0		
<b>27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)</b>			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	2	2	
<b>28. TOTAL SERVICE CONNECTIONS</b>		2	

<b>29. FULL-TIME RESIDENTIAL POPULATION</b>
A. How many residents are served by this system 180 or more days per year? <span style="float: right; text-align: center;">0</span>

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?	775	700	775	750	775	750	775	775	750	775	750	775
B. How many days per month is water accessible to the public?	31	28	31	30	31	30	31	31	30	31	30	31

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	1	1	1	1	1	1	1	1	1	1	1	1

<b>34. NITRATE SCHEDULE</b>	<b>QUARTERLY</b>	<b>ANNUALLY</b>	<b>ONCE EVERY 3 YEARS</b>
(One Sample per source by time period)		S01	

**35. Reason for Submitting WFI:**

Update - Change   
  Update - No Change   
  Inactivate   
  Re-Activate   
  Name Change   
  New System   
  Other \_\_\_\_\_

**36. I certify that the information stated on this WFI form is correct to the best of my knowledge.**

**SIGNATURE:** \_\_\_\_\_      **DATE:** \_\_\_\_\_  
**PRINT NAME:** \_\_\_\_\_      **TITLE:** \_\_\_\_\_



# WATER FACILITIES INVENTORY (WFI) FORM

Quarter: 1  
Updated: 07/02/2020

ONE FORM PER SYSTEM

Printed: 2/5/2021  
WFI Printed For: On-Demand  
Submission Reason: No Change

RETURN TO: Central Services - WFI, PO Box 47822, Olympia, WA, 98504-7822

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE																	
06325 V	SNO PUD 1- CRESWELL	SNOHOMISH	A	Comm																	
6. PRIMARY CONTACT NAME & MAILING ADDRESS		7. OWNER NAME & MAILING ADDRESS																			
BRETT A. GEHRKE [SUPERINTENDENT] SNOHOMISH COUNTY PUD PO BOX 1107 EVERETT, WA 98206		SNOHOMISH COUNTY PUD 1 BRANT WOOD PO BOX 1107 EVERETT, WA 98206																			
STREET ADDRESS IF DIFFERENT FROM ABOVE		STREET ADDRESS IF DIFFERENT FROM ABOVE																			
ATTN WATER RESOURCES ADDRESS 3301 OLD HARTFORD ROAD CITY LAKE STEVENS STATE WA ZIP 98258		ATTN WATER RESOURCES ADDRESS 3301 OLD HARTFORD ROAD CITY LAKE STEVENS STATE WA ZIP 98258																			
9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION																			
Primary Contact Daytime Phone: (425) 397-3005		Owner Daytime Phone: (425) 397-3003																			
Primary Contact Mobile/Cell Phone: (425) 359-0403		Owner Mobile/Cell Phone: (425) 231-5643																			
Primary Contact Evening Phone: (xxx)-xxx-xxxx		Owner Evening Phone: (xxx)-xxx-xxxx																			
Fax: (425)267-6776	E-mail: xxxxxxxxxxxxxxxxxxxxxx	Fax: (425) 267-6202	E-mail: xxxxxxxxxxxxxxxxxxxxxx																		
11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)																					
<input type="checkbox"/> Not applicable (Skip to #12) <input checked="" type="checkbox"/> Owned and Managed SMA NAME: <u>SNOHOMISH COUNTY PUD 1</u> SMA Number: 104 <input type="checkbox"/> Managed Only <input type="checkbox"/> Owned Only																					
12. WATER SYSTEM CHARACTERISTICS (mark all that apply)																					
<input type="checkbox"/> Agricultural <input type="checkbox"/> Commercial / Business <input type="checkbox"/> Day Care <input type="checkbox"/> Food Service/Food Permit <input type="checkbox"/> 1,000 or more person event for 2 or more days per year <input type="checkbox"/> Hospital/Clinic <input type="checkbox"/> Industrial <input type="checkbox"/> Licensed Residential Facility <input type="checkbox"/> Lodging <input type="checkbox"/> Recreational / RV Park <input checked="" type="checkbox"/> Residential <input type="checkbox"/> School <input type="checkbox"/> Temporary Farm Worker <input type="checkbox"/> Other (church, fire station, etc.): _____																					
13. WATER SYSTEM OWNERSHIP (mark only one)			14. STORAGE CAPACITY (gallons)																		
<input type="checkbox"/> Association <input type="checkbox"/> City / Town <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> Investor <input type="checkbox"/> Private <input checked="" type="checkbox"/> Special District <input type="checkbox"/> State																					
15 Source Number	16 SOURCE NAME	17 INTERTIE	18 SOURCE CATEGORY							19 USE	20	21 TREATMENT			22 DEPTH	23	24 SOURCE LOCATION				
	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL WELL IN A WELL FIELD WELL IN A WELL FIELD WELL WELL	WELL WELL IN A WELL FIELD WELL IN A WELL FIELD WELL WELL	WELL WELL IN A WELL FIELD WELL IN A WELL FIELD WELL WELL	WELL WELL IN A WELL FIELD WELL IN A WELL FIELD WELL WELL	WELL WELL IN A WELL FIELD WELL IN A WELL FIELD WELL WELL	WELL WELL IN A WELL FIELD WELL IN A WELL FIELD WELL WELL	WELL WELL IN A WELL FIELD WELL IN A WELL FIELD WELL WELL	WELL WELL IN A WELL FIELD WELL IN A WELL FIELD WELL WELL	WELL WELL IN A WELL FIELD WELL IN A WELL FIELD WELL WELL	WELL WELL IN A WELL FIELD WELL IN A WELL FIELD WELL WELL	WELL WELL IN A WELL FIELD WELL IN A WELL FIELD WELL WELL	WELL WELL IN A WELL FIELD WELL IN A WELL FIELD WELL WELL	WELL WELL IN A WELL FIELD WELL IN A WELL FIELD WELL WELL	WELL WELL IN A WELL FIELD WELL IN A WELL FIELD WELL WELL	WELL WELL IN A WELL FIELD WELL IN A WELL FIELD WELL WELL	WELL WELL IN A WELL FIELD WELL IN A WELL FIELD WELL WELL	WELL WELL IN A WELL FIELD WELL IN A WELL FIELD WELL WELL	WELL WELL IN A WELL FIELD WELL IN A WELL FIELD WELL WELL	
S01	24050L/EVERETT	24050 L								X		Y	X				2400			00N	00E



# WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
06325 V	SNO PUD 1- CRESWELL	SNOHOMISH	A	Comm

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS
<b>25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)</b>		23	Unspecified
A. Full Time Single Family Residences (Occupied 180 days or more per year)	23		
B. Part Time Single Family Residences (Occupied less than 180 days per year)	0		
<b>26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)</b>			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied less than 180 days/year	0		
<b>27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)</b>			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	
<b>28. TOTAL SERVICE CONNECTIONS</b>		23	

<b>29. FULL-TIME RESIDENTIAL POPULATION</b>
A. How many residents are served by this system 180 or more days per year? <span style="float: right; text-decoration: underline;">57</span>

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	1	1	1	1	1	1	1	1	1	1	1	1

<b>34. NITRATE SCHEDULE</b>	<b>QUARTERLY</b>	<b>ANNUALLY</b>	<b>ONCE EVERY 3 YEARS</b>
(One Sample per source by time period)			

**35. Reason for Submitting WFI:**

Update - Change   
  Update - No Change   
  Inactivate   
  Re-Activate   
  Name Change   
  New System   
  Other \_\_\_\_\_

**36. I certify that the information stated on this WFI form is correct to the best of my knowledge.**

**SIGNATURE:** \_\_\_\_\_ **DATE:** \_\_\_\_\_  
**PRINT NAME:** \_\_\_\_\_ **TITLE:** \_\_\_\_\_

# WATER FACILITIES INVENTORY (WFI) FORM

Quarter: 0  
Updated: 04/28/2010

ONE FORM PER SYSTEM

Printed: 2/5/2021  
WFI Printed For: On-Demand  
Submission Reason: Source Update

RETURN TO: Central Services - WFI, PO Box 47822, Olympia, WA, 98504-7822

<b>1. SYSTEM ID NO.</b> 06956 X		<b>2. SYSTEM NAME</b> SNO PUD 1-OTIS			<b>3. COUNTY</b> SNOHOMISH			<b>4. GROUP</b> B		<b>5. TYPE</b>																	
<b>6. PRIMARY CONTACT NAME &amp; MAILING ADDRESS</b>						<b>7. OWNER NAME &amp; MAILING ADDRESS</b>																					
BRANT WOOD [WATER OPERATIONS MAN] ATTN SNOHOMISH COUNTY PUD PO BOX 1107 EVERETT, WA 98206						SNOHOMISH COUNTY PUD 1 BRANT WOOD PO BOX 1107 EVERETT, WA 98206 ASST GENERAL MANAGER																					
<b>STREET ADDRESS IF DIFFERENT FROM ABOVE</b>						<b>STREET ADDRESS IF DIFFERENT FROM ABOVE</b>																					
ATTN WATER RESOURCES		ADDRESS 3301 OLD HARTFORD ROAD				ATTN WATER RESOURCES		ADDRESS 3301 OLD HARTFORD ROAD																			
CITY LAKE STEVENS		STATE WA		ZIP 98258		CITY LAKE STEVENS		STATE WA		ZIP 98258																	
<b>9. 24 HOUR PRIMARY CONTACT INFORMATION</b>						<b>10. OWNER CONTACT INFORMATION</b>																					
Primary Contact Daytime Phone: (425) 397-3003						Owner Daytime Phone: (425) 397-3003																					
Primary Contact Mobile/Cell Phone: (425) 231-5643						Owner Mobile/Cell Phone: (425) 231-5643																					
Primary Contact Evening Phone: (xxx)-xxx-xxxx						Owner Evening Phone: (xxx)-xxx-xxxx																					
Fax: (425) 397-3160			E-mail: xxxxxxxxxxxxxxxxxxxxxx			Fax: (425) 267-6202			E-mail: xxxxxxxxxxxxxxxxxxxxxx																		
<b>11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)</b>																											
<input type="checkbox"/> Not applicable (Skip to #12) <input checked="" type="checkbox"/> Owned and Managed SMA NAME: <u>SNOHOMISH COUNTY PUD 1</u> SMA Number: <u>104</u> <input type="checkbox"/> Managed Only <input type="checkbox"/> Owned Only																											
<b>12. WATER SYSTEM CHARACTERISTICS (mark all that apply)</b>																											
<input type="checkbox"/> Agricultural <input type="checkbox"/> Hospital/Clinic <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Commercial / Business <input type="checkbox"/> Industrial <input type="checkbox"/> School <input type="checkbox"/> Day Care <input type="checkbox"/> Licensed Residential Facility <input type="checkbox"/> Temporary Farm Worker <input type="checkbox"/> Food Service/Food Permit <input type="checkbox"/> Lodging <input type="checkbox"/> Other (church, fire station, etc.): <input type="checkbox"/> 1,000 or more person event for 2 or more days per year <input type="checkbox"/> Recreational / RV Park																											
<b>13. WATER SYSTEM OWNERSHIP (mark only one)</b>									<b>14. STORAGE CAPACITY (gallons)</b>																		
<input type="checkbox"/> Association <input type="checkbox"/> County <input type="checkbox"/> Investor <input type="checkbox"/> Special District <input checked="" type="checkbox"/> City / Town <input type="checkbox"/> Federal <input type="checkbox"/> Private <input type="checkbox"/> State																											
<b>15</b>	<b>16</b> SOURCE NAME	<b>17</b> INTERTIE	<b>18</b> SOURCE CATEGORY					<b>19</b> USE	<b>20</b>	<b>21</b> TREATMENT		<b>22</b> DEPTH	<b>23</b>	<b>24</b> SOURCE LOCATION													
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER.  Example: WELL #1 XYZ456  IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL IN A WELL FIELD	SPRING	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN TERNAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE	
S01	WELL #1 AGB580		X								X			Y		X					228	30	SE NW	13	31N	05E	

# WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
06956 X	SNO PUD 1-OTIS	SNOHOMISH	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS
<b>25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)</b>		4	Undetermined
A. Full Time Single Family Residences (Occupied 180 days or more per year)	4		
B. Part Time Single Family Residences (Occupied less than 180 days per year)	0		
<b>26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)</b>			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied less than 180 days/year	0		
<b>27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)</b>			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	
<b>28. TOTAL SERVICE CONNECTIONS</b>		4	

<b>29. FULL-TIME RESIDENTIAL POPULATION</b>
A. How many residents are served by this system 180 or more days per year? <span style="float: right; text-decoration: underline;">10</span>

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

34. NITRATE SCHEDULE	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
(One Sample per source by time period)			

35. Reason for Submitting WFI:

Update - Change   
  Update - No Change   
  Inactivate   
  Re-Activate   
  Name Change   
  New System   
  Other \_\_\_\_\_

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

PRINT NAME: \_\_\_\_\_ TITLE: \_\_\_\_\_



# WATER FACILITIES INVENTORY (WFI) FORM

Quarter: 1  
Updated: 07/02/2020

ONE FORM PER SYSTEM

Printed: 2/5/2021  
WFI Printed For: On-Demand  
Submission Reason: No Change

RETURN TO: Central Services - WFI, PO Box 47822, Olympia, WA, 98504-7822

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
23111 5	SNO PUD 1 - KAYAK	SNOHOMISH	A	Comm

6. PRIMARY CONTACT NAME & MAILING ADDRESS	7. OWNER NAME & MAILING ADDRESS
BRETT A. GEHRKE [SUPERINTENDENT] SNOHOMISH COUNTY PUD PO BOX 1107 EVERETT, WA 98206	SNOHOMISH COUNTY PUD 1 ASST GENERAL MANAGER BRANT WOOD PO BOX 1107 EVERETT, WA 98206

STREET ADDRESS IF DIFFERENT FROM ABOVE	STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN WATER RESOURCES ADDRESS 3301 OLD HARTFORD ROAD CITY LAKE STEVENS STATE WA ZIP 98258	ATTN WATER RESOURCES ADDRESS 3301 OLD HARTFORD ROAD CITY LAKE STEVENS STATE WA ZIP 98258

9. 24 HOUR PRIMARY CONTACT INFORMATION	10. OWNER CONTACT INFORMATION
Primary Contact Daytime Phone: (425) 397-3005	Owner Daytime Phone: (425) 397-3003
Primary Contact Mobile/Cell Phone: (425) 359-0403	Owner Mobile/Cell Phone: (425) 231-5643
Primary Contact Evening Phone: (xxx)-xxx-xxxx	Owner Evening Phone: (xxx)-xxx-xxxx
Fax: (425)267-6776     E-mail: xxxxxxxxxxxxxxxxxxxxx	Fax: (425) 267-6202     E-mail: xxxxxxxxxxxxxxxxxxxxx

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)	
<input type="checkbox"/> Not applicable (Skip to #12) <input checked="checked" type="checkbox"/> Owned and Managed     SMA NAME: <u>SNOHOMISH COUNTY PUD 1</u> <input type="checkbox"/> Managed Only     SMA Number: <u>104</u> <input type="checkbox"/> Owned Only	

12. WATER SYSTEM CHARACTERISTICS (mark all that apply)		
<input type="checkbox"/> Agricultural	<input type="checkbox"/> Hospital/Clinic	<input checked="checked" type="checkbox"/> Residential
<input type="checkbox"/> Commercial / Business	<input type="checkbox"/> Industrial	<input type="checkbox"/> School
<input type="checkbox"/> Day Care	<input type="checkbox"/> Licensed Residential Facility	<input type="checkbox"/> Temporary Farm Worker
<input type="checkbox"/> Food Service/Food Permit	<input type="checkbox"/> Lodging	<input type="checkbox"/> Other (church, fire station, etc.): _____
<input type="checkbox"/> 1,000 or more person event for 2 or more days per year	<input type="checkbox"/> Recreational / RV Park	

13. WATER SYSTEM OWNERSHIP (mark only one)	14. STORAGE CAPACITY (gallons)
<input type="checkbox"/> Association <input type="checkbox"/> County <input type="checkbox"/> Investor <input checked="checked" type="checkbox"/> Special District <input type="checkbox"/> City / Town <input type="checkbox"/> Federal <input type="checkbox"/> Private <input type="checkbox"/> State	295,000

15 Source Number	16 SOURCE NAME	17 INTERTIE	18 SOURCE CATEGORY										19 USE	20 SOURCE METERED	21 TREATMENT					22 DEPTH	23 CAPACITY (GALLONS PER MINUTE)	24 SOURCE LOCATION			
			WELL	WELL IN A WELL FIELD	SPRING	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL			EMERGENCY	NONE	CHLORINATION	FILTRATION	FLUORIDATION			IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN TERVERAL IN FEET	1/4, 1/4 SECTION
	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456  IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER																							
S01	WELL #2 BBF570		X											X		X	X		X	340	300	SW SE	29	31N	04E
S02	WELL #3 BBF571		X											X		X	X		X	370	300	SW SE	29	31N	04E

# WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
231115	SNO PUD 1 - KAYAK	SNOHOMISH	A	Comm

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS
<b>25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)</b>		384	481
A. Full Time Single Family Residences (Occupied 180 days or more per year)	382		
B. Part Time Single Family Residences (Occupied less than 180 days per year)	0		
<b>26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)</b>			
A. Apartment Buildings, condos, duplexes, barracks, dorms	1		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	2		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied less than 180 days/year	0		
<b>27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)</b>			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
<b>28. TOTAL SERVICE CONNECTIONS</b>		384	481

<b>29. FULL-TIME RESIDENTIAL POPULATION</b>
A. How many residents are served by this system 180 or more days per year? <span style="float: right; text-decoration: underline;">962</span>

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	1	1	1	1	1	1	1	1	1	1	1	1

34. NITRATE SCHEDULE	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
(One Sample per source by time period)			

35. Reason for Submitting WFI:

Update - Change   
  Update - No Change   
  Inactivate   
  Re-Activate   
  Name Change   
  New System   
  Other \_\_\_\_\_

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

PRINT NAME: \_\_\_\_\_ TITLE: \_\_\_\_\_



# WATER FACILITIES INVENTORY (WFI) FORM

Quarter: 1  
Updated: 07/02/2020

ONE FORM PER SYSTEM

Printed: 2/5/2021  
WFI Printed For: On-Demand  
Submission Reason: Pop/Connect Update

RETURN TO: Central Services - WFI, PO Box 47822, Olympia, WA, 98504-7822

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
44431 6	SNO PUD 1 - STORM LAKE RIDGE	SNOHOMISH	A	Comm

6. PRIMARY CONTACT NAME & MAILING ADDRESS	7. OWNER NAME & MAILING ADDRESS
BRETT A. GEHRKE [SUPERINTENDENT] SNOHOMISH COUNTY PUD PO BOX 1107 EVERETT, WA 98206	SNOHOMISH COUNTY PUD 1 BRANT WOOD PO BOX 1107 EVERETT, WA 98206 <span style="float: right;">ASST GENERAL MANAGER</span>
STREET ADDRESS IF DIFFERENT FROM ABOVE	STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN: WATER RESOURCES ADDRESS: 3301 OLD HARTFORD ROAD CITY: LAKE STEVENS STATE: WA ZIP: 98258	ATTN: WATER RESOURCES ADDRESS: 3301 OLD HARTFORD ROAD CITY: LAKE STEVENS STATE: WA ZIP: 98258

9. 24 HOUR PRIMARY CONTACT INFORMATION	10. OWNER CONTACT INFORMATION
Primary Contact Daytime Phone: (425) 397-3005	Owner Daytime Phone: (425) 397-3003
Primary Contact Mobile/Cell Phone: (425) 359-0403	Owner Mobile/Cell Phone: (425) 231-5643
Primary Contact Evening Phone: (xxx)-xxx-xxxx	Owner Evening Phone: (xxx)-xxx-xxxx
Fax: (425)267-6776   E-mail: xxxxxxxxxxxxxxxxxxxx	Fax: (425) 267-6202   E-mail: xxxxxxxxxxxxxxxxxxxx

**11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)**

Not applicable (Skip to #12)  
 Owned and Managed  
 Managed Only  
 Owned Only

SMA NAME: SNOHOMISH COUNTY PUD 1 SMA Number: 104

**12. WATER SYSTEM CHARACTERISTICS (mark all that apply)**

<input type="checkbox"/> Agricultural	<input type="checkbox"/> Hospital/Clinic	<input checked="" type="checkbox"/> Residential
<input type="checkbox"/> Commercial / Business	<input type="checkbox"/> Industrial	<input type="checkbox"/> School
<input type="checkbox"/> Day Care	<input type="checkbox"/> Licensed Residential Facility	<input type="checkbox"/> Temporary Farm Worker
<input type="checkbox"/> Food Service/Food Permit	<input type="checkbox"/> Lodging	<input type="checkbox"/> Other (church, fire station, etc.): _____
<input type="checkbox"/> 1,000 or more person event for 2 or more days per year	<input type="checkbox"/> Recreational / RV Park	

13. WATER SYSTEM OWNERSHIP (mark only one)	14. STORAGE CAPACITY (gallons)
<input type="checkbox"/> Association <input type="checkbox"/> County <input type="checkbox"/> Investor <input checked="" type="checkbox"/> Special District <input type="checkbox"/> City / Town <input type="checkbox"/> Federal <input type="checkbox"/> Private <input type="checkbox"/> State	230,000

15	16 SOURCE NAME	17 INTERTIE	18 SOURCE CATEGORY											19 USE	20	21 TREATMENT					22 DEPTH	23	24 SOURCE LOCATION							
	Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. <small>Example: WELL #1 XYZ456</small>  IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME <small>Example: SEATTLE</small>	INTERTIE SYSTEM ID NUMBER	WELL	WELL IN A WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)		OTHER	DEPTH TO FIRST OPEN TERVERAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE	
S03	24050/EVERETT	24050 L												X									500						00N	00E

# WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
44431 6	SNO PUD 1 - STORM LAKE RIDGE	SNOHOMISH	A	Comm

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS
<b>25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)</b>		253	220
A. Full Time Single Family Residences (Occupied 180 days or more per year)	253		
B. Part Time Single Family Residences (Occupied less than 180 days per year)	0		
<b>26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)</b>			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied less than 180 days/year	0		
<b>27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)</b>			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
<b>28. TOTAL SERVICE CONNECTIONS</b>		253	220

<b>29. FULL-TIME RESIDENTIAL POPULATION</b>
A. How many residents are served by this system 180 or more days per year? <span style="float: right; text-decoration: underline;">633</span>

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	1	1	1	1	1	1	1	1	1	1	1	1

34. NITRATE SCHEDULE	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
(One Sample per source by time period)			

35. Reason for Submitting WFI:

Update - Change   
  Update - No Change   
  Inactivate   
  Re-Activate   
  Name Change   
  New System   
  Other \_\_\_\_\_

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

PRINT NAME: \_\_\_\_\_ TITLE: \_\_\_\_\_



# WATER FACILITIES INVENTORY (WFI) FORM

Quarter: 1  
Updated: 07/02/2020

ONE FORM PER SYSTEM

Printed: 2/5/2021  
WFI Printed For: On-Demand  
Submission Reason: Pop/Connect Update

RETURN TO: Central Services - WFI, PO Box 47822, Olympia, WA, 98504-7822

<b>1. SYSTEM ID NO.</b> 52105 0	<b>2. SYSTEM NAME</b> SNO PUD 1 - MAY CREEK	<b>3. COUNTY</b> SNOHOMISH	<b>4. GROUP</b> A	<b>5. TYPE</b> Comm
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<b>6. PRIMARY CONTACT NAME &amp; MAILING ADDRESS</b>  BRETT A. GEHRKE [SUPERINTENDENT] SNOHOMISH COUNTY PUD PO BOX 1107 EVERETT, WA 98206	<b>7. OWNER NAME &amp; MAILING ADDRESS</b>  SNOHOMISH COUNTY PUD 1 BRANT WOOD PO BOX 1107 EVERETT, WA 98206
<b>STREET ADDRESS IF DIFFERENT FROM ABOVE</b> ATTN WATER RESOURCES ADDRESS 3301 OLD HARTFORD ROAD CITY LAKE STEVENS STATE WA ZIP 98258	<b>STREET ADDRESS IF DIFFERENT FROM ABOVE</b> ATTN WATER RESOURCES ADDRESS 3301 OLD HARTFORD ROAD CITY LAKE STEVENS STATE WA ZIP 98258

<b>9. 24 HOUR PRIMARY CONTACT INFORMATION</b>	<b>10. OWNER CONTACT INFORMATION</b>
Primary Contact Daytime Phone: (425) 397-3005	Owner Daytime Phone: (425) 397-3003
Primary Contact Mobile/Cell Phone: (425) 359-0403	Owner Mobile/Cell Phone: (425) 231-5643
Primary Contact Evening Phone: (xxx)-xxx-xxxx	Owner Evening Phone: (xxx)-xxx-xxxx
Fax: (425)267-6776 E-mail: xxxxxxxxxxxxxxxxxxxxxx	Fax: (425) 267-6202 E-mail: xxxxxxxxxxxxxxxxxxxxxx

<b>11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)</b>	
<input type="checkbox"/> Not applicable (Skip to #12) <input checked="" type="checkbox"/> Owned and Managed <input type="checkbox"/> Managed Only <input type="checkbox"/> Owned Only	SMA NAME: <u>SNOHOMISH COUNTY PUD 1</u> SMA Number: <u>104</u>

<b>12. WATER SYSTEM CHARACTERISTICS (mark all that apply)</b>		
<input type="checkbox"/> Agricultural <input checked="" type="checkbox"/> Commercial / Business <input type="checkbox"/> Day Care <input type="checkbox"/> Food Service/Food Permit <input type="checkbox"/> 1,000 or more person event for 2 or more days per year	<input type="checkbox"/> Hospital/Clinic <input type="checkbox"/> Industrial <input type="checkbox"/> Licensed Residential Facility <input type="checkbox"/> Lodging <input type="checkbox"/> Recreational / RV Park	<input checked="" type="checkbox"/> Residential <input type="checkbox"/> School <input type="checkbox"/> Temporary Farm Worker <input checked="" type="checkbox"/> Other (church, fire station, etc.): _____

<b>13. WATER SYSTEM OWNERSHIP (mark only one)</b>	<b>14. STORAGE CAPACITY (gallons)</b>
<input type="checkbox"/> Association <input type="checkbox"/> City / Town <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> Investor <input type="checkbox"/> Private <input checked="" type="checkbox"/> Special District <input type="checkbox"/> State	350,000

15	16 SOURCE NAME	17 INTERTIE	18 SOURCE CATEGORY										19 USE	20	21 TREATMENT				22 DEPTH	23	24 SOURCE LOCATION				
			WELL	WELL IN A WELL FIELD	SPRING	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL			EMERGENCY	SOURCE METERED	NONE	CHLORINATION			FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN TERYAL IN FEET
S01	AGB579 MAY CREEK WELL 1		X										X	Y	X					64	277	NW SW	04	27N	09E
S02	ABG629 MAY CREEK WELL #2		X										X	Y	X					90	500	NW SW	04	27N	09E



# WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
52105 0	SNO PUD 1 - MAY CREEK	SNOHOMISH	A	Comm

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS
<b>25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)</b>		489	Unspecified
A. Full Time Single Family Residences (Occupied 180 days or more per year)	489		
B. Part Time Single Family Residences (Occupied less than 180 days per year)	0		
<b>26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)</b>			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied less than 180 days/year	0		
<b>27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)</b>			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	6	6	
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	
<b>28. TOTAL SERVICE CONNECTIONS</b>		495	

<b>29. FULL-TIME RESIDENTIAL POPULATION</b>
A. How many residents are served by this system 180 or more days per year? <span style="float: right; text-decoration: underline;">1238</span>

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	2	2	2	2	2	2	2	2	2	2	2	2

<b>34. NITRATE SCHEDULE</b>	<b>QUARTERLY</b>	<b>ANNUALLY</b>	<b>ONCE EVERY 3 YEARS</b>
(One Sample per source by time period)			

**35. Reason for Submitting WFI:**

Update - Change   
  Update - No Change   
  Inactivate   
  Re-Activate   
  Name Change   
  New System   
  Other \_\_\_\_\_

**36. I certify that the information stated on this WFI form is correct to the best of my knowledge.**

**SIGNATURE:** \_\_\_\_\_ **DATE:** \_\_\_\_\_  
**PRINT NAME:** \_\_\_\_\_ **TITLE:** \_\_\_\_\_



# WATER FACILITIES INVENTORY (WFI) FORM

Quarter: 1  
Updated: 07/02/2020

ONE FORM PER SYSTEM

Printed: 2/5/2021  
WFI Printed For: On-Demand  
Submission Reason: No Change

RETURN TO: Central Services - WFI, PO Box 47822, Olympia, WA, 98504-7822

<b>1. SYSTEM ID NO.</b>	<b>2. SYSTEM NAME</b>	<b>3. COUNTY</b>	<b>4. GROUP</b>	<b>5. TYPE</b>
80220 1	SNO PUD 1 - SKYLITE TRACTS	SNOHOMISH	A	Comm

<b>6. PRIMARY CONTACT NAME &amp; MAILING ADDRESS</b>	<b>7. OWNER NAME &amp; MAILING ADDRESS</b>
BRETT A. GEHRKE [SUPERINTENDENT] SNOHOMISH COUNTY PUD PO BOX 1107 EVERETT, WA 98206	SNOHOMISH COUNTY PUD 1 BRANT WOOD PO BOX 1107 EVERETT, WA 98206  ASST GENERAL MANAGER

<b>STREET ADDRESS IF DIFFERENT FROM ABOVE</b>	<b>STREET ADDRESS IF DIFFERENT FROM ABOVE</b>
ATTN WATER RESOURCES ADDRESS 3301 OLD HARTFORD ROAD CITY LAKE STEVENS STATE WA ZIP 98258	ATTN WATER RESOURCES ADDRESS 3301 OLD HARTFORD ROAD CITY LAKE STEVENS STATE WA ZIP 98258

<b>9. 24 HOUR PRIMARY CONTACT INFORMATION</b>	<b>10. OWNER CONTACT INFORMATION</b>
Primary Contact Daytime Phone: (425) 397-3005	Owner Daytime Phone: (425) 397-3003
Primary Contact Mobile/Cell Phone: (425) 359-0403	Owner Mobile/Cell Phone: (425) 231-5643
Primary Contact Evening Phone: (xxx)-xxx-xxxx	Owner Evening Phone: (xxx)-xxx-xxxx
Fax: (425)267-6776     E-mail: xxxxxxxxxxxxxxxxxxxxxx	Fax: (425) 267-6202     E-mail: xxxxxxxxxxxxxxxxxxxxxx

<b>11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)</b>	
<input type="checkbox"/> Not applicable (Skip to #12) <input checked="" type="checkbox"/> Owned and Managed     SMA NAME: <u>SNOHOMISH COUNTY PUD 1</u> SMA Number: <u>104</u> <input type="checkbox"/> Managed Only <input type="checkbox"/> Owned Only	

<b>12. WATER SYSTEM CHARACTERISTICS (mark all that apply)</b>		
<input type="checkbox"/> Agricultural <input type="checkbox"/> Commercial / Business <input type="checkbox"/> Day Care <input type="checkbox"/> Food Service/Food Permit <input type="checkbox"/> 1,000 or more person event for 2 or more days per year	<input type="checkbox"/> Hospital/Clinic <input type="checkbox"/> Industrial <input type="checkbox"/> Licensed Residential Facility <input type="checkbox"/> Lodging <input type="checkbox"/> Recreational / RV Park	<input checked="" type="checkbox"/> Residential <input type="checkbox"/> School <input type="checkbox"/> Temporary Farm Worker <input type="checkbox"/> Other (church, fire station, etc.): _____

<b>13. WATER SYSTEM OWNERSHIP (mark only one)</b>	<b>14. STORAGE CAPACITY (gallons)</b>
<input type="checkbox"/> Association <input type="checkbox"/> County <input type="checkbox"/> Investor <input checked="" type="checkbox"/> Special District <input type="checkbox"/> City / Town <input type="checkbox"/> Federal <input type="checkbox"/> Private <input type="checkbox"/> State	105,000

15	16	17	18								19	20	21			22	23	24		
	SOURCE NAME	INTERTIE	SOURCE CATEGORY								USE		TREATMENT	DEPTH			SOURCE LOCATION			
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456  IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	DEPTH TO FIRST OPEN TERTVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	WELL AAA901		X										X	38	60	SW SW	02	27N	08E	

# WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
80220 1	SNO PUD 1 - SKYLITE TRACTS	SNOHOMISH	A	Comm

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS
<b>25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)</b>		153	167
A. Full Time Single Family Residences (Occupied 180 days or more per year)	153		
B. Part Time Single Family Residences (Occupied less than 180 days per year)	0		
<b>26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)</b>			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied less than 180 days/year	0		
<b>27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)</b>			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
<b>28. TOTAL SERVICE CONNECTIONS</b>		153	167

<b>29. FULL-TIME RESIDENTIAL POPULATION</b>
A. How many residents are served by this system 180 or more days per year? <span style="float: right; text-decoration: underline;">383</span>

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	1	1	1	1	1	1	1	1	1	1	1	1

<b>34. NITRATE SCHEDULE</b>	<b>QUARTERLY</b>	<b>ANNUALLY</b>	<b>ONCE EVERY 3 YEARS</b>
(One Sample per source by time period)			

**35. Reason for Submitting WFI:**

Update - Change   
  Update - No Change   
  Inactivate   
  Re-Activate   
  Name Change   
  New System   
  Other \_\_\_\_\_

**36. I certify that the information stated on this WFI form is correct to the best of my knowledge.**

**SIGNATURE:** \_\_\_\_\_ **DATE:** \_\_\_\_\_  
**PRINT NAME:** \_\_\_\_\_ **TITLE:** \_\_\_\_\_



# WATER FACILITIES INVENTORY (WFI) FORM

Quarter: 1  
Updated: 07/02/2020

ONE FORM PER SYSTEM

Printed: 2/5/2021  
WFI Printed For: On-Demand  
Submission Reason: No Change

RETURN TO: Central Services - WFI, PO Box 47822, Olympia, WA, 98504-7822

<b>1. SYSTEM ID NO.</b> 85205 D		<b>2. SYSTEM NAME</b> SNO PUD 1 - SUNDAY LAKE			<b>3. COUNTY</b> SNOHOMISH			<b>4. GROUP</b> A		<b>5. TYPE</b> Comm									
<b>6. PRIMARY CONTACT NAME &amp; MAILING ADDRESS</b>  BRETT A. GEHRKE [SUPERINTENDENT] SNOHOMISH COUNTY PUD PO BOX 1107 EVERETT, WA 98206						<b>7. OWNER NAME &amp; MAILING ADDRESS</b>  SNOHOMISH COUNTY PUD 1 BRANT WOOD PO BOX 1107 EVERETT, WA 98206  ASST GENERAL MANAGER													
<b>STREET ADDRESS IF DIFFERENT FROM ABOVE</b> ATTN WATER RESOURCES ADDRESS 3301 OLD HARTFORD ROAD CITY LAKE STEVENS STATE WA ZIP 98258						<b>STREET ADDRESS IF DIFFERENT FROM ABOVE</b> ATTN WATER RESOURCES ADDRESS 3301 OLD HARTFORD ROAD CITY LAKE STEVENS STATE WA ZIP 98258													
<b>9. 24 HOUR PRIMARY CONTACT INFORMATION</b> Primary Contact Daytime Phone: (425) 397-3005 Primary Contact Mobile/Cell Phone: (425) 359-0403 Primary Contact Evening Phone: (xxx)-xxx-xxxx Fax: (425)267-6776 E-mail: xxxxxxxxxxxxxxxxxxxxxx						<b>10. OWNER CONTACT INFORMATION</b> Owner Daytime Phone: (425) 397-3003 Owner Mobile/Cell Phone: (425) 231-5643 Owner Evening Phone: (xxx)-xxx-xxxx Fax: (425) 267-6202 E-mail: xxxxxxxxxxxxxxxxxxxxxx													
<b>11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)</b> <input type="checkbox"/> Not applicable (Skip to #12) <input checked="" type="checkbox"/> Owned and Managed SMA NAME: SNOHOMISH COUNTY PUD 1 SMA Number: 104 <input type="checkbox"/> Managed Only <input type="checkbox"/> Owned Only																			
<b>12. WATER SYSTEM CHARACTERISTICS (mark all that apply)</b> <input type="checkbox"/> Agricultural <input type="checkbox"/> Hospital/Clinic <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Commercial / Business <input type="checkbox"/> Industrial <input type="checkbox"/> School <input type="checkbox"/> Day Care <input type="checkbox"/> Licensed Residential Facility <input type="checkbox"/> Temporary Farm Worker <input type="checkbox"/> Food Service/Food Permit <input type="checkbox"/> Lodging <input type="checkbox"/> Other (church, fire station, etc.): <input type="checkbox"/> 1,000 or more person event for 2 or more days per year <input type="checkbox"/> Recreational / RV Park																			
<b>13. WATER SYSTEM OWNERSHIP (mark only one)</b> <input type="checkbox"/> Association <input type="checkbox"/> County <input type="checkbox"/> Investor <input checked="" type="checkbox"/> Special District <input type="checkbox"/> City / Town <input type="checkbox"/> Federal <input type="checkbox"/> Private <input type="checkbox"/> State									<b>14. STORAGE CAPACITY (gallons)</b> 200,000										
15	16 SOURCE NAME			17	18 SOURCE CATEGORY					19	20	21 TREATMENT			22	23	24 SOURCE LOCATION		
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456  IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE			INTERTIE SYSTEM ID NUMBER	WELL	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD
S01	InAct 08/18/1995 WELL # 1				X														
S02	InAct 10/01/1994 WELL #2				X														
S03	WELL #3 ABG638				X						X	X		X					

# WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
85205 D	SNO PUD 1 - SUNDAY LAKE	SNOHOMISH	A	Comm

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS
<b>25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)</b>		194	278
A. Full Time Single Family Residences (Occupied 180 days or more per year)	194		
B. Part Time Single Family Residences (Occupied less than 180 days per year)	0		
<b>26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)</b>			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied less than 180 days/year	0		
<b>27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)</b>			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
<b>28. TOTAL SERVICE CONNECTIONS</b>		194	278

<b>29. FULL-TIME RESIDENTIAL POPULATION</b>
A. How many residents are served by this system 180 or more days per year? <span style="float: right; text-decoration: underline;">485</span>

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	1	1	1	1	1	1	1	1	1	1	1	1

34. NITRATE SCHEDULE	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
(One Sample per source by time period)			

35. Reason for Submitting WFI:

Update - Change   
  Update - No Change   
  Inactivate   
  Re-Activate   
  Name Change   
  New System   
  Other \_\_\_\_\_

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

PRINT NAME: \_\_\_\_\_ TITLE: \_\_\_\_\_

# WATER FACILITIES INVENTORY (WFI) FORM



ONE FORM PER SYSTEM

Quarter: 2  
Updated: 10/25/2018  
Printed: 10/25/2018

WFI Printed For: On-Demand  
Submission Reason: Owner Update

RETURN TO: Central Services - WFI, PO Box 47822, Olympia, WA, 98504-7822

<b>1. SYSTEM ID NO.</b> 93000 F	<b>2. SYSTEM NAME</b> SNO PUD 1 - WARM BEACH	<b>3. COUNTY</b> SNOHOMISH	<b>4. GROUP</b> A	<b>5. TYPE</b> Comm
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<b>6. PRIMARY CONTACT NAME &amp; MAILING ADDRESS</b>  BRETT A. GEHRKE [SUPERINTENDENT] SNOHOMISH COUNTY PUD PO BOX 1107 EVERETT, WA 98206	<b>7. OWNER NAME &amp; MAILING ADDRESS</b>  SNOHOMISH COUNTY PUD 1 BRANT WOOD PO BOX 1107 EVERETT, WA 98206	<b>8. OWNER NUMBER: 003652</b>  ASST GENERAL MANAGER
<b>STREET ADDRESS IF DIFFERENT FROM ABOVE</b>		<b>STREET ADDRESS IF DIFFERENT FROM ABOVE</b>
ATTN WATER RESOURCES ADDRESS 3301 OLD HARTFORD ROAD CITY LAKE STEVENS STATE WA ZIP 98258		ATTN WATER RESOURCES ADDRESS 3301 OLD HARTFORD ROAD CITY LAKE STEVENS STATE WA ZIP 98258

<b>9. 24 HOUR PRIMARY CONTACT INFORMATION</b>	<b>10. OWNER CONTACT INFORMATION</b>
Primary Contact Daytime Phone: (425) 397-3005	Owner Daytime Phone: (425) 397-3003
Primary Contact Mobile/Cell Phone: (425) 359-0403	Owner Mobile/Cell Phone: (425) 231-5643
Primary Contact Evening Phone: (425) 771-8980	Owner Evening Phone: (425) 783-1000
Fax: (425)267-6776 E-mail: bagehrke@snopud.com	Fax: (425) 267-6202 E-mail: bewood@snopud.com

**11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)**

Not applicable (Skip to #12)  
 Owned and Managed SMA NAME: SNOHOMISH COUNTY PUD 1 SMA Number: 104  
 Managed Only  
 Owned Only

**12. WATER SYSTEM CHARACTERISTICS (mark all that apply)**

<input checked="" type="checkbox"/> Agricultural	<input type="checkbox"/> Hospital/Clinic	<input checked="" type="checkbox"/> Residential
<input checked="" type="checkbox"/> Commercial / Business	<input type="checkbox"/> Industrial	<input type="checkbox"/> School
<input type="checkbox"/> Day Care	<input type="checkbox"/> Licensed Residential Facility	<input type="checkbox"/> Temporary Farm Worker
<input type="checkbox"/> Food Service/Food Permit	<input type="checkbox"/> Lodging	<input checked="" type="checkbox"/> Other (church, fire station, etc.):
<input type="checkbox"/> 1,000 or more person event for 2 or more days per year	<input type="checkbox"/> Recreational / RV Park	

<b>13. WATER SYSTEM OWNERSHIP (mark only one)</b>	<b>14. STORAGE CAPACITY (gallons)</b>
<input type="checkbox"/> Association <input type="checkbox"/> County <input type="checkbox"/> Investor <input checked="" type="checkbox"/> Special District <input type="checkbox"/> City / Town <input type="checkbox"/> Federal <input type="checkbox"/> Private <input type="checkbox"/> State	200,000

15 Source Number	16 SOURCE NAME  LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER.  Example: WELL #1 XYZ456  IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	17 INTERTIE  INTERTIE SYSTEM ID NUMBER	18 SOURCE CATEGORY											19 USE	20	21 TREATMENT					22 DEPTH  DEPTH TO FIRST OPEN TERNAL IN FEET	23 CAPACITY (GALLONS PER MINUTE)	24 SOURCE LOCATION						
			WELL	WELL IN A WELL FIELD	SPRING	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY			SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION			IRRADIATION (UV)	OTHER	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE	
S01	WELL #2 ABR307 GROUND		X											X		Y	X							171	50	SE SE	13	31N	03E
S02	InAct 01/09/2002 WELL #3 GROUND		X												X	Y	X							186	30	SE SE	13	31N	03E
S04	WELL #4 ABR309		X											X		Y		X	X					534	155	SE SW	19	31N	04E
S05	InAct 09/20/1996 MARTHA LAKE								X					X										0	0	SE SW	18	31N	04E
S06	WELL #3R AFN241		X												X	Y	X							128	55	SE SE	13	31N	03E

# WATER FACILITIES INVENTORY (WFI) FORM - Continued

<b>1. SYSTEM ID NO.</b> 93000 F	<b>2. SYSTEM NAME</b> SNO PUD 1 - WARM BEACH	<b>3. COUNTY</b> SNOHOMISH	<b>4. GROUP</b> A	<b>5. TYPE</b> Comm
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	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS
<b>25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)</b>		614	750
A. Full Time Single Family Residences (Occupied 180 days or more per year)	598		
B. Part Time Single Family Residences (Occupied less than 180 days per year)	0		
<b>26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)</b>			
A. Apartment Buildings, condos, duplexes, barracks, dorms	8		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	16		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied less than 180 days/year	0		
<b>27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)</b>			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	7	7	0
<b>28. TOTAL SERVICE CONNECTIONS</b>		621	750

<b>29. FULL-TIME RESIDENTIAL POPULATION</b>	
A. How many residents are served by this system 180 or more days per year?	1535

<b>30. PART-TIME RESIDENTIAL POPULATION</b>	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

<b>31. TEMPORARY &amp; TRANSIENT USERS</b>	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

<b>32. REGULAR NON-RESIDENTIAL USERS</b>	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

<b>33. ROUTINE COLIFORM SCHEDULE</b>	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
* Requirement is exception from WAC 246-290	2	2	2	2	2	2	2	2	2	2	2	2

<b>34. NITRATE SCHEDULE</b>	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
(One Sample per source by time period)			

**35. Reason for Submitting WFI:**

Update - Change   
  Update - No Change   
  Inactivate   
  Re-Activate   
  Name Change   
  New System   
  Other \_\_\_\_\_

**36. I certify that the information stated on this WFI form is correct to the best of my knowledge.**

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

PRINT NAME: \_\_\_\_\_ TITLE: \_\_\_\_\_

**Appendix 1-3**

DOH Operating Permits



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## **PWS Operating Permit - Operating Permits Status**

Report Create Date: 02/05/2021

Region: ALL

County: SNOHOMISH

Quarter: ALL

Report Type: C

### **Report For - County**

**Region - Northwest**

**Region Page Separator - Report for County**

**Snohomish PUD water systems are highlighted on pages 12-13 of this report, which was generated for all water systems in Snohomish County.**

**There is no Operating Permit for PUD's Otis water system because these permits only apply to Group A systems. (Otis is a Group B water system with only 4 water service connections.)**



## PWS Operating Permit - Operating Permits Status

### County - SNOHOMISH

PWS ID	PWS Name	Grp/Typ	Owner	SMA	Color	Issued	Override	Permit Quarter
01319 B	164TH ST ARTESIAN WELL	A-TNC	000071		Green	12/01/2020	No	3
		System is substantially in compliance with applicable drinking water requirements						
01300 E	ALDERWOOD WATER DISTRICT	A-Comm	000071		Green	06/01/2020	No	1
		System is substantially in compliance with applicable drinking water requirements						
34400 V	AQUA COPIA/HORSE COUNTRY ESTATES	A-Comm	002660		Green	09/01/2020	No	2
		System is substantially in compliance with applicable drinking water requirements						
02950 K	ARLINGTON CITY OF	A-Comm	000200		Green	06/01/2020	No	1
		System is substantially in compliance with applicable drinking water requirements						
02948 E	ARLINGTON EAST MUTUAL WATER ASSN.	A-Comm	000199		Green	09/01/2020	No	2
		System is substantially in compliance with applicable drinking water requirements						
AA613 G	ARLINGTON FUEL STOP INC	A-TNC	030260		Blue	12/01/2020	No	3
		System lacks Department design approval and needs to bring system into compliance by getting required Department approval.						
11134 2	ARLINGTON HEIGHTS WATER CO INC	A-Comm	009193		Green	09/01/2020	No	2
		System is substantially in compliance with applicable drinking water requirements						
36136 F	ARLINGTON LDS CHURCH	A-TNC	035184	148	Green	12/01/2019	No	3
		System is substantially in compliance with applicable drinking water requirements						
27241 A	ARLINGTON TERRACE	A-Comm	011171	119	Green	09/01/2020	No	2
		System is substantially in compliance with applicable drinking water requirements						
02945 W	ARLINGTON VIEW ESTATES WATER ASSOC	A-Comm	000198		Green	09/01/2020	No	2

System is substantially in compliance with applicable drinking water requirements

00971 F BATTLE CREEK GOLF COURSE

A-TNC 015558 Green 12/01/2020 No 3  
System is substantially in compliance with applicable drinking water requirements

06630 X BIG BEND LANDOWNERS ASSOCIATION

A-Comm 000484 Green 09/01/2020 No 2  
System is substantially in compliance with applicable drinking water requirements

07250 0 BLACKMANS LAKE WATER DISTRICT

A-Comm 000522 Blue 09/01/2019 No 2  
System lacks Department design approval and needs to bring system into compliance by getting required Department approval.

26140 L BUNK FOSS SYSTEM

A-Comm 002019 Green 09/01/2020 No 2  
System is substantially in compliance with applicable drinking water requirements

10819 Y Camp Edward

A-TNC 000799 Green 12/01/2020 No 3  
System is substantially in compliance with applicable drinking water requirements

AA875 P CAMP KALSMAN WATER SYSTEM

A-TNC 030942 148 Green 12/01/2020 No 3  
System is substantially in compliance with applicable drinking water requirements

31203 Y CASCADE CREST

A-Comm 035746 Green 09/01/2020 No 2  
System is substantially in compliance with applicable drinking water requirements

17901 5 CEDAR SPRINGS CAMP

A-Comm 009947 Blue 09/01/2020 No 2  
System lacks Department design approval and needs to bring system into compliance by getting required Department approval.

12270 7 CHEALCO WATER SUPPLY

A-Comm 001003 Green 09/01/2020 No 2  
System is substantially in compliance with applicable drinking water requirements



## PWS Operating Permit - Operating Permits Status

AC928 3	Craven Farm Water System	A-TNC	034652	Green	12/01/2020	No		
		System is substantially in compliance with applicable drinking water requirements						
16270 F	CROSS VALLEY WATER DISTRICT	A-Comm	001336	Green	06/01/2021	No	1	
		System is substantially in compliance with applicable drinking water requirements						
16390 4	CRYSTAL LAKE INC	A-Comm	001348	Green	09/01/2020	No	2	
		System is substantially in compliance with applicable drinking water requirements						
59090 2	CYO - CAMP HAMILTON	A-TNC	014189	Green	12/01/2020	No	3	
		System is substantially in compliance with applicable drinking water requirements						
17950 X	Darrington Town of	A-Comm	001408	Yellow	06/01/2020	Yes	1	
		System is substantially in compliance with applicable drinking water requirements						
17945 8	DARRINGTON WATER ASSOCIATION	A-Comm	001407	Green	09/01/2020	No	2	
		System is substantially in compliance with applicable drinking water requirements						
44189 7	DONNAS MINI MARKET WATER SYSTEM	A-TNC	012615	Blue	12/01/2020	No	3	
		System lacks Department design approval and needs to bring system into compliance by getting required Department approval.						
24731 H	EAGLE RIDGE	A-Comm	010709	Green	09/01/2020	No	2	
		System is substantially in compliance with applicable drinking water requirements						
30164 U	EAST CRYSTAL LAKE ESTATES COMMUNITY	A-Comm	011328	148	Green	09/01/2020	No	2
		System is substantially in compliance with applicable drinking water requirements						
22500 U	EDMONDS CITY OF	A-Comm	001683	Green	06/01/2020	No	1	
		System is substantially in compliance with applicable drinking water requirements						



## PWS Operating Permit - Operating Permits Status

24050 L	EVERETT PUBLIC WORKS DEPT. CITY OF	A-Comm	001814		Green	06/01/2020	No	1	System is substantially in compliance with applicable drinking water requirements
01736 U	FERN BLUFF ESTATES	A-Comm	007800		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
25750 K	FOBES WATER DISTRICT	A-Comm	029861		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
25934 C	FOREST GROVE MOBILE HOME PARK	A-Comm	031516		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
16351 L	FRIAR CREEK WATER SYSTEM	A-Comm	002542		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
27270 K	GAYS WATER DISTRICT ASSOCIATION	A-Comm	002111		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
28300 Y	GOLD BAR CITY OF	A-Comm	002182		Green	06/01/2020	No	1	System is substantially in compliance with applicable drinking water requirements
28285 F	GOLD BAR NATURE TRAILS	A-TNC	002181	126	Blue	12/01/2020	No	3	System lacks Department design approval and needs to bring system into compliance by getting required Department approval.
FS314 C	GOLD BASIN CAMPGROUND	A-TNC	002662		Blue	03/01/2021	No	4	System lacks Department design approval and needs to bring system into compliance by getting required Department approval.
29050 X	GRANITE FALLS CITY OF	A-Comm	002242		Green	06/01/2020	No	1	System is substantially in compliance with applicable drinking water requirements



## PWS Operating Permit - Operating Permits Status

07559 1	GREEN ACRES DAY CARE	A-NTNC	020731	148	Green	12/01/2020	No	3	System is substantially in compliance with applicable drinking water requirements
29600 D	GREENWATER MEADOWS LANDOWNERS ASSN	A-Comm	002305		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
30955 4	HAPPY HILL COMMUNITY CLUB	A-Comm	002407	119	Green	09/01/2019	No	2	System is substantially in compliance with applicable drinking water requirements
31593 N	HAT ISLAND COMMUNITY INC	A-Comm	002458		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
32646 4	HIDDEN VALLEY CAMP	A-TNC	002524		Blue	12/01/2020	No	3	System lacks Department design approval and needs to bring system into compliance by getting required Department approval.
32850 J	HIGHLAND WATER DISTRICT	A-Comm	002542		Green	06/01/2020	No	1	System is substantially in compliance with applicable drinking water requirements
35093 9	HUSTON CAMP & CONFERENCE CENTER	A-TNC	002701		Green	12/01/2020	No	3	System is substantially in compliance with applicable drinking water requirements
35600 6	INDEX WATER DEPT	A-Comm	002731		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
35639 L	INDIAN RIDGE WATER ASSOCIATION	A-Comm	002737		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
07619 4	KACKMAN CREEK	A-Comm	020997	128	Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements



## PWS Operating Permit - Operating Permits Status

37910 Y	KATHANN ESTATES WATER	A-Comm	002914		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
24511 Q	KAYAK POINT COUNTY PARK	A-TNC	002920		Green	12/01/2020	No	3	System is substantially in compliance with applicable drinking water requirements
37922 8	KAYAK POINT GOLF COURSE	A-TNC	002920		Green	12/01/2020	No	3	System is substantially in compliance with applicable drinking water requirements
44381 B	KYAK RIDGE WATER SYSTEM	A-Comm	012672		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
50691 R	LAKE ALYSON	A-Comm	036082	165	Green	06/01/2020	No	1	System is substantially in compliance with applicable drinking water requirements
43655 Y	LAKE BRONSON ASSOC INC	A-TNC	003139		Green	12/01/2020	No	3	System is substantially in compliance with applicable drinking water requirements
44100 H	LAKE KI SUNRISE ADDITION WATER	A-Comm	003159		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
45290 1	LAKESIDE SHORES IMPROVEMENT ASSOC.	A-Comm	003215		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
42103 X	Lakewood Garden Tracts Water Assoc	A-Comm	036648		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
44627 9	LAKESIDE WEST WATER ASSN.	A-Comm	012723	128	Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
47640 C	LOHAVEN WATER	A-Comm	034049		Green	09/01/2020	No	2	





## PWS Operating Permit - Operating Permits Status

System is substantially in compliance with applicable drinking water requirements

49270 R LYNNWOOD CITY OF A-Comm 003510 Green 06/01/2020 No 1  
System is substantially in compliance with applicable drinking water requirements

20624 D MACHIAS RIDGE HOMEOWNERS ASSOC. A-Comm 010268 Green 09/01/2020 No 2  
System is substantially in compliance with applicable drinking water requirements

51530 M MARBELLO A-Comm 035746 Blue 09/01/2020 No 2  
System has exceeded the number of connections approved by the Department and needs to bring system into compliance by reducing the number of connections or getting department approval of existing connections.

09404 5 MARYSVILLE A-Comm 035746 Green 09/01/2020 No 2  
System is substantially in compliance with applicable drinking water requirements

51900 C MARYSVILLE UTILITIES A-Comm 003633 Green 06/01/2020 No 1  
System is substantially in compliance with applicable drinking water requirements

51935 Q MASONIC PARK A-TNC 003639 Green 12/01/2020 No 3  
System is substantially in compliance with applicable drinking water requirements

52930 7 MC PHERSON HILLS WATER SYSTEM A-Comm 003705 Green 09/01/2020 No 2  
System is substantially in compliance with applicable drinking water requirements

24190 R MCKEES EVERGREEN BEACH ASSOC A-Comm 001842 148 Blue 09/01/2020 No 2  
System has exceeded the number of connections approved by the Department and needs to bring system into compliance by reducing the number of connections or getting department approval of existing connections.

20637 7 MEADOW LAKE WATER ASSOCIATION A-Comm 010267 Green 09/01/2020 No 2  
System is substantially in compliance with applicable drinking water requirements



## PWS Operating Permit - Operating Permits Status

53213 D	MEADOW RIDGE	A-Comm	030191	128	Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
03449 C	MEADOWBROOK HOMEOWNERS ASSN	A-Comm	020549	128	Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
53820 W	MERIDIAN WATER SYSTEM	A-Comm	036169		Blue	09/01/2020	No	2	System lacks Department design approval and needs to bring system into compliance by getting required Department approval.
55820 1	MONROE WATER SYSTEM	A-Comm	003861		Green	06/01/2020	No	1	System is substantially in compliance with applicable drinking water requirements
55874 C	MOUNT FOREST WATER SYSTEM	A-Comm	013870		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
56528 U	MOUNTAIN LOOP VIEW TRACTS	A-Comm	003918		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
57250 5	MOUNTLAKE TERRACE CITY OF	A-Comm	003953		Green	06/01/2020	No	1	System is substantially in compliance with applicable drinking water requirements
57550 J	Mukilteo Water & Wastewater Distr	A-Comm	003959		Green	06/01/2020	No	1	System is substantially in compliance with applicable drinking water requirements
22380 M	NEW START LANDOWNERS ASSOCIATION	A-Comm	001673		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
19949 E	NORMANNA PARK INC.	A-TNC	010192		Green	12/01/2020	No	3	System is substantially in compliance with applicable drinking water requirements



## PWS Operating Permit - Operating Permits Status

24841 W	NORTH HIGH ROCK ESTATES W.S.	A-Comm	010740		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
61100 C	NORTH RIDGE WATER CORP	A-Comm	004102		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
61947 2	Northwest	A-Comm	035746		Blue	09/01/2020	No	2	System lacks Department design approval and needs to bring system into compliance by getting required Department approval.
02287 2	Northwest Water	A-Comm	036729	128	Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
63600 5	OLYMPIC VIEW WATER & SEWER DISTRICT	A-Comm	004263		Green	06/01/2020	No	1	System is substantially in compliance with applicable drinking water requirements
34999 F	OSO GENERAL STORE	A-TNC	036262	148	Green	12/01/2020	No	3	System is substantially in compliance with applicable drinking water requirements
55205 A	OTTERCREST ESTATES WATER SYSTEM	A-Comm	013558		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
56806 N	PANTHER LAKE COMMUNITY WATER SYSTEM	A-Comm	014119		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
01916 K	Peoples Creek Water System	A-Comm	032368		Blue	09/01/2020	Yes	2	System is substantially in compliance with applicable drinking water requirements
67355 W	PILAGUAMISH COMMUNITY CLUB	A-TNC	004539		Blue	12/01/2020	No	3	System lacks Department design approval and needs to bring system into compliance by getting required Department approval.



## PWS Operating Permit - Operating Permits Status

67375 D	PILCHUCK 26 TRACTS	A-Comm	004541	Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements	
67380 3	PILCHUCK RIVIERA #1	A-Comm	035718	Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements	
67382 4	PILCHUCK RIVIERA #2	A-Comm	004543	Blue	09/01/2020	No	2	System lacks Department design approval and needs to bring system into compliance by getting required Department approval.	
69450 K	PRIEST POINT BEACH WATER INC	A-Comm	004688	Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements	
44257 J	RIVER MEADOWS COUNTY PARK	A-TNC	002920	Green	12/01/2020	No	3	System is substantially in compliance with applicable drinking water requirements	
72835 Q	RIVERSHORE WATER DISTRICT #1	A-TNC	004917	Green	12/01/2020	No	3	System is substantially in compliance with applicable drinking water requirements	
72844 F	RIVERSIDE WATER DIST #1	A-Comm	004919	Blue	09/01/2020	No	2	System lacks Department design approval and needs to bring system into compliance by getting required Department approval.	
74150 W	ROOSEVELT WATER ASSOCIATION	A-Comm	004997	Green	06/01/2020	No	1	System is substantially in compliance with applicable drinking water requirements	
74372 P	ROSELAND COMMUNITY CLUB ASSOCIATION	A-Comm	005010	Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements	
75636 6	SAM LAKE IMPROVEMENT ASSOCIATION	A-Comm	005103	148	Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements



## PWS Operating Permit - Operating Permits Status

76650 N	SCHLUTER WATER ASSOCIATION	A-Comm	005193		Green	09/01/2019	No	2	System is substantially in compliance with applicable drinking water requirements
77660 0	SEVEN LAKES WATER ASSOCIATION	A-Comm	005292		Yellow	06/01/2020	No	1	System has been notified to comply with Water System Plan Requirements but has failed to do so in the time allowed
77675 U	SEVENTH HEAVEN COUNTRY CLUB	A-Comm	010610		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
79050 3	SILVANA WATER ASSOCIATION	A-Comm	005367	148	Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
79250 B	SILVER LAKE WATER & SEWER DISTRICT	A-Comm	005381		Green	06/01/2020	No	1	System is substantially in compliance with applicable drinking water requirements
79276 Y	SILVER SPRINGS ESTATES COMM ASSN	A-Comm	005387	128	Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
06583 M	SISCO HEIGHTS COMMUNITY CHURCH	A-TNC	019964		Blue	12/01/2020	No	3	System lacks Department design approval and needs to bring system into compliance by getting required Department approval.
31141 U	Skyview	A-Comm	035746		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
04287 6	SMITH GARDENS WATER SYSTEM	A-NTNC	035826		Green	12/01/2020	No	3	System is substantially in compliance with applicable drinking water requirements
80907 1	SNO PUD 1 - LAKE STEVENS	A-Comm	003652	104	Green	06/01/2020	No	1	System is substantially in compliance with applicable drinking water requirements

## PWS Operating Permit - Operating Permits Status

04515 Q	SNO PUD 1 - 212 MARKET & DELI	A-TNC	003652	104	Green	06/01/2020	No	1	System is substantially in compliance with applicable drinking water requirements
23111 5	SNO PUD 1 - KAYAK	A-Comm	003652	104	Green	06/01/2020	Yes	1	System has been notified to comply with Water System Plan Requirements but has failed to do so in the time allowed
52105 0	SNO PUD 1 - MAY CREEK	A-Comm	003652	104	Green	06/01/2020	No	1	System is substantially in compliance with applicable drinking water requirements
80220 1	SNO PUD 1 - SKYLITE TRACTS	A-Comm	003652	104	Green	06/01/2020	No	1	System is substantially in compliance with applicable drinking water requirements
44431 6	SNO PUD 1 - STORM LAKE RIDGE	A-Comm	003652	104	Blue	06/01/2020	No	1	System has exceeded the number of connections approved by the Department and needs to bring system into compliance by reducing the number of connections or getting department approval of existing connections.
85205 D	SNO PUD 1 - SUNDAY LAKE	A-Comm	003652	104	Green	06/01/2020	No	1	System is substantially in compliance with applicable drinking water requirements
93000 F	SNO PUD 1 - WARM BEACH	A-Comm	003652	104	Green	06/01/2020	No	1	System is substantially in compliance with applicable drinking water requirements
06325 V	SNO PUD 1 - CRESWELL	A-Comm	003652	104	Green	06/01/2020	No	1	System is substantially in compliance with applicable drinking water requirements
80915 8	SNOHOMISH CITY OF	A-Comm	005492		Green	06/01/2020	No	1	System is substantially in compliance with applicable drinking water requirements
81150 Q	SNUG HARBOR MHC	A-Comm	035042		Green	09/01/2020	No	2	



## PWS Operating Permit - Operating Permits Status

									System is substantially in compliance with applicable drinking water requirements
82950 U	SPEE-BI-DAH	A-TNC	005578	Green	12/01/2020	No		3	System is substantially in compliance with applicable drinking water requirements
83482 2	SQUIRE CREEK COUNTY PARK	A-TNC	002920	Blue	12/01/2020	No		3	System lacks Department design approval and needs to bring system into compliance by getting required Department approval.
44335 4	Stanwood Deli & Gas	A-TNC	037019	Green	12/01/2020	No		3	System is substantially in compliance with applicable drinking water requirements
42062 U	STANWOOD KINGDOM HALL	A-TNC	003033	Blue	12/01/2020	No		3	System lacks Department design approval and needs to bring system into compliance by getting required Department approval.
83650 H	STANWOOD WATER DEPT CITY OF	A-Comm	005635	Green	06/01/2020	No		1	System is substantially in compliance with applicable drinking water requirements
83850 R	STARTUP WATER DISTRICT	A-Comm	005644	Green	09/01/2020	No		2	System is substantially in compliance with applicable drinking water requirements
18707 2	STILLIRIDGE	A-Comm	035746	Green	09/01/2020	No		2	System is substantially in compliance with applicable drinking water requirements
12451 F	SUDDENVIEW	A-Comm	035746	Green	09/01/2020	No		2	System is substantially in compliance with applicable drinking water requirements
84760 Y	SULTAN ESTATES WATER SYSTEM	A-Comm	005726	Green	09/01/2020	No		2	System is substantially in compliance with applicable drinking water requirements



## PWS Operating Permit - Operating Permits Status

84770 7	SULTAN WATER DEPARTMENT	A-Comm	005727		Green	06/01/2020	No	
		System is substantially in compliance with applicable drinking water requirements						
85330 Q	SUNNY SHORES COMMUNITY CLUB	A-Comm	005785		Green	09/01/2020	No	2
		System is substantially in compliance with applicable drinking water requirements						
87123 W	TALL FIRS ASSESSORS PLAT	A-TNC	005918		Blue	12/01/2020	No	3
		System lacks Department design approval and needs to bring system into compliance by getting required Department approval.						
87189 J	TATOOSH WATER COMPANY	A-Comm	005942	148	Green	09/01/2020	No	2
		System is substantially in compliance with applicable drinking water requirements						
88150 6	THREE LAKES WATER ASSOCIATION	A-Comm	006021		Green	06/01/2020	No	1
		System is substantially in compliance with applicable drinking water requirements						
88220 J	Thunderbird Park	A-TNC	033641		Green	12/01/2020	No	3
		System is substantially in compliance with applicable drinking water requirements						
05067 F	THUNDERBIRD TERRACE WATER SYSTEM	A-Comm	036850		Green	09/01/2020	No	2
		System is substantially in compliance with applicable drinking water requirements						
89017 P	TRAFTON GROCERY	A-TNC	035808		Green	12/01/2020	No	3
		System is substantially in compliance with applicable drinking water requirements						
AC709 F	Triangle Recreation Camp WS	A-TNC	034310		Blue	12/01/2020	No	3
		System lacks Department design approval and needs to bring system into compliance by getting required Department approval.						
FS027 T	TROUBLESOME CREEK CAMPGROUND	A-TNC	002662		Green	03/01/2021	No	4
		System is substantially in compliance with applicable drinking water requirements						





## PWS Operating Permit - Operating Permits Status

35684 A	TULALIP LDS CHURCH	A-TNC	035184	148	Blue	12/01/2019	No	3	System lacks Department design approval and needs to bring system into compliance by getting required Department approval.
89550 R	TULALIP SHORES WATER SYSTEM	A-Comm	006150		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
89620 4	TULALIP WOOD WATER SYSTEM	A-Comm	006153		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
89650 W	TULARE BEACH ASSOCIATION	A-Comm	006154		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
02408 R	TWIN ROADS WATER ASSOCIATION	A-Comm	016645		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
11496 1	US NAVAL RADIO STATION(T)JIM CRK	A-NTNC	009235		Green	12/01/2020	No	3	System is substantially in compliance with applicable drinking water requirements
FS969 1	VERLOT PUBLIC SERVICE CENTER	A-TNC	002662		Green	03/01/2021	No	4	System is substantially in compliance with applicable drinking water requirements
64340 V	VISTA GLEN	A-Comm	035746		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
SP970 J	WALLACE FALLS STATE PARK	A-TNC	030247		Blue	03/01/2021	No	4	System has exceeded the number of connections approved by the Department and needs to bring system into compliance by reducing the number of connections or getting department approval of existing connections.
08982 R	WALLACE RIVER SALMON HATCHERY	A-TNC	016566		Blue	12/01/2020	No	3	



## PWS Operating Permit - Operating Permits Status

System lacks Department design approval and needs to bring system into compliance by getting required Department approval.

23486 X	WANDERING CREEK HOMEOWNERS ASSOC	A-Comm	010605		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
92950 V	WARM BEACH CONFERENCE GROUNDS	A-Comm	006386	148	Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
AD238 G	Whispering Firs at Firetrail	A-Comm	035292	148	Green	09/01/2019	No	2	System is substantially in compliance with applicable drinking water requirements
64401 F	WHITEHORSE MERCANTILE WATER SYSTEM	A-TNC	032372		Green	12/01/2020	No	3	System is substantially in compliance with applicable drinking water requirements
07581 N	WHITESIDE HOMEOWNERS ASSOCIATION	A-Comm	008734	148	Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
96876 L	WILDERNESS RIDGE COMMUNITY CLUB	A-Comm	006641		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
96930 L	WILKSHIRE LANE WATER DISTRICT INC	A-Comm	006659		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
98230 U	WOODS CREEK WATER DISTRICT	A-Comm	006744		Green	09/01/2020	No	2	System is substantially in compliance with applicable drinking water requirements
99405 Y	ZEKES DRIVE-IN	A-TNC	006808		Blue	12/01/2020	No	3	System lacks Department design approval and needs to bring system into compliance by getting required Department approval.

**\*\* End of Report \*\***

## **Appendix 1-4**

Warm Beach ALOP DOH Approval

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RECEIVED

DEC 21 2020

WATER DEPT.

State of Washington

DEPARTMENT OF HEALTH

NORTHWEST DRINKING WATER REGIONAL OPERATIONS  
20425 72nd Avenue South, Suite 310 • Kent Washington 98032-2388

December 16, 2020

BRANT WOOD  
SNOPUD WATER, MAIL STOP LS  
PO BOX 1107  
EVERETT WA 98206-1107

RE: Snohomish Public Utility District No. 1 – Warm Beach & Kayak, ID # 93000 & 23111  
Snohomish County  
Warm Beach/Kayak Water System Plan – 2020, System Consolidation Plan  
Submittal # 20-0311 & 20-0311B

Dear Mr. Wood:

The Snohomish Public Utility District No. 1 (the PUD) water system plan for the consolidation of your Warm Beach and Kayak water systems, received in this office on March 6, 2020 has been reviewed and in accordance with the provisions of WAC 246-290-100, is hereby **APPROVED**.

Based upon information you have supplied, it has been determined that the PUD's consolidated water system can support an "**unspecified**" designation for its approved number of connections. A specific number of approved connections will not be applied to your system at this time. Development within your system may occur in compliance with the schedule and information provided within your WSP. This designation may be rescinded (and replaced with a specified number of approved connections) if it is determined that the WSP is no longer representative of system activities.

Approval of the update of this water system plan is required on or before **December 14, 2026** unless the Department of Health (DOH) requests an update or plan amendment pursuant to WAC 246-290-100(9). Approval of this plan is valid as it relates to current standards outlined in Chapter 246-290 WAC, revised March 2012, Chapter 246-293 WAC, revised September 1997, and is subject to the qualifications herein. Future revisions in the rules and statutes may be more stringent and require facility modification or corrective action.

**LOCAL GOVERNMENT CONSISTENCY**

This document meets local government consistency requirements for WSP approval pursuant to RCW 90.03.386 and RCW 43.20.

**SERVICE AREA AND DUTY TO SERVE**

Pursuant to RCW 90.03.386(2), the service area identified in this WSP service area map may now represent an expanded "place of use" for this system's water rights. Changes in service area should be made through a WSP amendment.



The PUD has a duty to provide new water service within its retail service area. This WSP includes service policies to describe how your system plans to provide new service within your retail service area.

### CONSTRUCTION WAIVERS

Standard Construction Specifications for distribution main extensions in this WSP are approved. Consistent with WAC 246-290-125(2), this system may proceed with the installation of distribution main extensions provided this system completes and keeps on file the enclosed construction completion report form in accordance with WAC 246-290-125(2) and WAC 246-290-120(5) and makes it available for review upon request by ODW.

### WATER RESOURCES

Below is the general regulatory language that applies to all water system approvals:

The department's review of your water system plan will not confer or guarantee any right to a specific quantity of water. The approved number of service connections is based on your representation of available water quantity. If the Washington Department of Ecology, a local planning agency, or other authority responsible for determining water rights and water system adequacy determines that you have use of less water than you represented, the number of approved connections may be reduced commensurate with the actual amount of water and your legal right to use it.

Thank you for your cooperation. Snohomish County is being notified of the terms and requirements of this approval and the determination of the approved number of connections

If you have any questions or wish to check our records, please contact me at the number listed below.

Sincerely,



Richard Rodriguez  
Regional Planner  
Northwest Drinking Water Operations  
(253) 395-6771

enclosure

cc: Erika Lindsey, DOH  
John Ryding, DOH  
Snohomish County Planning and Development Services  
Snohomish County Health District  
Karen Heneghan, P.E., (SNOPUD Water, Mail Stop LS, PO Box 1107, Everett, WA)  
Tom Mortimer, Attorney at Law

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TACOMA, WA 98402  
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**PROJECT REPORT AMENDMENT  
and  
LIMITED WATER SYSTEM PLAN UPDATE  
for  
Snohomish PUD Warm Beach and Kayak  
Water Systems Consolidation  
PWSID #s 93000F & 231115  
February 2020**



**1. Purpose and Background**

The purpose of this Project Report Amendment and Limited Water System Plan (WSP) Update (Update) is to secure applicable approvals from the Washington State Department of Health (DOH) and Department of Ecology (Ecology) to construct connections between the Snohomish PUD (District) Warm Beach and Kayak water systems to complete the consolidation of these systems.

To the above end, this Update includes Water Right Self-Assessment forms (Attachment 1) and updated water demand forecasts used in preparing the self-assessment forms (Attachment 2). In addition, Attachment 3 was prepared to address the legal means and conditions, consistent with Municipal Water Law (MWL), by which the place of use of the Kayak system water rights may be extended to include the Warm Beach service area, without requirement of water right change. The content of the aforementioned attachment was vetted in detail with Ecology officials.

The approximate locations of the proposed connections between the Warm Beach and Kayak water systems are shown on figures in the Attachments to this report. The connections were identified in the project report, titled *Feasibility Study for Potential Consolidation of Warm Beach Water Association* (Feasibility Study/Project Report), approved by DOH on September 14, 2016. The full report can still be downloaded from <https://www.snopud.com/?p=3178>.

**2. Modifications to the Warm Beach Consolidation Improvements**

In 2019, while designing improvements outlined in the Feasibility Study/Project Report, the District's engineers identified modifications that would improve the overall water system consolidation project while remaining consistent with the goals of the approved project report. Proposed changes in this regard were discussed with DOH in a series of meetings and emails in 2019.

Attachment 4 is a December 13, 2019, letter with enclosures that summarizes the agreed-upon changes and how they relate to the Feasibility Study/Project Report. Rather than repeat this information, Attachment 4 is incorporated into this Update by reference. The letter also provided a modified scope of work for the DWSRF loans. DOH offered DWSRF contract amendments incorporating this revised scope of work in January 2020 and executed the amendments in February 2020.

In the course of the 2019 discussions, DOH abruptly threatened to cancel the DWSRF funding due to the absence of documentation regarding the Warm Beach and Kayak system connections that DOH presumed had been submitted by the District for agency review in 2016. In order to remove the agency's threat, the District offered to directly fund the connections – a concept which DOH endorsed as fully resolving the matter. However, subsequent to DOH's approval of the District's approach, DOH advised the District that its construction of the connections could still not occur absent further documentation. In order to avoid further project delays and risk to the Warm Beach residents, the District elected to prepare this Update to provide such documentation.

The District's decision to self-fund the connections between Warm Beach and Kayak was intended to provide certainty that this part of the consolidation project occurs without further DOH objection or obstacle in the summer of 2020, along with the DWSRF-funded water main improvements. These connections will play a critical role in ensuring the resiliency of the Warm Beach facilities which rely on a single storage tank and wells that cannot fully supply the average day water demand in the Warm Beach area if the highest producing well is out of service.

### ***3. Consolidation Concept for the Warm Beach and Kayak Water Systems***

As a result of the unified ownership of both systems, facility redundancy/connections, and Ecology's agreement that the place of use of the Kayak system's water rights may be expanded without requirement of change on an intermittent, exigent basis to address Warm Beach water supply needs, the District intends to manage Warm Beach and Kayak as a single water system after constructing the connections between the systems. See Attachment 3. This management approach and/or consolidated WFI treatment will be formalized with DOH after the project is completed and all interconnections constructed

The connections between Warm Beach and Kayak will function as an interface between pressure zones that have their own sources of supply, enabling one zone (Kayak) to back up the other zone (Warm Beach) when atypical operational events occur. Water will not flow in the reverse direction from Warm Beach to Kayak, because the Kayak 450-HGL zone operates at a higher hydraulic grade level than the Warm Beach 350-HGL zone. When the District described this design approach at an April 26, 2017 meeting, Ecology representatives expressed their support because it will ensure that the Warm Beach Well 4 water right permit is perfected within the service area described in WBWA's approved 2016 WSP, without using Warm Beach water in the Kayak zone.

One aspect that is different than most pressure zone interfaces is these connections will be metered. Metering between zones in distribution systems is becoming an encouraged practice in some situations. Zone meters are mentioned in DOH's Water Use Efficiency Guidebook to isolate sections of the distribution system, to identify and prioritize areas with the most leaks. Also, the American Water Works Association water audit methodology, which is now the industry standard for leakage tracking, sometimes results in recommendations for zonal management by metering pressure zone inflows and outflows (referred to as import and export meters).

The primary reason for meters on the connections between Warm Beach and Kayak will be to record the amount of water that passes from Kayak to Warm Beach. Because the Kayak water used to support Warm Beach is only for emergency backup, such as assisting when the storage tank or a well is off line or if low pressure occurs, this meter reading data will help the District to be aware when such events occur and to make sure that the water transfer from the Kayak to Warm Beach zone only occurs in circumstances that are intended.

The District will read these meters monthly and record the data along with its source meter readings. The District plans to continue calculating the annual average distribution system leakage (DSL) for Kayak and Warm Beach separately, in addition to the DSL for the combined system.

#### ***4. Full Water System Plan Update***

The District is in process of preparing its full WSP update to submit to DOH by the end of 2020, with review and approval carrying into mid-2021. The language in Attachment 3, regarding the Warm Beach and Kayak water rights and service area has been prepared and discussed with Ecology for inclusion in the Source of Supply chapter of the WSP.

The full WSP update was delayed while the District took on the temporary higher workload to consolidate the Warm Beach system in addition to its previously scheduled activities, including preparing the Feasibility Study/Project Report at the request of the community and DOH (2015-16); conducting extensive outreach, securing funding and preparing for the Warm Beach water system ownership transfer (2016-18); dealing with a funding delay caused by the state legislature failing to pass its capital budget (2017); dealing with further delays when DOH was not prepared to issue the DWSRF contracts when the state capital budget did pass (2018); completing the ownership transfer and incorporating the 600+ customer Warm Beach system into the Districts billing, records and operations (2018-19); and conducting cultural resources, environmental review and design activities while also dealing with DOH's disapproval of the connections that is the subject of this Update (2019-20).

The District's 2011 WSP was approved and current when DOH approved this water system consolidation project in 2016. Like most water systems in the region, growth in water demands in the District's water systems has been lower than projected in its previous WSP. Until DOH brought up its late-in-the-process disapproval of constructing the connections between the Warm Beach and Kayak systems, the District did not have any indication that the delayed WSP update would lead to a problem in completing improvements DOH had previously authorized and funded.

At this point, the District believes it would be imprudent and contrary to the public health and safety of Warm Beach customers to wait until after approval of the WSP update in 2021 to construct the connections between the Warm Beach and Kayak water systems. Clearly, these connections will improve the resiliency of the water supply and increase the ability to provide reliable, uninterrupted water service to the Warm Beach area. This is at the core of the water system consolidation, as included the Feasibility Study/Project Report and DWSRF funding

approved/granted by DOH. Also, the connections will be more cost-effective to construct along with other water main improvements this summer.

Although Warm Beach residents have lived with the current level of service for years, there are higher expectations now that the District is operating the water system. Customers are paying for improvements that have been promised, and they expect to see them constructed at the lowest possible cost. It would be unfortunate if a situation occurs in the coming year where water service is interrupted and the connections are not available, if construction is not allowed by DOH.

### ***5. Updated Water Demand Forecast and Water Rights Capacity Evaluation***

Attachment 2 provides updated service connection counts and water demand data for Warm Beach and Kayak from 2014-2019 and contains updated spreadsheets from the District's 2011 WSP to create water demand projections to the year 2040.

The data shows that annual growth in service connections has been within the projected ranges of the District's 2011 WSP and in WBWA's 2016 WSP, which were the basis for the Feasibility Study/Project Report. Also, household water use has declined in both the Warm Beach and Kayak systems. A detailed description of the data and projections in Attachment 2 is provided below, including discussion of how this updated information is still consistent with water rights capacity evaluations that were provided in the WSPs and in the Feasibility Study/Project Report.

When reading the following description, keep in mind that the word "system" or "customer" precedes the terms Average Daily Demand (ADD), Maximum Daily Demand (MDD) and MDD/ADD ratio. The main thing to know is that "system" values include leakage and unbilled authorized water use; and "customer" values are based on customer consumption, excluding leakage and unbilled authorized water use (such as fire flow and flushing).

WBWA's WSP uses "system" factors when calculating the Warm Beach water system capacity and the District's WSP uses "customer" factors when calculating the Kayak water system capacity. The Feasibility Study/Project Report and this Update include conversions of "system" and "customer" values so that the analyses can be compared. In both cases, the term Equivalent Residential Unit (ERU) means the single-family household equivalent of these "system" or "customer" factors.

#### **Warm Beach Water Demand Forecast and Water Rights Capacity**

The District's count of Warm Beach service connections in Attachment 2 was determined by identifying all installed services when setting up billing in 2018 and adding new connections since then. Connection counts back to 2014 were determined by looking through WBWA's records to find when water shares were purchased for the installed services. WBWA's definition of "connections" might have meant the number of purchased water shares, rather than installed services, considering that their 2016 WSP referred to "active" and "inactive" connections. In addition to the connections counted in Attachment 2, the District is honoring commitments for 9 Warm Beach customers that are paying the monthly surcharge for the water system improvements but are not using water and do not have meters installed.

WBWA's 2016 WSP used a growth rate of 15% over 10 years for facilities planning and a more conservative growth rate of 10% over 10 years for financial planning. This worked out to 6-10 new service connections per year over the planning period. Actual growth in Warm Beach from 2014 through 2019 is within this range, averaging 9 new connections per year, which correlates to a 1.55% average annual growth rate. This growth rate is rounded down to 1.5% in the spreadsheets used for the growth forecasts in this Update.

When starting their 2016 WSP update, WBWA had only one good year of meter-reading data since their previous 2002 WSP. Therefore, the system ADD of 178 gpd/ERU and system MDD of 480 gpd/ERU from their 2002 WSP were used for water demand forecasting until additional years of data could be collected. As can be seen in Attachment 2, the additional years of data from 2014-2019 show that the Warm Beach customer ADD is now 132 gpd/ERU. To compare to WBWA's 2016 WSP, source production can be divided by the number of connections to get the 2014-2019 system ADD of 155 gpd/ERU, which has clearly declined from the 178 gpd/ERU system ADD used in WBWA's WSPs.

The system MDD/ADD ratio from WBWA's WSP works out to 2.7 (480/178). Peak day demands have not been determined for the Warm Beach system since 2002, so this ratio was used for the updated forecasts. Applying the concepts from PUD's WSP, a customer MDD/ADD value of 3.0 was determined to use in the forecasting spreadsheets.

The Warm Beach water demand projections in Attachment 2 are developed for two scenarios because a significant portion of homes in Warm Beach are currently occupied part-time and water demand might increase as occupancy transitions to full-time. Scenario 1 uses the current 2014-2019 customer ADD of 132 gpd/ERU. Scenario 2 uses a customer ADD of 150 gpd/ERU, which is close to recent residential water demands reported by nearby cities, considering small lot sizes in much of the Warm Beach area. When the resulting Scenario 2 production is divided by the sum of single-family, multifamily and commercial ERUs, the resulting system ADD is around 165 gpd/ERU. This is still lower than the 178 gpd/ERU system ADD used in WBWA's WSP, but reasonable for full-time occupancy considering progress in water use efficiency.

In WBWA's 2016 WSP, the 250 gpm combined pumping limit of its active Wells 2 and 4 was determined to be the limiting factor for water system capacity, enough for 750 connections at the system MDD of 480 gpd/ERU. Because of this, DOH reduced its previous approval for 785 connections to 750 when approving WBWA's WSP in 2016. WBWA had started to investigate rehabilitating or replacing Warm Beach Well 1, which could add another 35 gpm to the active water supply.

The District's Feasibility Study/Project Report determined that the current limiting factor might be the 135 acre-foot per year (afy) annual limit of the Warm Beach groundwater rights, which could support 667 services with a system ADD of 178 gpd/ERU, and determined that this number of services might be reached by 2025-2030 a growth rate of 6-10 connections per year.

As the District pointed out in the Feasibility Study/Project Report and in its April 26, 2017 meeting with Ecology, it will need to be careful to reserve capacity if water demands are trending upward due to homes still transitioning to full-time occupancy by 2025-2030. In other

words, the District might need to restrict new connections as water use approaches 135 afy. Therefore, the District requested that the timeframe to perfect the Well 4 water right permit be extended to 2035, to leave time for this part-time to full-time occupancy transition. On July 9, 2019, Ecology processed the District's request to extend the deadline to perfect the Well 4 permit to June 30, 2035.

The updated water demand forecasts in Attachment 2 are still consistent with the 2035 timeframe to perfect the Well 4 permit, although more connections may be supported with the reduced residential demand. In Scenario 2 with full-time occupancy and a customer ADD of 150 gpd/ERU, annual well production would reach 135 afy by 2030, when the system could be serving 729 connections. In Scenario 1, with the 2014-2019 customer ADD of 132 gpd/ERU, it would take closer to the year 2038 and over 800 connections to reach 135 afy. Ecology's extension of the deadline to perfect the Warm Beach Well 4 permit to June 30, 2035, falls between these scenarios.

The DOH approval for up to 750 connections should still be considered valid, because it also falls within the range of the above potential scenarios. As water use gets closer to 135 afy, the District will check the full-time/part-time occupancy to determine how many more service connections can be supported.

In its 2016 WSP, WBWA used the full Lake Martha annual water right limit of 216 afy/year to determine that water rights could support projected buildout of up to 1,000 connections within its service area. Likewise, the District anticipates it will need to apply to transfer more of the Lake Martha surface water rights to groundwater as growth in the Warm Beach area approaches the limit of the authorized groundwater withdrawals. If such application is unsuccessful, the District does not see that it would be obligated to provide water service to remaining vacant parcels in Warm Beach beyond the limits of the current groundwater rights.

#### Kayak Water Demand Forecast and Water Rights Capacity

For the Kayak system, the District's 2011 WSP used a 1.0% annual growth rate for new connections. The actual growth rate in 2014-2019 is on target, averaging 4 new connections, or 0.96% growth, per year. Therefore, the water demand forecasting spreadsheet in Attachment 2 continues to use the 1.0% annual growth rate for Kayak.

In the District's 2011 WSP, the average Kayak customer ADD was 247 gpd/ERU and the system ADD was 270 gpd/ERU. The 2014-2019 customer ADD has declined to 220 gpd/ERU and the system ADD has declined to around 240 gpd/ERU. Compared to Warm Beach, the higher Kayak water demands reflect that Kayak lot sizes range from 0.5 to 20 acres compared to a preponderance of city-sized lots in Warm Beach.

A system MDD of 700 gpd/ERU was used for Kayak in the 2011 WSP and in the Feasibility Study/Project Report. The system MDD/ADD ratio worked out 2.59 (700/270) and the customer MDD/ADD ratio worked out 2.73. The District has not yet determined the MDD that will be used in its WSP update, so this ratio is unchanged in the demand forecasting in Attachment 2.

The Feasibility Study/Project Report described how, although the annual limit of Kayak water rights should be reserved for remaining water service requests that could occur within the Kayak area, the instantaneous Kayak well capacity is enough to supplement the Warm Beach facilities when adverse short-term events occur. As can be seen on the Water Right Self-Assessment Form (Attachment 1), if growth continues as projected, water consumption will be below the 156 afy annual limit of the Kayak Wells 2 & 3 water right by 2040, and the system MDD by that time will be about two-thirds of the 300 gpm Wells 2 & 3 capacity. Like Warm Beach, the District anticipates that a water right transfer within the Kayak service area would be necessary to support full build-out in the Kayak area, and the District will be careful to not commit to more connections in the long-run than the water rights and facilities can support.

## ***6. Facilities Analysis and Sizing the Connections***

Considering that household water demands have declined and growth in new service connections is close to previous forecasts, the analysis in the Feasibility Study/Project Report is still valid, including the justification to connect the Warm Beach and Kayak systems. Nevertheless, further discussion is provided below to elaborate on aspects of the system capacities that relate to connecting these systems.

Each water system has been approved by DOH to meet the needs of existing service connections plus a moderate amount of growth. The Warm Beach system is approved to serve 750 connections and is currently serving 620 connections. The Kayak system is approved to serve 481 connections and is currently serving 386 connections.

The Warm Beach system relies on a single storage tank and two wells producing 200 gpm and 50 gpm. The smaller 50-gpm well produces less than the system ADD, which leaves Warm Beach vulnerable when the larger well is out of service, and especially vulnerable if something takes the tank out of service. Although the Warm Beach facilities meet minimum sizing requirements for DOH approval, connecting Warm Beach to Kayak will provide significant improvement for reliability and resiliency.

The Feasibility Study/Project Report recommended two connections between Kayak and Warm Beach. One would be a direct connection between distribution systems with pressure reducing valve (PRV) station that can support Warm Beach when its tank is offline. The other would be a connection near the Warm Beach storage tank to fill the tank when the larger well is offline.

The Feasibility Study/Project Report said both connections would be done with 8-inch diameter pipes, because that is the District's default pipe size. However, upon further thought, a 2-inch diameter copper tubing size (CTS) pipe with a 2-inch meter is enough for the connection to fill the Warm Beach storage tank. For the second connection, the pipe crossing the road from Kayak to Warm Beach will be 8-inch diameter, but the meter and pressure reducing assemblies will be 6-inch with 6-inch piping. Justification for this sizing is provided below.

### **Sizing the 2-inch Diameter Pipe Connection to the Warm Beach Tank**

Per Attachment 2, the Kayak ADD works out to less than 100 gpm over 24 hours. This leaves at least 200 gpm out of the 300 gpm pumping rate of Kayak Wells 2 & 3 available on an average



day, which is more than enough to cover an average day of Warm Beach water demands. Even on a peak day, the Kayak wells might still have 100-150 gpm to spare in a Warm Beach outage scenario, which would help keep the Warm Beach area in service when accompanied by the smaller 50 gpm Warm Beach well.

With a 2-inch pipe filling the Warm Beach tank at 200 gpm, velocity in the pipe would be 19 feet/second (fps) and head loss would be 67 feet (29 psi) per 100 feet of pipe. This velocity exceeds the District's design standard of 8 fps but is not a concern because the standard is intended to protect the lining of ductile iron pipe, whereas 2-inch copper tubing will be used in this case. Also, the 67-feet per 100-feet of head loss is acceptable because the distance between the Kayak pipe and the Warm Beach tank is about 100 feet and about 100 feet of pressure head is available from the Kayak 450-HGL zone to the 350-foot elevation of the Warm Beach tank overflow. Furthermore, the restriction caused by the 2-inch pipe will help keep flow within the range that can be supported by the Kayak facilities when this connection is used.

#### Sizing the Pressure Reducing Valve (PRV) Station Connection

The larger PRV station connection will be located near the corner of 172<sup>nd</sup> St NW and 89<sup>th</sup> Ave NW. Hydraulic modeling in a 2008 project report for the Kayak storage tank indicated 520 gpm fire flow is available in Kayak at this intersection, with the water level in the Kayak tank drawn down to the bottom of the fire storage and a background MDD flow is occurring in the Kayak system. Although the average flow needed to support Warm Beach in a backup scenario will be less than 200 gpm, the PRV station will be able to support shorter duration peak flows while the Warm Beach tank is out of service. As can be seen in Attachment 2, the current Warm Beach system ADD flow is estimated to be 63 gpm, which could increase to 98 gpm by 2040; the Warm Beach MDD flow is estimated to be 177 gpm, which could increase to 242 gpm by 2040; and the Warm Beach peak hour demand (PHD) is estimated to be around 360 gpm, which may increase to 523 gpm by the year 2040.

The District is designing the PRV station with a combination of 2-inch and 6-inch PRVs and with a 6-inch fire meter rated for 5-1600 gpm, to allow for flexibility in case future improvements in the Kayak system increase available short-term peaking flows. Piping from Kayak through this station will be 6-inch diameter, consistent with the meter and PRV valve sizes, and will increase to 8-inch diameter pipe crossing the road to the Warm Beach 350-HGL zone 8-inch pipe.

There will be a parallel 2-inch pipe after the meter with a 2-inch PRV to the 6-inch Warm Beach 450-HGL boosted zone pipe (which parallels the 8-inch 350-HGL zone pipe). The Warm Beach boosted zone currently serves about 20 homes and is projected to serve 40-50 homes at buildout. The WBWA 2016 WSP calculated a 38 gpm PHD for 20 connections and 61 gpm PHD for 43 connections. At 65 gpm, velocity in a 2-inch pipe would be about 6 fps and head loss would be about 7.7 feet (3.3 psi) per 100 feet of pipe. The length of this pipe will be less than 100 feet because it just needs to cross the street from Kayak to Warm Beach.

#### Other Design and Operation Considerations for the Connections

The settings of the PRVs will be such that they open automatically when an adverse event occurs in Warm Beach, with a target of maintaining pressure above 20 psi to all customers

during such events. The PRVs will be equipped with a pressure sustaining feature to restrict flow if pressure drops below a set point on the Kayak side, to ensure that pressure is also maintained above 20 psi at critical high points in the Kayak system.

Because set points can be adjusted, the exact settings do not need to be determined prior to construction. As a starting point, a 20-psi PRV setting to the Warm Beach 350-HGL will keep pressure above 20 psi for customers in that zone, because the highest service meter in this zone is below the connection point. And, a 35-psi setting to the Warm Beach 450-HGL boosted zone should keep pressure above 20 psi for those customers, because the highest booster-fed customer is about 30 feet above the connection point. A 58-psi target for the pressure sustaining setting would match the Kayak hydraulic model, which showed that 58 psi during a 520-gpm fire flow at this location corresponded to a 20-psi minimum pressure elsewhere in the Kayak system. The District will conduct further field tests and hydraulic modeling after the PRV station is installed to confirm the appropriate settings. The decided settings will then be recorded for the District's operators to reference when maintaining the control valves.

Alarm settings in the District's control system will help staff to be aware when adverse events occur (such as pump failure and tank water level alarms); and the District can remotely monitor facilities while taking appropriate action to respond to the situation.

Because the PRV station connection will automatically open during low pressure events, it could open when a fire flow event occurs in Warm Beach, although supplemental fire flow is not essential. According to hydraulic modeling in WBWA's 2002 WSP, after identified improvements in that WSP are complete (not considering the connections to Kayak), available fire flow should improve to over 1,000 gpm throughout most of Warm Beach. The lowest fire flow capacity is at the north end of Beach Drive, with a 3,500-foot stretch of 6-inch asbestos cement (AC) pipe. A fire flow test conducted on Beach Drive in May 2000 resulted in 400 gpm available fire flow, which is likely to increase above 500 gpm after this year's improvements. The District plans to replace and upsize that pipe before the year 2030 as part of its goal to replace all AC pipe in its water systems, which will further improve fire flow to that location.

The District will create a new hydraulic model for the combined Warm Beach and Kayak systems as part of the WSP update this year. However, based on the existing hydraulic modeling and capacity analyses described above, the existing facilities can support these connections now. So, there is no reason to wait for completion of the new model before constructing the connections.

The Feasibility Study/Project Report indicated the District is considering adding a second storage tank in the Kayak system that could include additional standby storage for the Warm Beach area. The District still expects to include this tank in the improvement program of its WSP update. As can be seen in Attachment 2, it could take until the year 2032 for the Warm Beach area to reach the currently approved 750 connections, and it could take beyond the year 2040 for the Kayak area to reach the currently approved 481 connections, so additional storage is not an immediate need.

## **7. Public Process and Commission Approval**

The District, in conjunction with WBWA's board of directors, conducted extensive public outreach for this water system consolidation project. The culmination was a public hearing held as part of a District Commission meeting on July 24, 2018, in preparation for the Commission's approval to sign the DWSRF loan contracts and accept ownership of the Warm Beach system.

Slides from this hearing are still posted with the Feasibility Study/Project Report at <https://www.snopud.com/?p=3178>:

- Slide 2 points out locations of Warm Beach and Kayak systems and the intent to merge
- Slides 3-4 summarizes the chronology of events, including earlier outreach
- Slide 5 is the post card mailed out to promote the hearing
- Slide 6 lists connecting the systems among the proposed improvements
- Slides 7-9 describe resolutions to be proposed at the following Commission meeting

The public hearing was well attended, by more than members of the Warm Beach community and District representatives. Because an election was in process for a Commission seat, the hearing garnered attention of candidates and constructive discussion occurred.

The District's Commission approved the following resolutions at their August 7, 2018, meeting: Resolution 5862 adopted the Feasibility Study/Project Report into the District's WSP and authorized the District's CEO/General Manager to execute the agreement to accept ownership of the Warm Beach system; Resolution 5863 authorized the CEO/General Manager to execute the two DWSRF loan contracts; Resolution 5864 established rates and charges for the Warm Beach customers to repay the DWSRF loans and other costs of the consolidation; and resolutions 5865 and 5866 addressed public use of open space on one of the well sites.

The District's board packets, minutes and audio recordings are posted online, currently back to the beginning of 2018. (Go to [www.snopud.com](http://www.snopud.com) and click on Commission Meetings at the bottom of the page.) There is a link from the Commission page to the Washington State Digital Archives, where copies of the District's resolutions are saved.

## **8. Budget and CIP**

When presenting the consolidation proposal in the public process and when working with DOH staff regarding the DWSRF funding, the District provided extensive information regarding budget and schedule to demonstrate its readiness and commitment to complete this project within the deadlines of the DWSRF loan contracts.

Attachment 4 includes the most recent cost estimate and schedule provided to DOH for the parts of the consolidation project funded by the DWSRF loans. In addition, the District prepared a document called *Summary of Improvements and Costs*, which was used as a meeting handout. The August 2018 edition on the Warm Beach page (<https://www.snopud.com/?p=3178>) incorporates feedback from the public hearing held on July 24, 2018. This summary shows how the \$35 per month surcharge collected from Warm Beach customers for 20 years will more than repay the DWSRF loans, providing additional contingency if project costs exceed the estimates used for the DWSRF loan applications. The District committed that any money left

from the surcharge after completing the listed improvements would be used for further improvement to the Warm Beach water facilities. The District's self-funded construction of the connections between Kayak and Warm Beach will be counted among the improvements reimbursed by the surcharge.

Additionally, the District posts its annual budget online at <https://www.snopud.com/?p=2525>.

## **9. Environmental and Cultural Review**

All improvements depicted on the figure in Attachment 4 are included in the cultural resources study and in the environmental review that is in process.

The District submitted the cultural resources report to DOH on January 14, 2020. The report recommends conducting Unanticipated Discoveries Protocol (UDP) training, having a copy of the UPD onsite at all times, having an archaeological monitor onsite during construction in specified locations, and developing an archaeological monitoring protocol. DOH concurred with the findings and recommendations and mailed letters to interested parties with comments due by February 29. In the meantime, UDP training was conducted for District staff on February 6, 2020, and the District is developing an on-call contract with the archaeologist to conduct UDP training onsite for each contractor involved in earth disturbing activity and to carry out the other recommendations listed above.

The District is its own lead agency for environmental review and DOH is the lead agency for DWSRF-funded projects in Washington State. The District conducted its internal process and issued a recommended Determination of Non-Significance (DNS) on February 18, 2020, with comments due by March 3, 2020. The appropriate DOH representatives have received a copy of the DNS and supporting documentation to conduct their process. In addition to the cultural resources study, a critical areas study was conducted by a consultant and was used in support of the environmental review.

## **10. Adjacent Water Systems**

### Adjacent Expanding Water Systems

The District's Warm Beach and Kayak water systems are surrounded by Puget Sound to the west and by other expanding water systems on all other sides. The adjacent systems are Warm Beach Conference Grounds (PWSID# 92950V) to the north, Seven Lakes Water Association (PWSID# 776600) to the west, and the Tulalip Utilities Authority (no active PWSID#) to the south.

### Non-Expanding Water Systems Inside the Service Area

There are four known Group B water systems inside the Warm Beach area: Kayak Wells Water System (PWSID# 043392), Moore-Peterson (PWSID# 506169), Paul Water System (PWSID# 46794T), and Ronning Community Water System (PWSID# 482883).

Inside the Kayak area, known non-expanding water systems include the Group A Community McKee's Evergreen Beach Association (PWSID# 24190R); two Group A TNC water systems,

Kayak Golf Course (PWSID# 24511Q) and Kayak Point County Park (PWSID# 379228); two Group B water systems, Kayak Cove Community Club (PWSID# 16576Y) and Strieby (PWSID# AA474D); and the pre-active McKees Hilltop Owners Water Association (PWSID# AB607K).

As part of the 2011 WSP update, the Kayak future service area was expanded to Puget Sound and to match the boundaries of the adjacent expanding water systems to enable Kayak to provide service to non-expanding water systems within this boundary should the need arise.

The District and WBWA have been approached at various times by water systems listed above, although no projects have materialized. If more requests are received, the District would further evaluate the feasibility of consolidating such systems with Kayak and Warm Beach.

#### Outreach to Adjacent Water Systems

The District did extensive outreach regarding its water service area boundary changes when updating its WSP in 2009-2011. Copies of letters seeking input from each adjacent expanding water system are in Appendix 00-1 of the District's 2011 WSP. These include letters to Seven Lakes Water Association, Snohomish County Parks Department, Tulalip Utilities Authority, and WBWA. In addition, the District contacted adjacent purveyors directly and presented its proposed service area boundary revisions at several North Snohomish Water Utility Coordinating Committee (NSWUCC) meetings for approval to incorporate the revised service area boundaries into the North Snohomish County Coordinated Water System Plan (NSCWSP).

WBWA likewise conducted outreach to adjacent expanding public water systems when preparing its 2016 WSP to clarify service area boundaries. WBWA and the District agreed it made more sense for Warm Beach to serve an area along Marine Drive due to elevation and the closer proximity of WBWA's water main. Also, there was one customer in WBWA's service area that was transferred to the Kayak service area because it was hooked up to the Kayak system by prior owners. WBWA similarly worked with Seven Lakes Water Association to clarify the boundary between their water systems.

A resulting agreement in Appendix A of WBWA's 2016 WSP was signed by WBWA, the District, and Seven Lakes Water Association. The appendix also includes an agreement between WBWA and Warm Beach Conference Grounds that would have adjusted the northern Warm Beach service area boundary if a proposed senior community development received a conditional use permit (CUP) from the county. However, the county denied the CUP and the north end boundary remained unchanged from WBWA's original 1991 signed service area agreement in the NSCWSP.

Because the combined Warm Beach and Kayak systems will be entirely within the service areas developed through the above outreach in the WSP updates, the District does not see a need to conduct further outreach to adjacent systems in order to connect these two District-owned water systems to each other.

## **11. Consistency Review**

The District is requesting that Snohomish County Planning and Development Services (PDS) complete the Local Government Consistency Review Form in Attachment 5. A description to help with the review is provided below.

**Item (a) asks if this submittal is consistent with adopted land use and zoning within the service area.** Attachment 5 provides printouts of land use and zoning layers from the PDS online Map Portal. The outline of the combined Warm Beach and Kayak service areas is drawn in red on these maps for reference. As stated in Attachment 3, which will be incorporated into the District's full WSP update, the Kayak retail service area/place-of-use expansion request to use Kayak water in Warm Beach has been determined by the District to be consistent with the 2015 Snohomish County Comprehensive Land Use Plan and applicable land use regulations.

Furthermore, the land use in zoning shown on the maps in Attachment 5 are still consistent with analyses in the District's 2011 WSP and WBWA's 2016 WSP, which formed the basis of the Feasibility Study/ Project Report and this Update. Future Land Use within the combined Warm Beach and Kayak service area is classified as Rural Residential-5 (1DU/5 Acres) and Rural Residential (1DU/5 Acres Basic). Zoning within the service area is predominately Rural-5 Acre. Properties zoned other than R-5 are:

- Within Kayak, a plat zoned R-20,000 called Kayak Landing was created in the 1990s with 77 half-acre lots. These are the smallest lots in Kayak.
- In Warm Beach, 18902 Marine Drive is zoned Rural Business. This previous fire department property was sold and converted to business use when the new fire house was built farther north on Marine Drive.
- In Warm Beach, a parcel at 17333 Marine Dr is zoned Native American Land.

Regarding platted lots smaller than 5 acres created prior to establishment of the R-5 zoning:

- A significant portion of the Warm Beach service area was previously platted into approximately 3,000 square feet residential lots. To build new homes on remaining vacant lots of this size, typically 3 to 4 lots are combined to meet septic system requirements or sewer effluent is pumped to septic systems on other lots.
- There are also remaining vacant lots in the range of 1-5 acres in both the Kayak and Warm Beach areas on which individual homes can be built.

Regarding remaining vacant parcels larger than 5-acres:

- There is one preliminary plat approval extended to April 4, 2020 for a 7-lot rural cluster in Warm Beach under Project File Number 11-106296-SD on 22.6 acres. The District does not know the current intentions of the property owner, but water service is available through a developer extension according to the District's policies if desired.
- There are some additional larger parcels in both the Warm Beach and Kayak in the range of 10 to 20 acres that could subdivide into 5-acre lots or achieve slightly higher densities with rural clusters. For example, a rural cluster on 20 acres could create 6 lots, rather than 4 5-acre lots. There are no remaining larger tracts of privately-owned land other than these, and the District is

not aware of any developer activity within the service area boundary to buy up property to combine for larger development.

- The Stanwood School District purchased a 15-acre parcel at 20223 Marine Dr in 2000 for a potential future elementary school. As stated in the Feasibility Study/Project Report, the City of Stanwood's 2015 Comprehensive Plan says enrollment is declining and excess elementary school capacity is expected to continue through 2025. WBWA considered the future school in the facility analysis of its 2016 WSP and the District considered the school when sizing water mains in the Feasibility Study/Project Report, however the needs for this potential school are not a driving force for the water system improvements. In accordance with District policies, the School District would be responsible for the cost of any further facilities needed to support their project.
- A significant amount of land in the Kayak area is owned by the Snohomish County Parks department. The county has been in process of converting the former Kayak Point Golf Course to other uses and has been conducting master planning effort for the Kayak Point County Park. The county has assured residents that it intends to keep this property as park land and has no intention of selling the property for development. In its 2011 WSP, the District expanded the Kayak retail service area to cover the golf course club house and a portion of Kayak Point park because the parks department had expressed interest in domestic water service for the club house building and for park facilities.

**Item (b) asks if the growth projection used to forecast water demand is consistent with adopted population growth projections, or if an explanation of the alternative growth projection and methodology is provided.** Section 5 of this Update shows how growth has been spot-on with the previous projections in the 2011 District WSP (for Kayak) and the 2016 WBWA WSP (for Warm Beach). It applies similar methodology to further project growth to 2030-2040.

**Item (c) is not applicable because it relates to cities and towns that provide water service. The District is not a city or town.**

**Item (d) asks if service area policies for new service connections conform to adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.** Only Snohomish County has jurisdiction over the District's Warm Beach and Kayak service area. The District's service area policies are described in Section 2.4 of its 2011 WSP, including criteria for timely and reasonable water service decisions. Also, the District's Water Policies & Procedures Manual is posted at <https://www.snopud.com/?p=1214>. The District continues to follow these policies but is aware that Snohomish County is rethinking its requirements for when connection to public water is required for building permits. As the District is preparing its WSP update in 2020, it will look closely at its water service policies in relation to changes that are in process at the county.

**Item (e) asks if there are other relevant elements related to water supply that are addressed in the water system plan, if applicable.** It lists local plans that may be applicable, including Coordinated Water System Plans and the Capital Facilities Element of local comprehensive plans.

Regarding Coordinated Water System Plans, the Warm Beach and Kayak service area is inside the Critical Water Supply Service Area Boundary which defines the planning area for the North Snohomish County Coordinated Water System Plan (NSCWSP). The 2011 District WSP, the 2016 WBWA WSP and this Update have been prepared in accordance with NSCWSP requirements.

Regarding the Capital Facilities Element, the county's current comprehensive plan was completed in 2015. Section 2.4 of the Capital Facilities Element describes the public water supply facilities of agencies external to the county that are necessary to support development. It references a technical support document titled Countywide Utility Inventory Report for Snohomish County that is compiled from the most recent WSPs of water systems that have some prospect of growing in the future. A description of the District's Warm Beach and Kayak water systems consolidation could be added to the Countywide Utility Inventory Report upon approval of this Update.



# Water Right Self-Assessment Form for SNOHOMISH PUD – WARM BEACH

Mouse-over any link for more information. Click on any link for more detailed instructions.

Water Right Permit, Certificate, or Claim # <small>*If water right is interruptible, identify limitation in yellow section below</small>	WFI Source # <small>If a source has multiple water rights, list each water right on separate line</small>	Existing Water Rights <small>Qi= Instantaneous Flow Rate Allowed (GPM or CFS) Qa= Annual Volume Allowed (Acre-Foot/Year) This includes wholesale water sold</small>				Current Source Production – Most Recent Calendar Year <small>Qi = Max Instantaneous Flow Rate Withdrawn (GPM or CFS) Qa = Annual Volume Withdrawn (Acre-Foot/Year) This includes wholesale water sold</small>				10-Year Forecasted Source Production (determined from WSP) <small>This includes wholesale water sold</small>				20-Year (2040) Forecasted Source Production (determined from WSP) <small>This includes wholesale water sold</small>			
		Primary Qi <small>Maximum Rate Allowed</small>	Non-Additive Qi <small>Maximum Rate Allowed</small>	Primary Qa <small>Maximum Volume Allowed</small>	Non-Additive Qa <small>Maximum Volume Allowed</small>	Total Qi <small>Maximum Instantaneous Flow Rate Withdrawn</small>	Current Excess or (Deficiency) Qi	Total Qa <small>2019 Annual Volume Withdrawn</small>	Current Excess or (Deficiency) Qa	Total Qi <small>Maximum Instantaneous Flow Rate in 2030</small>	10-Year Forecasted Excess or (Deficiency) Qi	Total Qa <small>Maximum Annual Volume in 2030</small>	10-Year Forecasted Excess or (Deficiency) Qa	Total Qi <small>Maximum Instantaneous Flow Rate in 2040</small>	20-Year Forecasted Excess or (Deficiency) Qi	Total Qa <small>Maximum Annual Volume in 2040</small>	20-Year Forecasted Excess or (Deficiency) Qa
1 SWC 328	Lake Martha	0.3 cfs (135 gpm)		216 afy		0	135 gpm	0	81 afy	0	135 gpm		81 afy	0	135 gpm		81 afy
2 SWC 11576	Lake Martha		0.3 cfs		216 afy	0	0	0		0	0		0	0			
3 G1-00718C	Well 1	35 gpm			30 afy	0	35 gpm	0		0	35 gpm		0	35 gpm			
4 G1-24266C	Well 2	50 gpm			80 afy	50 gpm	0	23.1	*	50 gpm	0	24 afy	*	50 gpm	0	28 afy	*
5 G1-24690C	Well 3R	33 gpm			39.6 afy	0	33 gpm	0		0	33 gpm		0	33 gpm			
6 G1-25686P	Well 4	200 gpm			135 afy*	165 gpm	35 gpm	81.5	30.4 afy	200 gpm	0	96 afy	15 afy*	200 gpm	0	111 afy	(-4 afy)
<b>TOTALS =</b>		453 gpm		216 afy		215 gpm	238 gpm	104.6 afy	111.4 afy	250 gpm	203 gpm	120 afy	96 afy	250 gpm	203 gpm	139 afy	77 afy

Column Identifiers for Calculations:      A                      B                      C                      =A-C                      D                      =B-D                      E                      = A-E                      F                      =B-F                      G                      =A-G                      H                      =B-H

PENDING WATER RIGHT APPLICATIONS: 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

INTERTIES: 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>			
	Maximum Qi <small>Instantaneous Flow Rate</small>	Maximum Qa <small>Annual Volume</small>		Maximum Qi <small>Instantaneous Flow Rate</small>	Current Excess or (Deficiency) Qi	Maximum Qa <small>Annual Volume</small>	Current Excess or (Deficiency) Qa	Maximum Qi <small>10-Year Forecast</small>	Future Excess or (Deficiency) Qi	Maximum Qa <small>10-Year Forecast</small>	Future Excess or (Deficiency) Qa	Maximum Qi <small>20-Year Forecast</small>	Future Excess or (Deficiency) Qi	Maximum Qa <small>20-Year Forecast</small>	Future Excess or (Deficiency) Qa
1															
2															
3															
<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

INTERRUPTIBLE WATER RIGHTS: Identify limitations on any water rights listed above that are interruptible.		
Water Right #	Conditions of Interruption	Time Period of Interruption
1		
2		
3		

ADDITIONAL COMMENTS:
*The 135 afy Qa for Well 4 includes annual volumes pumped from the other wells. Wells 2, 3R, and 4: An approved measuring device shall be installed and maintained (meter) Wells 3R and 4: Installation and maintenance of an access port Well 4: Measure static water level at least once each month. Meter readings shall be recorded monthly. Submit chloride concentration static water level measurement to Ecology in April and August each year.

# Water Right Self-Assessment Form for SNOHOMISH PUD - KAYAK

Mouse-over any link for more information. Click on any link for more detailed instructions.

<a href="#">Water Right Permit, Certificate, or Claim #</a> <small>*If water right is interruptible, identify limitation in yellow section below</small>	<a href="#">WFI Source #</a> <small>If a source has multiple water rights, list each water right on separate line</small>	<a href="#">Existing Water Rights</a> <small>Qi= Instantaneous Flow Rate Allowed (GPM or CFS) Qa= Annual Volume Allowed (Acre-Feet/Year) This includes wholesale water sold</small>				<a href="#">Current Source Production – Most Recent Calendar Year</a> <small>Qi = Max Instantaneous Flow Rate Withdrawn (GPM or CFS) Qa = Annual Volume Withdrawn (Acre-Feet/Year) This includes wholesale water sold</small>				<a href="#">10-Year Forecasted Source Production (determined from WSP)</a> <small>This includes wholesale water sold</small>				<a href="#">20-Year Forecasted Source Production (determined from WSP)</a> <small>This includes wholesale water sold</small>			
		<a href="#">Primary Qi</a> <small>Maximum Rate Allowed</small>	<a href="#">Non-Additive Qi</a> <small>Maximum Rate Allowed</small>	<a href="#">Primary Qa</a> <small>Maximum Volume Allowed</small>	<a href="#">Non-Additive Qa</a> <small>Maximum Volume Allowed</small>	<a href="#">Total Qi</a> <small>Maximum Instantaneous Flow Rate Withdrawn</small>	<a href="#">Current Excess or (Deficiency) Qi</a>	<a href="#">Total Qa</a> <small>2019 Annual Volume Withdrawn</small>	<a href="#">Current Excess or (Deficiency) Qa</a>	<a href="#">Total Qi</a> <small>Maximum Instantaneous Flow Rate in 2030</small>	<a href="#">10-Year Forecasted Excess or (Deficiency) Qi</a>	<a href="#">Total Qa</a> <small>Forecasted Annual Volume in 2030</small>	<a href="#">10-Year Forecasted Excess or (Deficiency) Qa</a>	<a href="#">Total Qi</a> <small>Maximum Instantaneous Flow Rate in 2040</small>	<a href="#">20-Year Forecasted Excess or (Deficiency) Qi</a>	<a href="#">Total Qa</a> <small>Forecasted Annual Volume in 2040</small>	<a href="#">20-Year Forecasted Excess or (Deficiency) Qa</a>
1 G1-23278C	Well 1	70 gpm		72 afy		0	70 gpm	0	72 afy	0	70 gpm	0	72 afy	0	70 gpm	0	72 afy
2 G1-24415C	Well 2	57 gpm		42 afy		alternates with Well 3	0			alternates with Well 3	0			alternates with Well 3	0		
3 G1-25989C	Wells 2 & 3	243 gpm	57 gpm	114 afy	42 afy	300 gpm	0	101 afy	55 afy	300 gpm	0	115 afy	41 afy	300 gpm	0	127 afy	29 afy
4																	
5																	
6																	
<b>TOTALS =</b>		370 gpm		228 afy		300 gpm	70 gpm	101 afy	127 afy	300 gpm	70 gpm	115 afy	113 afy	300 gpm	70 gpm	127 afy	101 afy

Column Identifiers for Calculations:      A                      B                      C                      =A-C                      D                      =B-D                      E                      = A-E                      F                      =B-F                      G                      =A-G                      H                      =B-H

<b>PENDING WATER RIGHT APPLICATIONS:</b> 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

<b>INTERTIES:</b> 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>			
	<a href="#">Maximum Qi</a> <small>Instantaneous Flow Rate</small>	<a href="#">Maximum Qa</a> <small>Annual Volume</small>		<a href="#">Maximum Qi</a> <small>Instantaneous Flow Rate</small>	<a href="#">Current Excess or (Deficiency) Qi</a>	<a href="#">Maximum Qa</a> <small>Annual Volume</small>	<a href="#">Current Excess or (Deficiency) Qa</a>	<a href="#">Maximum Qi</a> <small>10-Year Forecast</small>	<a href="#">Future Excess or (Deficiency) Qi</a>	<a href="#">Maximum Qa</a> <small>10-Year Forecast</small>	<a href="#">Future Excess or (Deficiency) Qa</a>	<a href="#">Maximum Qi</a> <small>20-Year Forecast</small>	<a href="#">Future Excess or (Deficiency) Qi</a>	<a href="#">Maximum Qa</a> <small>20-Year Forecast</small>	<a href="#">Future Excess or (Deficiency) Qa</a>
1															
2															
3															
<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

<b>INTERRUPTIBLE WATER RIGHTS:</b> Identify limitations on any water rights listed above that are interruptible.		
Water Right #	Conditions of Interruption	Time Period of Interruption
1		
2		
3		

<b>ADDITIONAL COMMENTS:</b>
Provisions on G1-24415C: Install & maintain an access port and an approved measuring device.
Provisions on G1-24415C: Install & maintain an access port and an approved measuring device. Record meter readings monthly and maintain data. Measure static water level at least once per month.

**Service Connections and Equivalent Residential Units (ERUs)**

Year	Single Family	Multi-family	Non-Res	Total	Annual Increase #	%	Single Family	Multi-Family	Non-Res	Unbilled Use	Leakage	Total
<b>WARM BEACH</b>												
	<b>Historic Retail Meters</b>				<b>Actual</b>		<b>Historic ERUs<sup>1,2</sup></b>					
2014	558	8	8	574	4	0.70%	574	-	-	14	123	711
2015	573	8	8	589	15	2.61%	589	-	-	11	67	667
2016	578	8	8	594	5	0.85%	594	-	-	16	86	696
2017	587	8	8	603	9	1.52%	603	-	-	14	98	715
2018	597	8	8	613	10	1.66%	613	-	-	16	144	773
2019	604	8	8	620	7	1.14%	604	12	7	14	44	681
<b>Annual Growth 2014-19</b>	<b>1.60%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>1.55%</b>	<b>9</b>	<b>1.55%</b>						
	<b>Projected Retail Connections<sup>3</sup></b>				<b>Projected<sup>4</sup></b>		<b>Projected ERUs</b>					
2030	711	9	9	729	10	1.50%	711	14	8	16	60	809
2040	826	11	11	848	11	1.50%	826	16	9	19	70	940
<b>KAYAK</b>												
	<b>Historic Number of Retail Meters</b>				<b>Actual</b>		<b>Historic ERUs<sup>1</sup></b>					
2014	367	1	1	369	0	0.00%	367	0	1	1	43	411
2015	368	1	1	370	1	0.27%	368	1	2	3	20	394
2016	373	1	1	375	5	1.36%	373	0	6	2	38	419
2017	381	1	1	383	8	2.14%	381	0	8	2	34	425
2018	385	1	1	387	4	1.05%	385	0	7	1	35	428
2019	385	1	0 <sup>5</sup>	386	0	0.00%	385	0	0	1	37	423
<b>Annual Growth 2014-19</b>	<b>0.96%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>4</b>	<b>0.96%</b>						
	<b>Projected Retail Connections<sup>6</sup></b>				<b>Projected<sup>7</sup></b>		<b>Projected ERUs</b>					
2030	430	1	0	431	4	1.00%	430	1	0	2	35	468
2040	475	1	0	476	4	1.00%	475	1	0	2	38	516

- 1) See next table for consumption data and gpd/ERU factors used to determine ERUs above.
- 2) 2019 is the first full year when Warm Beach multi-family and non-residential ERUs can be determined. WBWA did not separate its billing by customer class; and PUD billing by customer class began after September 2018.
- 3) Warm Beach was previously approved for 785 connections. DOH reduced the approval to 750 connections in 2016, pending further water demand data to support the capacity analysis. The WBWA WSP projects buildout based on underlying land use planning of approximately 1,000 service connections within its future water service area.
- 4) The average Warm Beach annual growth rate from the previous 5 years is rounded down slightly, to match WBWA's projection of 10 new connections per year for facility planning. WBWA used a projection of 6 new connections per year for financial planning.
- 5) The non-residential Kayak service was a temporary fill station, removed in 2019, for a gravel operation located in the adjacent Tulalip water service area. Based on the last communication, the company was working a solution with the Tulalip utility, so a permanent service is not anticipated.
- 6) The Kayak system is currently approved to serve up to 481 connections.
- 7) The service connection growth rate of 1.0% per year for the Kayak system used in the District's 2011 WSP is still valid based on average growth over the most recent five years.

Water Production and Consumption

Year	Single Family	Multi-family	Non-Residential	Total Retail	Unbilled Consumption	Leakage	Total Production	Production AFY	Leakage %	gpd/ERU <sup>1</sup>
<b>WARM BEACH</b>										
<b>Historic (1000 gallons/year)</b>								<b>Actual<sup>2,3</sup></b>		
Well 2							9,639	29.6		
Well 4							<u>21,373</u>	<u>65.6</u>		
2014 Total	-	-	-	25,062	590	5,360	31,012	95.2	17.28%	120
Well 2							11,397	35.0		
Well 4							<u>21,072</u>	<u>64.7</u>		
2015 Total	-	-	-	28,642	553	3,274	32,469	99.7	10.08%	133
Well 2							8,044	24.7		
Well 4							<u>25,038</u>	<u>76.8</u>		
2016 Total	-	-	-	28,248	745	4,089	33,082	101.5	12.36%	130
Well 2							8,246	25.3		
Well 4							<u>26,729</u>	<u>82.0</u>		
2017 Total	-	-	-	29,517	661	4,797	34,975	107.3	13.72%	134
Well 2							8,303	25.5		
Well 4							<u>27,679</u>	<u>84.9</u>		
2018 Total	28,393	113	34	28,540	746	6,696	35,982	110.4	18.61%	127
Well 2							7,513	23.1		
Well 4							<u>26,543</u>	<u>81.5</u>		
2019 Total	30,208	586	353	31,147	689	2,220	34,056	104.6	6.52%	137
<b>Average 2015-19</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>29,219</b>	<b>679</b>	<b>4,215</b>	<b>34,113</b>	<b>104.7</b>	<b>12.26%</b>	<b>132</b>
<b>Projected (1000 gallons/year)</b>								<b>Projected</b>		
2030	34,256	674	385	35,315	771	2,887	38,973	120	8.00%	132
2040	39,797	771	434	41,002	915	3,353	45,270	139	8.00%	132
<b>KAYAK</b>										
<b>Historic (1000 gallons/year)</b>								<b>Actual</b>		
2014	27,526	8	49	27,583	78	3,199	30,860	95	10.37%	205
2015	33,177	54	219	33,450	264	1,773	35,487	109	5.00%	247
2016	28,101	8	433	28,542	186	2,871	31,599	97	9.09%	206
2017	30,227	9	615	30,851	122	2,707	33,680	103	8.04%	217
2018	30,281	14	589	30,884	57	2,777	33,719	103	8.24%	215
2019	29,966	10	36	30,012	61	2,913	32,987	101	8.83%	213
<b>Average 2015-19</b>	<b>30,350</b>	<b>19</b>	<b>379<sup>4</sup></b>	<b>30,748</b>	<b>138</b>	<b>2,608</b>	<b>33,494</b>	<b>103</b>	<b>7.84%</b>	<b>220<sup>5</sup></b>
<b>Projected (1000 gallons/year)</b>								<b>Projected</b>		
2030	34,529	80	0	34,609	161	2,782	37,552	115	8.00%	220
2040	38,142	80	0	38,222	161	3,071	41,454	127	8.00%	220

- 1) Gallons per day per Equivalent Residential Unit (gpd/ERU) determined by dividing single family consumption by the number of single-family connections in the previous table. Warm Beach 2014-18 gpd/ERU is based total connections because WBWA did not bill by customer class.
- 2) It is expected that Warm Beach DSL can be maintained similar to the 8% Kayak DSL in coming years. One factor for the lower 2019 Warm Beach DSL is that the District found some meters that were not being read. The 6.5% 2019 DSL may be artificially low (and 18.6% 2018 DSL artificially high) due to delayed customer meter readings after the water system ownership transfer. (Note also the Warm Beach gpd/ERU is lower 2018 and higher in 2019.) DSL values above differ from the annual Water Use Efficiency reports. Kayak differences are due to a March-Feb reporting period used in WUE reports, compared to Jan-Dec. The above Warm Beach values are considered more accurate than the WUE reports, after sorting through data obtained in the water ownership transfer.
- 3) The 178 gpd/ERU factor in WBWA's 2016 WSP (based on 1999-2000 production) included unbilled consumption and leakage. The updated 2015-19 Warm Beach average based on production would be 155 gpd/ERU.
- 4) Kayak non-residential consumption was from a temporary fill station for a gravel operation that has been removed.
- 5) The Kayak average customer gpd/ERU value has declined from 247 gpd/ERU in the District's 2011 WSP.

**Warm Beach  
Projected Water Demands  
Scenario 1 - current average household use, with many properties used recreationally**

**1 ERU = 132 gpd**

**1.5% Growth Rate**

Customer Class	Existing Conditions ADD Demand		2020 (Year 0) ADD Demand		2025 (Year 5) ADD Demand		2030 (Year 10) ADD Demand		2035 (Year 15) ADD Demand		2040 (Year 20) ADD Demand	
	ERU	gpd	ERU	gpd	ERU	gpd	ERU	gpd	ERU	gpd	ERU	gpd
Single Family	604	79,728	613	80,916	660	87,120	711	93,852	766	101,112	826	109,032
Multi Family	12	1,584	12	1,584	13	1,716	14	1,848	15	1,980	16	2,112
Non-Residential Consumption	7	924	7	924	8	1,056	8	1,056	9	1,188	9	1,188
Non-Revenue Authorized Use	14	1,716	14	1,848	15	1,980	16	2,112	18	2,376	19	2,508
<sup>1</sup> Distribution System Leakage	51	6,716	52	6,822	56	7,350	60	7,909	65	8,532	70	9,187
<b>Total Demands</b>	<b>688</b>	<b>90,668</b>	<b>698</b>	<b>92,094</b>	<b>752</b>	<b>99,222</b>	<b>809</b>	<b>106,777</b>	<b>873</b>	<b>115,188</b>	<b>940</b>	<b>124,027</b>

**Planning Totals**

Annual Demand (acre-ft/yr)	102	103	111	120	129	139
ADD - (gpd) (gpm)	90,668    63	92,094    64	99,222    69	106,777    74	115,188    80	124,027    86
<sup>2</sup> MDD - (gpd) (gpm)	255,140    177	258,942    180	279,006    194	300,289    209	323,748    225	348,691    242
<sup>3</sup> PHD - (gpm)	360	364	386	409	435	462
ADD - gal/yr	33,093,878	33,614,222	36,215,942	38,973,766	42,043,795	45,269,928

1 DSL = 8% of Total Consumption + Authorized Use

2 MDD gpd = Customer consumption multiplied by MDD/ADD Ratio of 3.0 + Non-Revenue Authorized Use and DSL

3 PHD calculated from DOH Equation 5-1 applied to customer ERUs, plus gpm demand from non-revenue authorized use and DSL

**Warm Beach  
Projected Water Demands  
Scenario 2 - increase average household use similar to nearby cities**

**1 ERU = 150 gpd**

**1.5% Growth Rate**

Customer Class	Existing Conditions ADD Demand		2020 (Year 0) ADD Demand		2025 (Year 5) ADD Demand		2030 (Year 10) ADD Demand		2035 (Year 15) ADD Demand		2040 (Year 20) ADD Demand	
	ERU	gpd	ERU	gpd	ERU	gpd	ERU	gpd	ERU	gpd	ERU	gpd
Single Family	604	90,600	613	91,950	660	99,000	711	106,650	766	114,900	826	123,900
Multi Family	12	1,800	12	1,800	13	1,950	14	2,100	15	2,250	16	2,400
Non-Residential Consumption	7	1,050	7	1,050	8	1,200	8	1,200	9	1,350	9	1,350
Non-Revenue Authorized Use	14	1,716	14	2,100	15	2,250	16	2,400	18	2,700	19	2,850
<sup>1</sup> Distribution System Leakage	51	7,613	52	7,752	56	8,352	60	8,988	65	9,696	70	10,440
<b>Total Demands</b>	<b>688</b>	<b>102,779</b>	<b>698</b>	<b>104,652</b>	<b>752</b>	<b>112,752</b>	<b>809</b>	<b>121,338</b>	<b>873</b>	<b>130,896</b>	<b>940</b>	<b>140,940</b>

**Planning Totals**

Annual Demand (acre-ft/yr)	115	117	126	136	147	158						
ADD - (gpd) (gpm)	102,779	71	104,652	73	112,752	78	121,338	84	130,896	91	140,940	98
<sup>2</sup> MDD - (gpd) (gpm)	289,679	201	294,252	204	317,052	220	341,238	237	367,896	255	396,240	275
<sup>3</sup> PHD - (gpm)	406	411	436	463	492	523						
ADD - gal/yr	37,514,437	38,197,980	41,154,480	44,288,370	47,777,040	51,443,100						

1 DSL = 8% of Total Consumption + Authorized Use

2 MDD gpd = Customer consumption multiplied by MDD/ADD Ratio of 3.0 + Non-Revenue Authorized Use and DSL

3 PHD calculated from DOH Equation 5-1 applied to customer ERUs, plus gpm demand from non-revenue authorized use and DSL

**Kayak  
Projected Water Demands**

**1 ERU = 220 gpd**

**1.0% Growth Rate**

Customer Class	Existing Conditions ADD Demand		2020 (Year 0) ADD Demand		2025 (Year 5) ADD Demand		2030 (Year 10) ADD Demand		2035 (Year 15) ADD Demand		2040 (Year 20) ADD Demand	
	ERU	gpd	ERU	gpd	ERU	gpd	ERU	gpd	ERU	gpd	ERU	gpd
Single Family	385	84,700	389	85,580	409	89,980	430	94,600	452	99,440	475	104,500
Multi Family	1	220	1	220	1	220	1	220	1	220	1	220
Non-Residential	0	0	0	0	0	0	0	0	0	0	0	0
Non-Revenue Authorized Use	2	1,650	2	440	2	440	2	440	2	440	2	440
<sup>1</sup> Distribution System Leakage	31	6,926	31	6,899	33	7,251	35	7,621	36	8,008	38	8,413
<b>Total Demands</b>	419	93,496	423	93,139	445	97,891	468	102,881	491	108,108	516	113,573

**Planning Totals**

Annual Demand (acre-ft/yr)		105		104		110		115		121		127
ADD - (gpd) (gpm)	93,496	65	93,139	65	97,891	68	102,881	71	108,108	75	113,573	79
<sup>2</sup> MDD - (gpd) (gpm)	240,407	167	241,573	168	253,937	176	266,919	185	280,520	195	294,738	205
<sup>3</sup> PHD - (gpm)		366		368		383		399		416		434
ADD - gal/yr	34,125,894		33,995,808		35,730,288		37,551,492		39,459,420		41,454,072	

<sup>1</sup> DSL = 8% of Total Consumption + Authorized Use

<sup>2</sup> MDD gpd = Customer consumption multiplied by MDD/ADD Ratio of 2.73 + Non-Revenue Authorized Use and DSL

<sup>3</sup> PHD calculated from DOH Equation 5-1 applied to customer ERUs, plus gpm demand from non-revenue authorized use and DSL

**Warm Beach – Kayak Water System ALOP Water Rights/Service Area Summary and Description**

The following language will be included in the Water Supply chapter of the full Water System Plan update that Snohomish PUD is preparing to submit to DOH by the end of 2020.

***Warm Beach Water Association***

The Warm Beach Water Association (WBWA) was initially formed in 1928 as a not for profit water system for the purpose of serving 68 homes located along Soundview Drive, which is located approximately five miles south of Stanwood, Washington. In 1948, the water system was serving 90 connections and re-organized as a for profit entity. In 1992, the water system was re-organized again into a non-profit mutual water system. This allowed WBWA to pursue state and federal loan assistance to construct necessary system improvements.

Since its initial formation, the WBWA has evolved from a small residential water system holding a single surface water right to the waters of Lake Martha, into an expanding and substantial community-owned, mutual water system. By 2016, the water system served 590 service connections and an estimated population of 1475 people. At this time, the Warm Beach water system is approved by the Washington State Department of Health (DOH) DOH to serve 750 connections and is serving 620 service connections. With system improvements, the District projects that the Warm Beach water system could serve a build-out up to 1000 single family homes within the limitations of its existing, inchoate water rights.

The WBWA was issued four (4) groundwater rights with a total instantaneous quantity ( $Q_i$ ) of 318 gpm, a total annual quantity ( $Q_a$ ) of 135 afy, and two (2) surface water rights with a total instantaneous quantity ( $Q_i$ ) of 0.3 cfs/135 gpm and total annual quantity ( $Q_a$ ) of 216 afy. The annual quantity of the groundwater rights appear to be non-additive to WBWA's additive surface water annual quantity total of 216 afy. The instantaneous quantities held under the groundwater rights all appear to be additive/primary quantities.

Pursuant to RCW 90.03.015 (Municipal Water Law), the community domestic water rights held by the WBWA qualify as water rights for "municipal water supply purposes" and are considered water rights in "good standing" under the water code RCW 90.03.330(3). The WBWA's most recent Water System Plan (WSP) was approved by WA DOH in 2016. In the course of its review of the WSP, Ecology reviewed and confirmed the instantaneous and annual quantities of the WBWA rights referenced above.

In 2016, the District commenced work with the assistance of a DOH grant to study the feasibility of the District assuming ownership and operation of the WBWA, including the cost of related improvements and appropriate engineering actions by which the WBWA water system could be consolidated with the District's adjacent Kayak water system to improve system reliability, redundancy, operational integrity, and emergency water access.



The feasibility study, as well as the consolidation of the Kayak and WBWA water systems was strongly endorsed by DOH, as well as by the WBWA Board of Directors. On September 6, 2016, the District submitted the feasibility study to DOH. The study concluded that the consolidation could occur in a cost-effective manner, subject to specified engineering, storage, source, rate adjustment, water treatment improvements, and water right regulatory actions. On September 14, 2016, DOH approved the Feasibility Study/Report. Shortly thereafter, the District applied for a DWSRF construction loan from DOH on September 29, 2017. The District applied for a second DWSRF loan on November 30, 2017 to fund the balance of the project.

Key among the actions deemed necessary by the District to ensure the proposed system consolidation could meet WBWA's and the District system reliability, redundancy, and source security objectives was the construction of two points of connection between the WBWA and Kayak water systems and securing an extension of WBWA groundwater permit G1-25686. To this end, and consistent with DWSRF loan criteria, project descriptions, engineering estimates, and schematic system maps were provided by the District to DOH pertaining to the preliminary design, location, and operation of the two system connections, as well as other related facilities.

Concurrent with the above actions, the District met with Ecology NWRO water resource section officials on April 26, 2017 to discuss the District's need to secure an extension of Groundwater Permit G1-25686. In the course of that meeting, the District clearly stated and documented its intention to beneficially use G1-25686 within the WBWA service area in order to meet projected demand and water supply needs of the Warm Beach system. The District also stated and documented that any delivery of water from the Kayak system to the Warm Beach system through the planned two connections would be limited to those circumstances necessary to avoid water supply/operational disruptions involving maintenance, repair, system failure, and emergency events.

In the course of the meeting with Ecology, agency officials indicated their understanding of the District's operational and water right objectives and concurrence with the water use limitations proposed by the District. To implement the actions discussed at the District's meeting with Ecology, an application to assign Groundwater Permit G1-25686 from WBWA to the District was sent to Ecology on September 12, 2018, directly from escrow as part of the water system ownership transfer and Ecology processed the permit assignment on October 1, 2018. As the next step, the District applied for extension of G1-25686 on April 15, 2019. On July 9, 2019, Ecology granted the District's extension request of the water right permit to 2035.

### ***Kayak Water System –Qualified Service Area Expansion***

In 2006, the District acquired the Kayak Estates Water System which it now operates as a retail/satellite system. At the time of the District's acquisition, Kayak Estates held three certificated groundwater rights (G1-23278C, G1-24415C, and G1-25989C), and was serving approximately 360 connections. The Kayak certificated groundwater rights were quitclaimed to the District as a condition of the system acquisition and are reflected in its updated water right table(s). It is the District's future intention to change the point of withdrawal of Kayak Well No.1 (G1-23278C) to either Kayak Wells 2 and 3 or drill a replacement well for this source.

Prior to acquiring the Kayak water system, the District completed a study identifying needed improvements, including a 75-foot tall by 26-foot diameter tank to replace two shorter tanks, treatment to remove iron and manganese from Wells 2 and 3, and various distribution system improvements. The District moved ahead with these capital projects which, once completed, enabled reliable service for an earlier approval of 481 connections. On July 30, 2009, the Washington State Department of Health (DOH) acknowledged the construction completion report for the treatment plant, which was finished soon after the storage tank, and reinstated the design approval of the Kayak system to serve 481 equivalent residential units. Such service can occur within the quantities authorized by the Kayak Wells 2 and 3 water rights which total 300 gpm (Qi) and 156 afy (Qa).

Pursuant to RCW 90.03.015 (Municipal Water Law), the community domestic water rights held by the Kayak system qualify as water rights for “municipal water supply purposes” and are considered water rights in “good standing” under the water code. RCW 90.03.330(3). The Kayak water rights were described in the District’s most recent Water System Plan (WSP) that was approved by WA DOH in 2011. In the course of its review of the WSP, Ecology reviewed and confirmed the instantaneous and annual quantities of the Kayak Point rights referenced above.

On May 17, 2016, the District submitted a request that Ecology conform the groundwater right certificates for the Kayak Wells 2 and 3 (G1-24415C and G1-25989C) to “municipal water supply purposes” and issue superseding certificates reflecting such status in accordance with RCW 90.03.560. Ecology issued the superseding certificates on November 4, 2016.

In 2016, the District commenced work with the assistance of a DOH grant to study the feasibility of the District assuming ownership and operation of the Warm Beach Water Association (WBWA), including the cost of related improvements, and consolidating its operations as appropriate with the District’s Kayak water system in order to improve system reliability, redundancy, operational integrity, and emergency water access.

The feasibility study, as well as the consolidation of the Kayak and WBWA water systems was strongly endorsed by DOH, as well as by the WBWA Board of Directors. On September 6, 2016, the District submitted the feasibility study to DOH. The study concluded that the consolidation could occur in a cost-effective manner, subject to specified engineering, storage, source, rate adjustment, water treatment improvements, and water right regulatory actions. On September 14, 2016, DOH approved the Feasibility Study/Report. Shortly thereafter, the District applied on September 29, 2016, a DWSRF construction loan from DOH. The District applied for a second DWSRF loan on November 30, 2017 to fund the balance of the project.

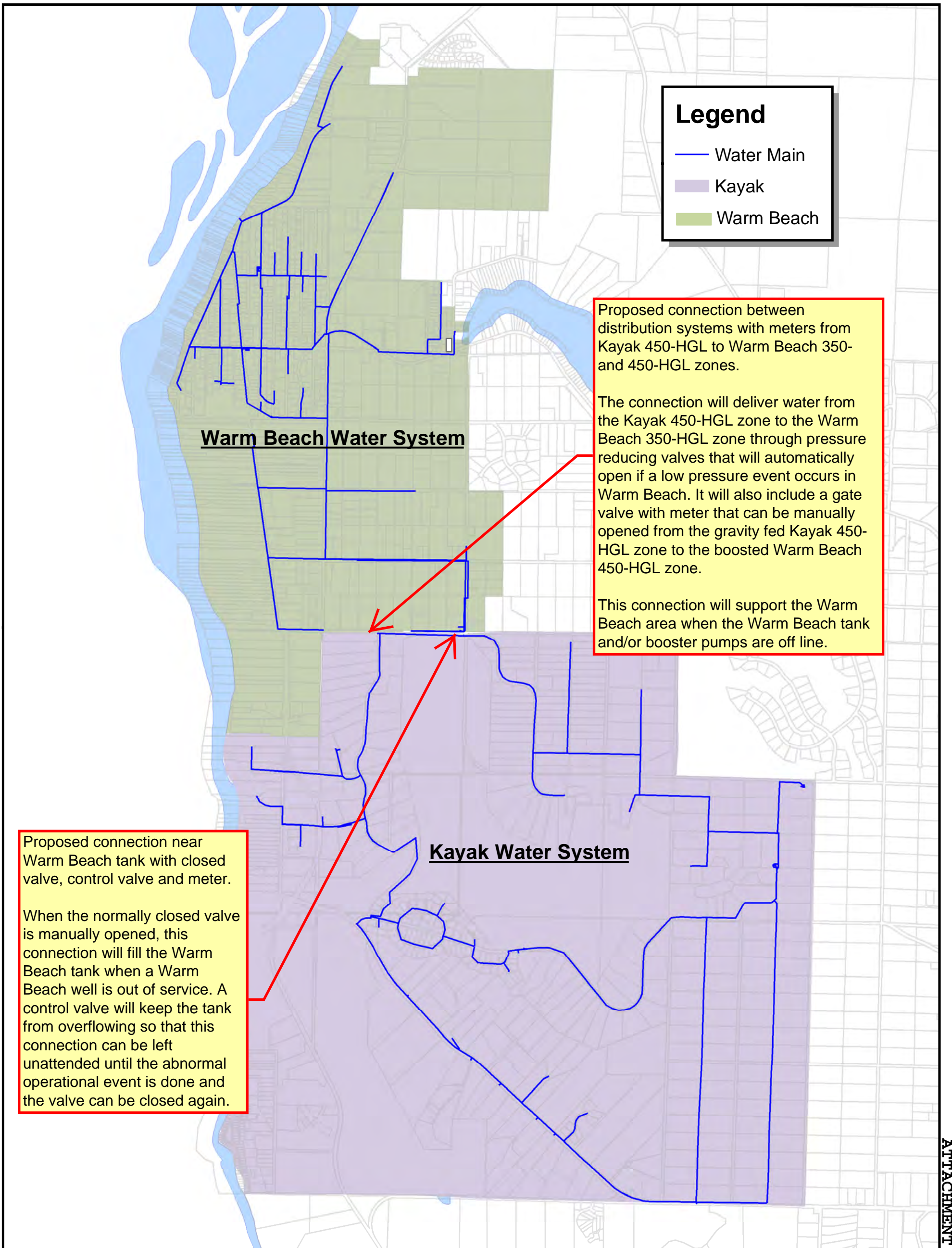
Key among the actions deemed necessary by the District to ensure the proposed system consolidation could meet WBWA’s and the District system reliability, redundancy, and source security objectives, was the construction of two points of connection between the WBWA and Kayak water systems and securing an extension of WBWA groundwater permit G1-25686. To this end, and consistent with DWSRF loan criteria, project descriptions, engineering estimates,

and schematic system maps were provided by the District to DOH relating to the preliminary design, location, and operation of the two system connections, as well as other related facilities.

Concurrent with the above actions, the District met with Ecology NWRO water resource section officials on April 26, 2017 to discuss the District's need to secure an extension of Groundwater Permit G1-25686. In the course of that meeting, the District clearly stated and documented its intention to beneficially use G1-25686 within the WBWA service area in order to meet projected demand and water supply needs of the Warm Beach system. The District also stated and documented that any delivery of water from the Kayak system to the Warm Beach system through the planned two connections would be limited to those circumstances necessary to avoid water supply/operational disruptions caused involving maintenance, repair, system failure, and emergency events. Ecology did not object to the proposed connections as described nor the related use of Kayak water rights.

Pursuant to the above described District system consolidation operational objectives, and prior supportive consultations with Ecology, the District in accordance with RCW 90.03.386(2) proposes to expand the place of use of Kayak water rights (G1-22415 and G1-25989C), to the Warm Beach service area in order to enable the delivery of water from the Kayak system to the Warm Beach system subject to those conditions and circumstances the District determines necessary to avoid water supply/operational disruptions caused by maintenance, repair, system failure, and emergency events. The legal operation of RCW 90.03.386(2), and the fact that the WBWA and Kayak system will operate as a consolidated system, obviate the need for a water right change.

The retail service area/place-of-use expansion request has been determined by the District to be consistent with the 2015 Snohomish County Comprehensive Land Use Plan, and applicable land use regulations. Such service area/place of use expansion may therefore occur in accordance with RCW 90.03.386(2). Please see the following Figure depicting Kayak and WBWA (qualified) consolidated service areas.



**Legend**

- Water Main
- Kayak
- Warm Beach

Proposed connection between distribution systems with meters from Kayak 450-HGL to Warm Beach 350- and 450-HGL zones.

The connection will deliver water from the Kayak 450-HGL zone to the Warm Beach 350-HGL zone through pressure reducing valves that will automatically open if a low pressure event occurs in Warm Beach. It will also include a gate valve with meter that can be manually opened from the gravity fed Kayak 450-HGL zone to the boosted Warm Beach 450-HGL zone.

This connection will support the Warm Beach area when the Warm Beach tank and/or booster pumps are off line.

Proposed connection near Warm Beach tank with closed valve, control valve and meter.

When the normally closed valve is manually opened, this connection will fill the Warm Beach tank when a Warm Beach well is out of service. A control valve will keep the tank from overflowing so that this connection can be left unattended until the abnormal operational event is done and the valve can be closed again.

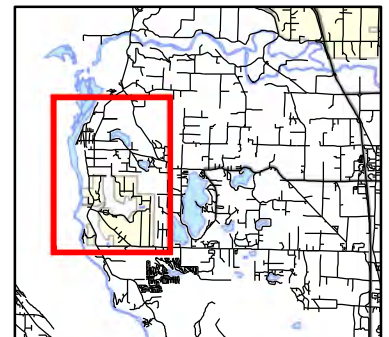
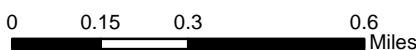
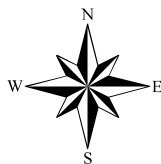
**Warm Beach Water System**

**Kayak Water System**

Snohomish County PUD  
Water Resources



**WARM BEACH & KAYAK  
WATER SYSTEMS  
FUTURE SERVICE AREAS**



Note: This map is provided as a courtesy only.  
The Snohomish County PUD in no way guarantees the accuracy or completeness of the digital data portrayed on this map.  
Furthermore, the Snohomish County PUD assumes no liability for any errors or omissions in the digital data.





*Energizing Life in Our Communities*

December 13, 2019

Erika Lindsey, Regional Engineer  
NW Drinking Water Department of Health  
20425 72<sup>nd</sup> Ave S, Suite 310  
Kent WA 98032-2388

RE: Warm Beach Water System Consolidation Improvements  
Scope of Work Modifications for DWSRF Loan Contracts DWL23479 and DWL23480

Dear Erika,

As you are aware, proposed changes have come up in the DWSRF scope of work for funding the consolidation of Warm Beach water system into Snohomish County PUD #1. We have talked through these changes with you to the point that we agree, and the PUD is now seeking DOH's formal approval.

Enclosed are a table and figure illustrating the scope we have been discussing, plus language for the proposed modified scope of work to use in amending the loan contracts. I am proposing a single scope of work description for both loan contracts, with funds to be drawn first from the DWSRF loan contract #DWL23475 and then from loan contract #DWL23480. This single scope is consistent with the way we applied for the funding, with the second loan covering the remainder that was not fully funded by the first loan. I spoke with Dennis Hewitt who, after consulting with other staff, agreed this approach is better than assigning elements of the scope to each loan, as was done for our current loan contracts.

In addition to modifying the scope of work, we understand the loan contract amendments will extend the deadline for issuing Notice to Proceed by three months to May 24, 2020. We contacted Dennis Hewitt in April 2019 to request this extension because the timing of signing the loan contracts caused the deadline to fall in February, which does not work with the PUD's typical schedule to advertise in spring and construct in summer months.

The rest of this letter provides description and background for the modified scope of work, but first I would like to confirm how the project report is addressed for these improvements.

When I submitted the Warm Beach feasibility study for DOH review and approval in 2016, I had asked Denis Mehinagic and Derek Pell to approve it as the project report for the improvements to be funded by the DWSRF loans. Their approval letter was issued on September 14, 2016. With this understanding, I checked relevant "yes" boxes in the loan applications indicating the project report was complete and approved by DOH, and I provided a copy of the approval letter with both applications. In the first DWSRF loan application, I also included a narrative describing how the improvements were covered in the District's then-approved Water System Plan, as well as in the approved project report.

In a November 19, 2019, phone conversation, you said you would look back at the feasibility study to confirm that it covers the project report elements and call me back, which you did. We also discussed that the only additional project report I expect to submit will be the treatment study (which I plan to

submit in two parts for intermediate and longer-term treatment improvements). In a December 5, 2019 email, after reviewing a draft of this scope modification, you confirmed the feasibility study meets the project report requirements for the modified scope.

The changed elements for the DWSRF scope of work are emphasized in red on the enclosed table and described below, including an explanation of how they relate to the project report (feasibility study) approved by DOH on September 14, 2016, and to the February 2016 edition of Warm Beach's Water System Plan (WSP), approved by DOH on March 9, 2016 (which formed the basis for many improvements in the feasibility study):

- We propose changing the feasibility study improvement #4 (the gully crossing) from a 600-foot directionally drilled 12" pipe to an approximately 1,200-foot long 8" diameter pipe extension. This was CIP #10 in Warm Beach's WSP. The description of this project in Section 8.2.4 of Warm Beach's WSP says the design should consider a few routes. In the process of design, we found property owners in the vicinity are amenable to providing easements for a route around the top of the gully that avoids the uncertainties of directional drilling. The proposed modified scope of work adds securing the easements to the list of costs in addition to construction costs. We are proposing an 8" rather than a 12" diameter pipe in this modification because we are upsizing much more 6" pipe to 8" and 12" pipe in other improvements that feed into and parallel this extension compared to what had been planned in Warm Beach's WSP.
- We propose reducing the length of the pipe to be replaced in feasibility study improvement #7 from 4,450 feet to approximately 3,400 feet because we found as-built drawings showing that some of the pipe indicated as AC in Warm Beach's WSP is actually 8" C900 PVC pipe that does not need to be replaced at this time.
- For feasibility study improvement #5, we propose increasing the length of the 8" diameter water main extension along 172<sup>nd</sup> St NW by 600 feet (for a total length of 1900 ft) to complete a loop for reliable transmission from the Warm Beach storage tank into the Warm Beach 350-HGL pressure zone. This modification is a return to Warm Beach's WSP CIP #14. The feasibility study modified this improvement from Warm Beach's WSP, by shortening it to connect to the PUD's Kayak 450-HGL pressure zone and locating a pressure reducing station (improvement #6) downstream of a few existing customers with low pressure. After thinking about the dead-ends this would have left in the Warm Beach pipes, we requested to go back to Warm Beach's original plan for this main extension (to loop the Warm Beach 350-Zone pipe and to not transfer any of the Warm Beach customers to the Kayak 450-Zone).
- We propose that the PUD will directly fund feasibility study improvement #s 6 and 8, thereby removing the two connections to the Kayak system from the DWSRF loan scope. These are the pressure reducing station connection and a second connection from the Kayak system to the Warm Beach storage tank near Well 4.
- In place of the Kayak connections (improvement #s 6 and 8), we propose adding an approximate 2,000-foot long 6" diameter pipe extension of the Warm Beach 450-HGL boosted pressure zone to resolve the low-pressure issue described in Section 9.2.1 of the feasibility study. Approximately 1,900 feet of this 6" extension will be in a shared trench with the 8" 350-HGL pressure zone pipe along 172<sup>nd</sup> St NW. The 6" 450-HGL boosted zone pipe will extend a

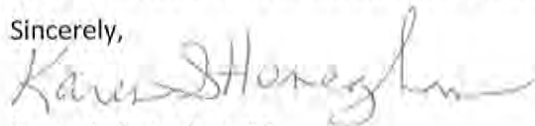
little farther west than the 8" 350-Zone pipe extension and existing water meters experiencing water pressure below 30 psi will be transferred to this 6" pipe. The 6" pipe diameter is consistent with other existing pipe in the 450-HGL boosted zone, which is only expected to serve about 40 homes and currently serves about 20 homes. All hydrants in the boosted zone area are connected to parallel 350-HGL zone pipes. The 3-foot wide trench described in the EZ-1 form submitted with the loan applications is sufficient for the parallel pipe installation while leaving enough space between the pipes for future maintenance. This is the most cost-effective time and method to resolve the low-pressure issue.

- We propose clarifying wording in the scope of work for feasibility study improvement #14, replacing the pump in Well 4. Section 4.2 of the feasibility study describes how the PUD will employ contract services to take a video of the well when replacing the well pump, will perform any identified remediation (such as cleaning the well screen), and will install a level probe along with the well pump. All of this was considered in the cost estimate but not described very well in the original scope of work.
- We propose increasing contingency in the cost estimate from about 10% to about 13% of the estimated construction costs. The construction cost estimate for the revised scope of work is slightly lower than our previous estimate, but the higher contingency will keep the total loan amounts unchanged from the existing loan contracts. The resulting 13% contingency is still well within the 10-20% range allowed in the scope forms.

I should also mention that all elements of this scope of work are included in the Cultural Resources Survey and a Critical Areas Survey that are nearing completion. We expect to receive the report from the Cultural Resources Consultant very soon, so that the next step of the process can move forward.

We look forward to your review and approval of these scope of work revisions for our DWSRF loans.

Sincerely,



Karen S. Heneghan, PE

Principal Engineer

Snohomish PUD Water Utility

[ksheneghan@snopud.com](mailto:ksheneghan@snopud.com)

425-397-3037

Enclosures

Cc: Dennis Hewitt, DOH (with enclosures)

**Snohomish County PUD No. 1  
Warm Beach Water Association Consolidation  
December 13, 2019**

**Proposed Modified Scope of Work for DWSRF Loan Contracts DWL23475 and DWL23480:**

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**Project Description:**

Implement a portion of the projects identified in Snohomish PUD's September 2016 *Feasibility Study for Potential Consolidation of Warm Beach Water Association* (Study) and subsequent agreed modifications consistent with the goals of the Study to consolidate and add resiliency to the Warm Beach Water Association (WBWA) system. The DWSRF-funded portion of the project will include paying off WBWA's existing debt; improving treatment and controls; replacing a well pump; extending approximately 5,450 LF of 6" and 8" pipe; replacing approximately 11,000 LF of pipe with new 8" and 12" pipe; abandoning two unused tanks and a pump station; replacing 10 hydrants; and replacing approximately 600 water meters. Funding for these improvements will be reimbursed from DWSRF loan contract DWL23475 until the full loan amount has been committed, and the remaining eligible costs will be reimbursed from DWSRF loan contract DWL23480. The following scope includes the entire improvements that will be funded by both DWSRF loans.

**Scope of Work:**

Project to include:

1. Retiring WBWA's existing debt by paying off their USDA loans.
2. Conducting a study to determine needed treatment improvements.
3. Designing and installing the treatment improvements.
4. Replacing and/or upgrading WBWA's control system to integrate it with PUD's control system and to operate the improved water treatment. May be conducted in two phases (initial phase to operate existing facilities and additional controls with the treatment improvements).
5. Replacing a well pump and level probe, including performing a well video inspection and any resulting identified remediation that can be accomplished before installing the replacement pump in the well.
6. Replacing approximately 11,000 linear feet of pipe with 8-inch and 12-inch diameter pipes and installing approximately 5,450 linear feet of new 6-inch and 8-inch diameter pipes in the WBWA water distribution system. Water main costs to include: traffic control, excavation, pipe, valves, hydrants, other appurtenances, backfill, bedding, and surface restoration.
7. Replacing 10 fire hydrants in addition to hydrants that will be replaced as part of the pipe replacements above.
8. Demolishing/decommissioning two abandoned concrete storage tanks and one abandoned below-ground pump station. Includes removing material and bringing in fill to restore surface to match surrounding grade.
9. Replacing approximately 600 water meters.
10. Consolidating the Warm Beach Water Association water system (ID #93000). Prior to the end of this project, the WBWA water system will be owned by Snohomish PUD.

Surface restoration will encounter a variety of conditions including gravel and paved and unpaved roads and shoulders. Restoration will be in accordance with Snohomish County requirements and may include trench patching and full-width road overlays as required by the County.

In addition to costs of construction, costs may include (but are not limited to): engineering, design, securing easements, construction inspection, cultural and environmental review, permits, preparation of bid documents, fees, taxes, administrative, and processing of water right documents.












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**Updated Cost Estimate & Schedule for SnoPUD - Warm Beach DWSRF Loans  
(November 2019)**

Feasibility Study #	CIP #	Description	Pipe Replacement 11,000 ft		Pipe Extension 5,450 ft		Estimated Cost	SCHEDULED COST						
			8" 6700	12" 4300	6" 2000	8" 3450		actual 2018	2019	2020	2021	First 1/2 2022		
1	52	<b>Soundview Dr NW Water Main Replacement</b> Soundview Dr main replacement, south end to about 19500 block (8")	3300				\$683,100			\$683,100				
2	53	<b>Marine Dr - 92nd Ave NW Water Main Replacement</b> Marine Dr/92nd Ave main replacement, 176th to Railroad Ave (12")		4300			\$950,300			\$950,300				
3	54	<b>Marine Dr - Clarence Ave Water Main Replacement</b> Connection 184th to 96th main extension (8")				350	\$72,450			\$72,450				
4	54	Gully-crossing extension through easements (8") (change from directional drilling option)				1200	\$248,400			\$248,400				
7	54	Marine Dr/Clarence main replacement (8") (shorter because found PVC pipe)	3400				\$703,800			\$703,800				
Subtotal CIP 54:							\$1,024,650			\$1,024,650				
5	55	<b>Warm Beach - 172nd St NW Extension (changed from "intertie")</b> 172nd St NW extension (8") (longer to fully loop Warm Beach 350-Zone pipe)				1900	\$393,300			\$393,300				
replaces 6&8	55	Extend 450-Zone pipe, portion in shared ditch (6") (resolves low pressure for existing services)				1900	\$114,000			\$114,000				
replaces 6&8	55	Extend 450-Zone pipe, addl extension to western end of 450-Zone (6") (resolves low pressure)				100	\$20,600			\$20,600				
Subtotal CIP 55:							\$527,900			\$527,900				
9	57	<b>Replace Hydrants &amp; Demolish Facilities</b> Replace 10 hydrants					\$79,568					\$79,568		
10	Maint	Abandon booster pump facilities along 176th					\$10,609					\$10,609		
17	Maint	Abandon two (2) 55,000-gallon old concrete storage tanks near Lake Martha					\$85,566					\$85,566		
Subtotal Hydrants & Demolition:							\$175,743			\$175,743				
13	310	<b>Treatment and SCADA</b> Well 4 treatment improvements					\$212,180					\$212,180		
15	310	Well 2 pH adjustment and chlorination					\$106,090					\$106,090		
16	310	Well 4 SCADA for treatment, storage, and booster pump controls					\$79,568	\$25,000		\$54,568				
16	310	Well 2 SCADA for site and treatment					\$79,568	\$25,000		\$54,568				
Subtotal Treatment and SCADA:							\$477,405	\$50,000		\$427,405				
14	106	<b>Well 4 Pump Replacement</b> Replace Well 4 pump; Install level probe; Video and possibly clean screen					\$84,872			\$84,872				
<b>Subtotal Construction Cost:</b>							<b>\$3,923,970</b>	<b>\$50,000</b>	<b>\$3,270,822</b>	<b>\$603,148</b>				
11	309	<b>Replace Approx 600 Service Meters</b> (separate from other construction costs in DWSRF Scope)					\$159,135							\$159,135
10% Contingency:							10%	\$408,310	\$5,000	\$327,082	\$60,315	\$15,914		
Additional Contingency							3%	\$140,644	\$5,432	\$108,313	\$19,973	\$5,270		
<b>Contingency as % of Construction and Meters (still below 20% allowed for DWSRF scope)</b>							<b>13%</b>	<b>\$548,954</b>	<b>\$5,432</b>	<b>\$6,656</b>	<b>\$435,395</b>	<b>\$80,288</b>	<b>\$21,183</b>	
12	310	<b>Design &amp; Inspection</b> Study for treatment improvements					\$159,135			\$159,135				
		Design + Construction Engineering (Bid Docs + Inspection):					\$381,770	\$117,899	\$236,729	\$27,142				
		Subtotal Design and Inspection:					\$540,905	\$117,899	\$395,864	\$27,142				
		<b>Permits</b>					\$44,914	\$22,457	\$22,457					
		<b>Environmental/SEPA (\$15k) Historical/Cultural Review (\$70k)</b>					\$85,000	\$60,000	\$25,000					
		Subtotal permits, cultural review and sepa:					\$129,914	\$82,457	\$47,457					
<b>Subtotal Design, Inspection, Permits, Cultural/SEPA:</b>							<b>\$670,819</b>	<b>\$0</b>	<b>\$200,356</b>	<b>\$443,321</b>	<b>\$27,142</b>	<b>\$0</b>		
<b>8.9% Sales Tax</b>							<b>\$399,736</b>	<b>\$0</b>	<b>\$4,895</b>	<b>\$320,213</b>	<b>\$59,048</b>	<b>\$15,579</b>		
<b>Originally estimated pay off amount of WBWA's USDA loans:</b>							<b>\$549,095</b>	<b>\$549,095</b>						
<b>Total from above</b> (should equal, \$6,251,709, \$3,532,862 from 2016 DWSRF + \$2,718,847 from 2017 DWSRF):							<b>\$6,251,709</b>	<b>\$554,527</b>	<b>\$261,907</b>	<b>\$4,469,752</b>	<b>\$769,625</b>	<b>\$195,898</b>		
Cumulative % of DWSRF loans spent								9%	13%	85%	97%	100%		

LEGEND:

-  EXISTING WATER SYSTEM
-  EXISTING SMALL SERVICE MAIN (3" OR SMALLER)
-  3 PORT FIRE HYDRANT
-  2 PORT FIRE HYDRANT
-  BLOWOFF
-  VALVE
-  PLAT BLOCK NUMBER
-  REMAINING ASBESTOS CEMENT (AC) PIPE TO REPLACE BY 2028
-  PROPOSED DEVELOPER EXTENSION
-  SERVICE BOUNDARY (TICKS REPRESENT AREA UNDER SEPARATE JURISDICTION)
-  HGL ZONE BOUNDARY

**IMPROVEMENT FOR CONSOLIDATION WITH SNOHOMISH PUD WATER UTILITY**

**#9 - Replace about ten(10) hydrants. (WBWA's CIP #9)**

**#11 - Replace Water Service Meters. Applies to entire water system.**

**#1 - Replace approx 3300 ft of 6-in pipe with 8-in diameter DI pipe. (WBWA's CIP #4)**

**#3 - Install approx 350 ft of new 8-in diam pipe from 184th to 96th. (WBWA's CIP #8) Project moved slightly north because found location of existing pipe was not accurate on the figure in WBWA's WSP.**

**#4 - Directionally drill new 12-in pipe under gully (WBWA's CIP #10) Changed route to open-cut 1200 ft and changed pipe to 8-in DI.**

**#7 - Replace approx 3400 ft of 6-in pipe with 8-in DI pipe. (not in WBWA's CIP) Length reduced because found pipe south of here is PVC that does not need to be replaced.**

**UPDATED FIGURE 2 - FROM 2016 FEASIBILITY STUDY FOR WARM BEACH WATER SYSTEM CONSOLIDATION**

**#5 - Install approx 1900 ft 8" DI pipe. (WBWA's CIP #14). Increased length to loop Warm Beach supply transmission to 350-HGL pressure zone, rather than extend from Kayak water system.**

**Plus, added parallel 2000 ft 6" DI pipe to resolve low pressure at the western edge of 450-HGL boosted pressure zone (not in WBWA's CIP).**

**#15 - Well 2 chlorination and likely pH adjustment. (not in WBWA's CIP)**

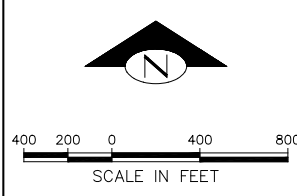
**#2 - Replace approx 4300 ft of 6-in pipe with 12-in diameter DI pipe. (Expansion of WBWA's CIP #6)**

**#10 - Abandon old booster pump station facilities. (WBWA's CIP #19)**

**#17 - Abandon 2 55,000-gal tanks. Keep Lake Martha intake facilities and tank site until future of water rights determined. (Modified WBWA's CIP #18)**

**#12 & 13 - Study and improve treatment operations. #14 - Replace Well 4 pump for 200 gpm capacity. #16 - Integrate controls with PUD SCADA system.**

**#6 & #8 - Connection from Kayak 450-Zone to Warm Beach 350-Zone, including connection to fill tank and connection with pressure reducing station to distribution. (WBWA's CIP #16) PUD will self-fund.**



PROPOSED WATER SYSTEM  
WARM BEACH WATER ASSOCIATION

## Local Government Consistency Determination Form

Water System Name: Snohomish PUD Warm Beach and Kayak PWS ID: 93000F & 231115

Planning/Engineering Document Title: Project Report Amendment and Limited Water System Plan Update for Snohomish PUD Warm Beach and Kayak Systems Consolidation Plan Date: February 2020

Local Government with Jurisdiction Conducting Review: Snohomish 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.	Section 11, pgs 13-14	
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.	Section 5, pgs 4-7	
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> .	N/A, not a city or town	
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.	Section 11, pg 14	
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.	Section 11, pgs 14-15	

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

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.

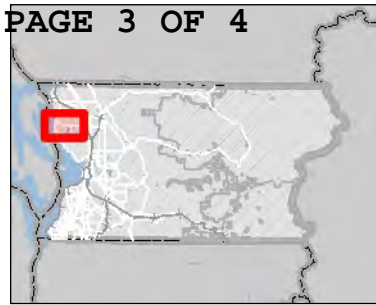
For **small water system management programs**, a consistency review is only required for areas where a municipal water supplier wants to expand its water right's place-of-use. If no water right place-of-use expansion is requested, a consistency review is not required.

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)).

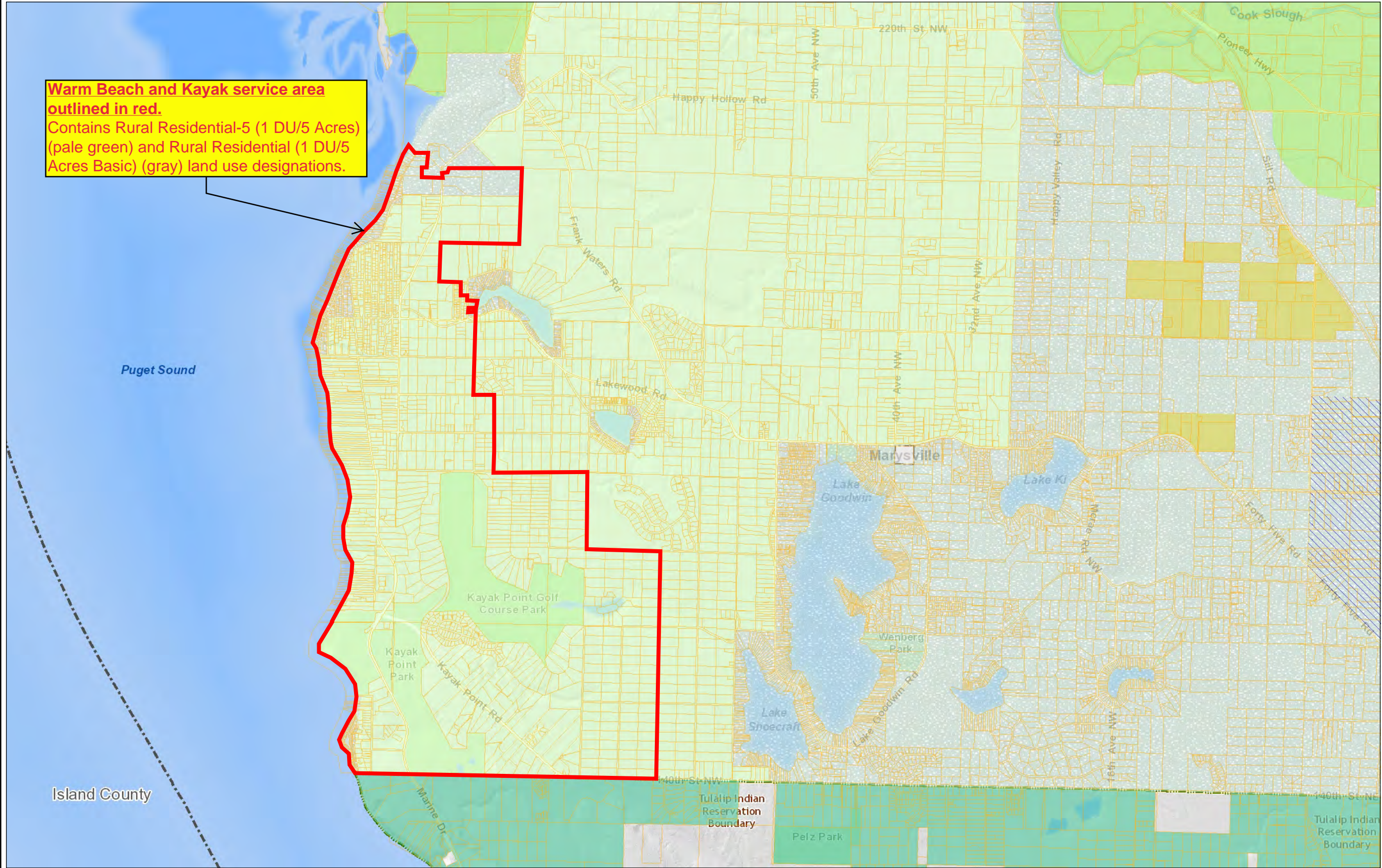
- A) Documenting Consistency:** The planning or engineering document must include the following when applicable.
- a) A copy of the adopted **land use/zoning** map corresponding to the service area. The uses provided in the WSP should be consistent with the adopted land use/zoning map. Include any other 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).



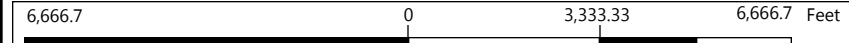


**Warm Beach and Kayak service area outlined in red.**  
Contains Rural Residential-5 (1 DU/5 Acres) (pale green) and Rural Residential (1 DU/5 Acres Basic) (gray) land use designations.



- Legend**
- Snohomish County Tax Parcels
  - Transfer of Development Rights
  - Rural / Urban Transition Area Overlay
  - Future Land Use**
  - Clearview Rural Commercial
  - Commercial Forest
  - Commercial Forest - Forest Transition Area
  - CITY
  - Local Commercial Farmland
  - Local Forest
  - Low Density Rural Residential (1 DU/20 Acres)
  - National Forest (Includes Some Private and Non-Federal Public Lands)
  - Public/Institutional Use
  - Recreational Land
  - Reservation Commercial
  - Riverway Commercial Farmland
  - Rural Freeway Service
  - Rural Industrial
  - Rural Residential (1 DU/5 Acres Basic)
  - Rural Residential - RD (1 DU/5 Acres)
  - Rural Residential-10 (1DU/10 Acres)
  - Rural Residential-10 Resource Transition DU/10 Acres)
  - Rural Residential-5 (1 DU/5 Acres)
  - Transit Pedestrian Village
  - Upland Commercial Farmland
  - Urban Center
  - Urban Commercial
  - Urban High Density Residential
  - Urban High Density Residential/Urban Industrial (overlapping designations)
  - Urban Horticulture
  - Urban Industrial
  - Urban Low Density Residential (3 DU/Acre Gold Bar and Darrington)
  - Urban Low Density Residential
  - Urban Medium Density Residential
  - Urban Village

1: 40,000

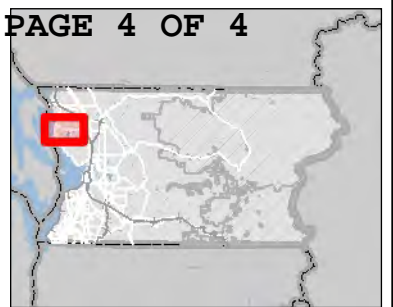


Projection: NAD\_1983\_StatePlane\_Washington\_North\_FIPS\_4601\_Feet  
Planning and Development Services, Snohomish County

All maps, data, and information set forth herein ("Data"), are for illustrative purposes only and are not to be considered an official citation to, or representation of, the Snohomish County Code. Amendments and updates to the Data, together with other applicable County Code provisions, may apply which are not depicted herein. Snohomish County makes no representation or warranty concerning the content, accuracy, currency, completeness or quality of the Data contained herein and expressly disclaims any warranty of merchantability or fitness for any particular purpose. All persons accessing or otherwise using this Data assume all responsibility for use thereof and agree to hold Snohomish County harmless from and against any damages, loss, claim or liability arising out of any error, defect or omission contained within said Data. Washington State Law, Ch. 42.56 RCW, prohibits state and local agencies from providing access to lists of individuals intended for use for commercial purposes and, thus, no commercial use may be made of any Data comprising lists of individuals contained herein.

**Notes**  
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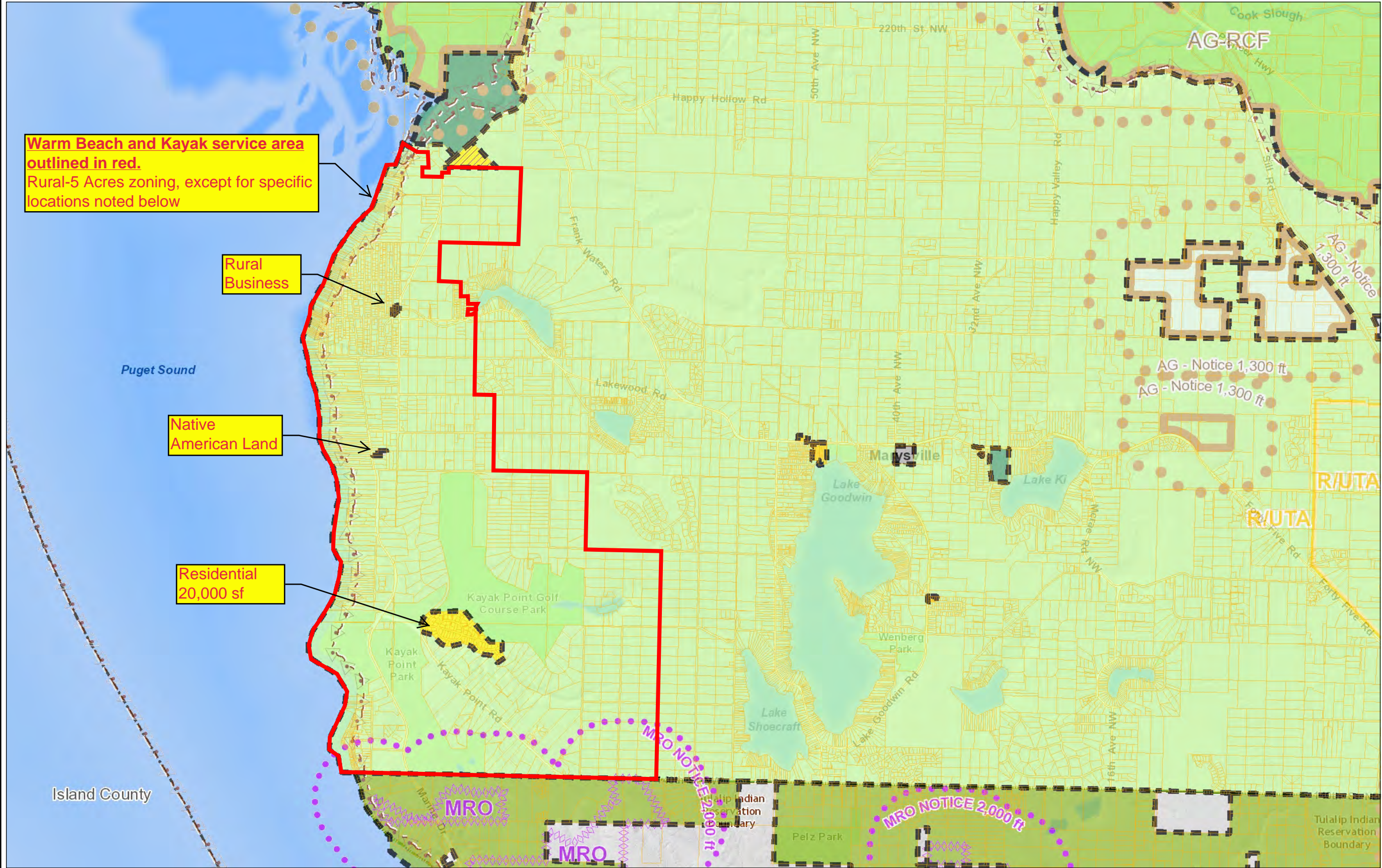


**Warm Beach and Kayak service area outlined in red.**  
Rural-5 Acres zoning, except for specific locations noted below

**Rural Business**

**Native American Land**

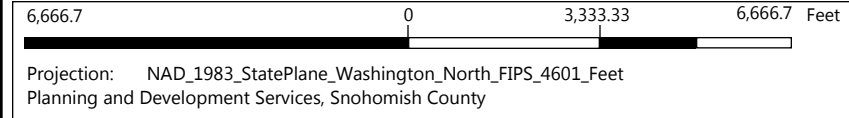
**Residential 20,000 sf**



**Legend**

- Snohomish County Tax Parcels
- Zoning Line
- Commercial and Local Forest Notice (500 ft.)
- Mineral Resource Overlay Notice (2,000 ft.)
- Agriculture Notice (1,300 ft.)
- + Airpark Notice 2,500 ft.
- ⊠ Hazard Areas: Mines (w/ 200 ft.)
- ⊠ Hazard Areas: Seismic Active Faults (w/ 200 ft.)
- ⊠ Hazard Areas: Tsunami (w/ 200 ft.)
- ⊠ Hazard Areas: Volcanic Lahar (w/ 200 ft.)
- ⊠ Mineral Resource Overlay
- Agriculture Notice Area
- Urban Growth Area (UGA)
- Rural/Urban Transition Area (R/UTA)
- Airpark
- Airport Compatibility Areas (SCC 30.32E)
- Commercial Forest Transition Area
- Commercial Forest (CF, LF)
- Zoning Types (Colorized)**
- A-10 (Agriculture-10 Acre)
- BP (Business Park)
- CB (Community Business)
- PRD-CB
- CRC (Clearview Rural Commercial)
- F (Forestry)
- F and R (Forestry and Recreation)
- F and R ORV (Forestry and Recreation-Of Road Vehicle)
- GC (General Commercial)
- HI (Heavy Industrial)
- IP (Industrial Park)
- LDMR (Low Density Multiple Residential)
- PRD-LDMR
- LI (Light Industrial)
- MC (Mineral Conservation)
- MHP (Mobile Home Park)
- MR (Multiple Residential)
- PRD-MR
- NB (Neighborhood Business)
- PCB (Planned Community Business)
- PIP (Planned Industrial Park)
- PRUD (Planned Residential Unit Development)
- R-5 (Rural-5 Acre)
- R-20,000 (Residential 20,000 sq. ft.)
- PRD-20,000
- PRD-20,000(Mobile)
- R-12,500 (Residential 12,500 sq. ft.)
- PRD-12,500(Mobile)

1: 40,000



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