Small Water System Management Program

Westside Water Association

PWS 949500

website: http://westsidewater.org/

Submitted October 16. 2020.
Revised based on DOH feedback February 9, 2021 (included as Appendix 4)

Prepared by:
Pat Call, Board member of Westside Water Association
Douglas P. Dolstad, Island Water Management, Inc.

Under Direct Supervision of and Reviewed by:
James Gross, P.E., BHC Consultants

4/19/21

Introduction

This plan supplants the previous Westside Water Comprehensive Plan of 1996. Consistent with the Guidelines offered by the Washington State Department of Health (Office of Drinking Water dated April 2016, revised) this submittal is intended as a dynamic ("living") document and as such references the Westside Water website http://westsidewater.org/ for changes in policy, financial information, capital planning, board members, contact information etc. What is offered in the following pages should be considered a snapshot of Westside Water that reflects the capacity of the system as viewed against the primary considerations of Managerial,Technical and Financial aspects of the system. Within this document, links are provided to guide the Viewer to the appropriate section of the Westside Water website. In addition, hard copies of the hyperlinks are provided as appendices to this document.

Appendix 4 has been added to document Westside's response to DOH comments regarding this plan with 10 of 10 DOH questions addressed. Westside's answers to those questions have been added in the body of this plan where appropriate and cross-referenced to Appendix 4.

Mission Statement

(Article III of the Articles of Incorporation, Feb 15th 1979)

http://westsidewater.org/page-3.html

The purpose for which the corporation is organized is to obtain a supply of water for distribution to the members of the corporation for domestic purposes and without profit. This corporation shall also be empowered and is hereby empowered to do any and all other acts or things authorized by the Washington State Nonprofit Corporation Act defining the general powers of a non-profit corporation.

Ownership

WWA is owned by its members. Shares are valued at $15,000, roughly equivalent to the pro rata share of each member's ownership stake in the assets of the system.

Statement of Adoption

This plan was adopted by a vote of the Board of Directors of Westside Water Association at its regular meeting dated: October 15th, 2020

Westside Water Board Members (2019-2021)

Link to WWA Board members

Jim Cross, Secretary
11909 SW Cove Rd
Vashon WA 98070
206-463-9465 (Home)
551-580-6956 (mobile)
jimcross49@gmail.com
Elected 2019

Richard Perret, Treasurer
11729 SW Cove Rd
Vashon WA 98070
206-579-9985 (Cell)
richard.perret3@gmail.com
Elected 2018,2020

Jeff Thurlow, President
12626 SW 151st St
Vashon WA 98070
206-940-4646 / (cell)
jeffreythurlow@comcast.net
Elected 2017

Adrian Witherspoon, At large
12533 SW 148th St
Vashon, WA 98070
206-356-5891 (mobile)
adrianspoon@gmail.com
Elected 2019

Pat Call, Vice President
12642 SW 148th St
Vashon WA 98070
206-567-4011 (Home)
650-867-9083 (mobile)
pat.call@cengage.com
Elected 2020

Operations & Management

Island Water Management, Inc.

Operator/Manager

IWM, Inc
11205 SW Corbin Beach Rd, #2
Vashon, WA 98070
iwm.1@juno.com
Manager@westsidewater.org
Doug Dolstad, owner of IWM Inc & main "go to" person
206-567-4568, *1
Cell: 206-715-3805

Mike Yates, IWM
Fills in for Doug on occasion. Knowledgeable about the system.
Cell: 956-966-6782

Bookkeeping/Admin

IWM, Inc
Stacey Sampson
billing@westsidewater.org
206-567-4568, *2

Westside Water Association Small Water System Plan narrative

History

The Westside Water Association (WWA) Service Area is the same as its Retail Service Area. The Service Area is located in the Colvos area near the northwestern corner of Vashon Island. The Association's service area is bordered on the west by Colvos Passage, to the north by McCormick Place, to the east properties along 115th Ave SW and the Shinglemill Canyon and to the south by Cove Road. The Department of Ecology included approximated 500 parcels in the Service Area when confirming Westside's water rights. However, an analysis conducted by Westside Water in 2021 concluded that there are some 367 parcels in the Service Area of which 235 are presently served by the Association, 42 have their own water source (wells primarily) and 90 are potentially subject to development. The water utility was first organized as a nonprofit corporation in September 1928. Owned by its shareholding members, WWA was developed to provide potable water supplies to approximately 20 farms and homes located in the Colvos area. A small dam on Shinglemill Creek, a water tower on what has become 156th SW, and distribution pipelines were installed at that time. The utility's water right was amended in 1964 from the original 0.05 cubic feet per sec (cfs) to 2.0 cfs to serve the growing population. At that time, the Association was providing water to 130 metered connections.

In 1971 WWA commenced an improvement program which included development of a 100,000- gallon storage reservoir on Cove Road, source redevelopment and service improvements.

In the aftermath of disastrous floods in the late 1980's which destroyed the dam and pump house along Shinglemill Creek, WWA (with assistance from FEMA) built a new pumping facility, installed flood mitigation structures and refurbished its spring sources. In 1989 a 153,000-gallon steel storage reservoir was added to replace the 20,000-gallon wooden tower on 156th SW and 4000' of 4" line was replaced with an 8" line to meet fire-flow needs of the Island Christian school located in Bethel Park. Springs and well points in the Shinglemill Canyon (now known as S01, S02 and S03) were developed as the primary water sources. In 2012 the S02 spring was disallowed by DOH due to a failure to meet the threshold of a wet

season Microparticle analysis (MPA) test. S01 and S03 remain contributing sources for WWA, providing about 20 gpm summertime capacity.

In the spring of 1993 the WWA Board of Directors contracted with Island Water Management (IWM) to provide comprehensive management and operations services for the Association. IWM Inc continues to provide this service to the Association. To meet drinking water standards for using surface water and to provide more reliable service, a two-stage bag and cartridge filtration system was installed in 1995 to augment water supplies during the summer. Because using surface water placed WWA under extensive Surface Water regulations (WAC 246-290-Part 6) and the filtration system proved to be expensive to operate, it was used only to augment water delivery in the high demand summer months and was discontinued in 2003 when a deep well was drilled in the Shinglemill Canyon. The Canyon Well (S06) is a stable year-round source of 65 gallons/minute capacity but contains 33 ppb Arsenic (As) as well as elevated levels of phosphate, silica, manganese and iron. In 2006 when the EPA As standard was implemented to an MCL of <10 ppb, WWA was once again in search of another water source.

Anticipating the implementation of the revised federal drinking water arsenic standard, WWA contracted with an engineer to design an oxidation/ filtration system. This system design was completed but as is the case with many NW sources contaminated with As, removal is chemically complicated and although jar, bench and prototype scale filtration tests were successful in reducing As concentration below 5 ppb, WWA has not been able to successfully put this filtration process into reliable commercial application. As an arsenic mitigation strategy, WWA obtained approval from DOH to blend Canyon Well water up to a total As concentration in the system of 10 ppb. Prior to 2015 "as needed" summer time demand was met by the combined canyon sources (S01, S03 and S06). During this time, instantaneous As concentration values sometimes exceeded the 10 ppb level but yearly "Rolling Annual Average" values did not. The WWA Board has subsequently set the goal of operations to minimize As concentration in the water consistent with reasonable economics and federal safe drinking water standards and to keep As concentrations below 5 ppb if possible.

As part of its on-going strategy to meet source water demands, WWA has also been actively negotiating to acquire private wells since 1999. The opportunity to acquire the rights to a private well with confirmed excellent water quality on the Anderson property (~1/4 mile north of the WWA tank on 156th Ave) in 2014 caused the WWA board to abandon pursuit of As filtration of the canyon well. This acquisition met several important goals: 1) it provided a source of immediate excellent water quality; 2) pump test data indicated favorable production for an additional well, the option for which was secured; 3) it gave WWA a source in a different part of the PSE power grid thereby increasing overall reliability of source

production and, 4) given the technical difficulties and expense of operating a filtration system it was an excellent financial investment. The existing Anderson Well (A1, DOH ID SO7) was put on-line in May 2015 with a supply-line running south from the source on 115th St SW to reach a tie in point to the existing transmission system at the NE corner of 115th and 156th. The second well (A2, SO8) was drilled in spring 2016 and came on-line on July 3rd, 2016. Collectively these wells are referred to as the Anderson Well Field (S09). Normal operational procedure (as outlined by WWA'S consulting engineer in the Source Approval document) is to use the wells at no more than 75% capacity although they are available at 100% capacity when water demand requires that. Since S09 was completed in July 2016 no water from the Canyon Well (S06) has been blended and delivered to WWA users.

Today WWA has 227 DOH approved connections of which 220 are physically connected. Historically WWA has had more members than the 227 and has worked to reduce that overage (from a high of 239 to a recent level of 233). WWA had not added any connections since 1988 except for one water share (Membership) given to Chris Anderson in 2014 as a portion of the compensation for providing WWA the right to his well (tacitly accepted by DOH). With the acquisition of the Back 40A well and the issuance of two shares as part of that transaction the total number of issued shares is now 235.

A "non-additive" water right secured in 2014 at the time of the acquisition of the Anderson well recognizes WWA has total Certificated rights to 286.2 acre-feet per year (an annual continuous withdrawal average of 177 gpm) from Shinglemill Creek and associated tributaries with an instantaneous maximum of 920.10 gpm. The Certificated water rights include 250 acre feet from a 1964 right plus an additional right for 36.2 af/y dating to 1928. 130gpm of this larger water right has been transferred to a Ground Water right and covers the withdrawal quantities of the SO6, SO9 and SO10 wells. (Canyon, Anderson Well field and Back 40 wells respectively)

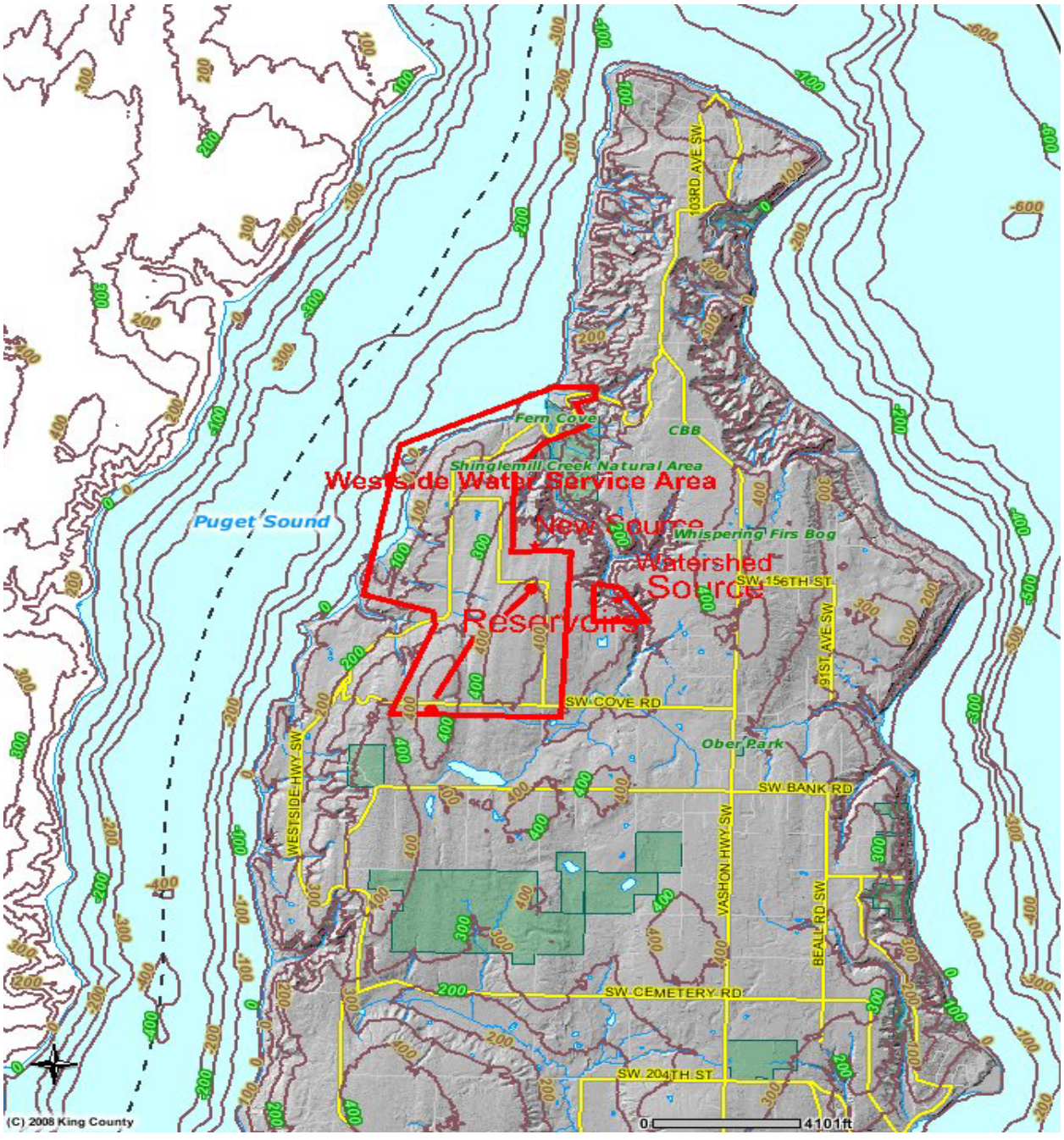
Table of Ownership and Management

Water system name	**Westside Water Association**	
Type of system ***Check all that apply.***	☐ **Homeowners association** ☐ **Single private owner** ☐ **Partnerships** ☒ **Corporation** ☐ **Local government (Town*, County*, Public Utility or Water District)** ☐ **Other** ***If your system is a town or county, ask your regional planner if a SWSMP is the right planning document for you.***	
Name and phone number for person(s) or association that owns system	**Name N/A Member owned** **Name**	**Phone** **Phone**
Do you have articles of incorporation or a certificate of registration with the Department of Revenue?	☒ **Yes. If yes, attach a copy** **Articles of Incorporation, Westside Water** **(Appendix 5)** ☐ **No.**	
Do you have a document that establishes the legal authority to make decisions for the system? ***For example, by-laws, resolutions, ordinances?***	☒ **Yes. If yes, attach a copy. See by laws: Westside Water By Laws (Appendix 6)** ☐ **No**	

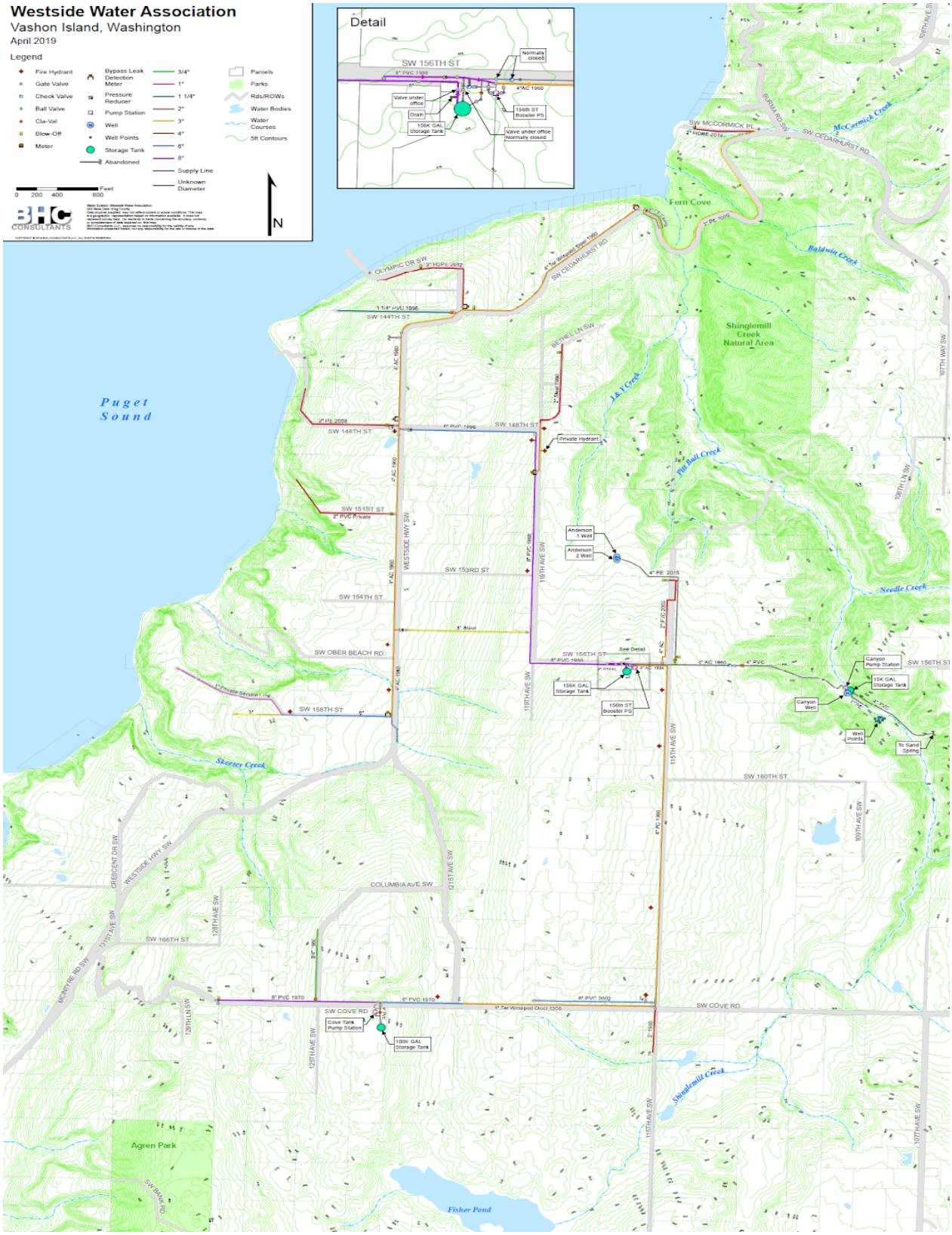
Do you have any insurance policies for the system?	☒ Yes. ☐ No.	
Who makes the major decisions? *For example, who decides when to make improvements, how to finance improvements, when to allow additional connections.*	☐ Single party ☒ Board, 5 members, 2 yr terms, max 3 consecutive terms. ☐ System customers or a representative subset of customers ☐ Commissioners (how many commissioners) ☐ Other	
How long are the terms of service for members of the decision-making body?	2 years for not more than 3 consecutive terms	
How often do those responsible for making decisions meet?	☒ Bi-Monthly ☒ When necessary	☒ Annually ☐ Quarterly
	☐ Other	
Are customers notified about these meetings?	☒ Yes ☐ No	Annual meeting notification. Email/hard copy newsletter, Official Notice of Annual Meeting
Is there an organizational chart?	☐ Yes. If yes, attach a copy. ☒ No There are however, well developed SOP's (Standard Operating Procedures) Westside Water Standard Operating Procedures (Appendix 7)	

Does the system have any paid employees?	☐ Yes ☒ No	**If yes, do you have personnel policies?** ☐ Yes ☐ No
Identify the persons or positions responsible for making financial transactions	**Board Treasurer, signs payments 2 Board signatures required** **Island Water Management Inc, provides admin services including bookkeeping, customer accounts.**	
Do you have a process to record and respond to customer complaints?	☒ Yes ☐ No.	**If yes, explain your process.** **IWM handles most Customer issues and presents issues for Board attention.**

SERVICE/RETAIL AREA MAP



FACILITIES MAP



Nearby Water Systems

Water District #19 is the nearest purveyor and has a main that ends approximately 1900 feet to the EAST of Westside Water's 4" main on Cove Road.

Service Policies

See: Westside Water Policies (Appendix 6) and also Westside Water By Laws (Appendix 7)

Do you have a written policy for the following?	Has it ever been updated?	Brief description
Water rate structure and fees.	☒ Yes ☐ No If yes, when was last update?	WWA Billing and Rate Card (Appendix 8) Access to Rate Card Updated annually, last update May 2020
System improvement funding. *For example, how you will allocate the cost of future replacements or improvements to customers.*	☐ Yes ☐ No If yes, when was last update?	WWA Budget 2020-2021 (Appendix 9) WWA Asset Inventory ((Appendix 10)
Customer responsibilities. *For example, consent agreements for inspections or requirements to install and test backflow assemblies.*	☒ Yes ☐ No If yes, when was last update? 2018	Westside Water By Laws (Appendix 6) and WWA Policies (Appendix 7)
New customer responsibilities. *For example, hook-up fees, other assessments, or service meter requirements.*	☒ Yes ☐ No If yes, when was last update?	Same as previous

Cross Connection Control

Westside Water is 97.8% residential. Back check valves are installed with all new services and when services are replaced. To date an estimated 80% of all service meters have such back check protection. Westside Water implemented a cross connection control program in 1997 and Members are informed at every Annual Meeting of the dangers of cross connection and who to contact if they have questions. Cross connection and back flow informational pamphlets are available and Association Members are encouraged to take them. A comprehensive survey was done as part of the program in the early 1990's to determine levels of risk and potential sources of cross connections. Several residences that had auxiliary water sources have been required to install an air gap with verification provided by the CCS. There have been no incidences of cross connection on the system since record keeping began in the early 1990's Given that Westside Water is applying for authorization from DOH for additional connections, the WWA Board will be adopting policies requiring premise protection for all new connections commensurate with the risk. See WWA Cross Connection Policy (Appendix 11).

Cross-Connection Control Program

Identify the steps you completed and target completion dates for remaining required tasks.

Completed	Task	Completion Date
☒	Step 1: Retain a cross-connection specialist (CSS) certified by us.	1997 -
☒	Step 2: Establish legal authority to implement a program. Attach a copy.	1997
☒	Step 3: Develop administrative and technical procedures.	1997
☒	Step 4: Develop a record-keeping and reporting system.	1997
☒	Step 5: Conduct initial hazard evaluations and ensure backflow preventers are installed.	1997
☒	Step 6: Ensure assembly testing.	1997
☒	Step 7: Educate consumers about cross connections.	1997/Annually
☒	Step 8: Reevaluate existing services and review new applications for service.	1997

Description of Sources

WWA utilizes multiple sources to meet its normal and seasonal needs. A detailed system map is included as Appendix 1. This section describes the current production status of all sources as of July 2020.

Sources

Spring (S01)

Source SO1 is a spring located along a tributary to Shinglemill Creek (see Appendix 1 key 01). Its flow is ~ 5 gpm.

Well Points (S03)

Source SO3 consists of a series of well points that collectively produce 20 gpm. This flow is maintained by siphon and is combined with source S01 and piped to the well house structure located off the south bank of Shinglemill Creek (see Appendix 1 key 03). The spring and well points have been providing water to WWA customers continuously since 1988. In the winter of 2016 a severe windstorm in the canyon site for the well points destroyed the collection system which was subsequently rebuilt with HDPE piping. Since that time the collection system has provided consistent water flow except when one of the individual well points infrequently needs to be recharged. When recharging has been performed the delivery has returned to its normal flow state. Nonetheless WWA acknowledges the DOH view that well points are a higher risk source than deep wells and it is the intention of the Association to continue to work to mitigate this risk.

Canyon Well

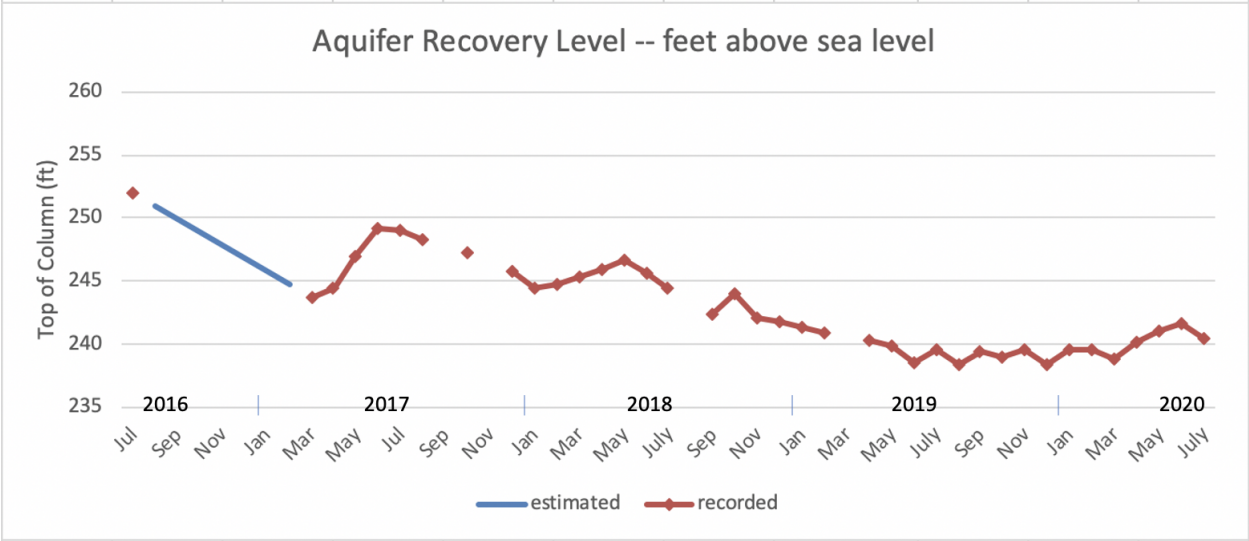
In 2002 a well (SO6) was drilled in the bottom of Shinglemill Canyon adjacent to the well house structure (see Appendix 1 key 03). This well is approximately 300 feet deep with a pump elevation about 150 feet below sea level and delivers 65 gpm at full capacity. The water from this source contains 33 parts per billion (ppb) Arsenic (As) as well as elevated levels of phosphates (1.81 mg/L) and silica (40 mg/L). When operational it is piped into the holding tank that also receives water from SO1 & SO3. In 2006 EPA implemented changes to

the Safe Drinking Water Act that reduced the maximum concentration of As to 10 ppb nationally. Subsequently WWA obtained an approval from DOH to blend the SO6 source with other sources up to a combined total instantaneous As concentration of 10 ppb (given the low levels of Arsenic in the other sources, this 10 ppb limit means that blending to about 30% of the total of the other sources is allowed when necessary to meet demand.) With the WWA Board decision to keep As contamination below 5 ppb, the SO6 source can provide approximately 8% additional capacity on top of other sources.

Anderson Well Field

In 2014 an agreement was reached with a private party to purchase the right to his private well (A1) along with an option to drill a second well. (see Appendix 1 key 04). A significant extension of the supply transmission system (~1500 feet) was required to connect the new well to the storage tank (bolted standpipe). This private well, designed for a single residence, initially operated at a maximum flow of 23 gpm and was put into service in May 2015 with a normal operating regimen of a 75% daily duty cycle for a net sustained capacity of 15 gpm. In late spring 2016, the option was exercised to drill a second well on the Anderson property (A2). This second well initially produced a peak capacity of 57 gpm at the maximum 60Hz setting for the variable frequency pump that was installed. Normal maximum operating flows were 50 gpm at 57 Hz for a net daily average delivery of 38 gpm under the same operating regimen as for the first well. Together these two wells have been designated a "well field" and are referenced as SO9. At times of peak demand these two wells initially delivered a flow of 80 gpm for several days if required.

Since that initial drilling date of A2 in 2016, the recovered aquifer depth has declined. Based on monthly static 24-hour recovery measurements, WWA determined in 2019 that the amount of annual water consumption from the Anderson Well Field (~1.5MM cubic feet/year) needed to be reduced to provide a sustainable resource. Since that time the recovered aquifer level has stabilized and the A2 pump can be operated at 53 Hz for a capacity of 35 gpm. When needed, A1 is operated at a maximum pumping rate of 15 gpm. SO9 is thus safely capable of providing 50 gpm capacity at peak demand for a few days (and 75% of that on a sustained basis).



During the 9 months of the year from September to June, the combined flow from the spring and well points (SO1, SO3) or the Anderson well field (SO9) are more than sufficient to meet the needs of users. Each pump station (Canyon and SO9) has its own chlorination system. Operationally both systems are used below capacity to keep them running.

Since July 2016 when the second Anderson well came on line, the summertime peak demand has been 100% covered by a combination of SO1, SO3 and SO9. Source SO6 has not been used since July 2016.

Back 40 Well

WWA has negotiated with a private party to acquire the rights to a well drilled on a property off of SW 156th St (see map location 7). This well has a pump elevation of ~120 feet above sea level, has water with low As concentration (<5 ppb) and with iron and manganese near the MCL level. Based on pump test analysis, this source produces in excess of 25 gpm. It is located very close to the steel tank so that including it into the WWA system is relatively cost effective. DOH has approved this source @ 30 gpm for use by Westside Water.

In summary, WWA has a potential peak capacity of 97 gpm from its combined sources: SO1, SO3, SO9 ,the newly acquired Back 40 well and blending of SO6 to 5 ppb.

Ongoing efforts to mitigate Arsenic in the Canyon Well (SO6)

Although WWA is no longer pursuing the oxidation/filtration technique for removing Arsenic from the Canyon Well, other technologies continue to be explored. Both anion resin and granulated ferric oxide (GFO) approaches may prove feasible in bringing this source directly into compliance with drinking water standards. Because of the other constituent contaminants (iron, manganese, phosphate and silica) in this source, it is likely that either of these filtration options will require pre-filtration or a precursor reverse osmosis stage. In the case of the anion resin technique, disposal of a brine backwash solution with high concentration of Arsenic will also be required. Nonetheless the Canyon Well remains a known source with demonstrated potential warranting further efforts to bring at least part of it on-line.

WWA will update this SWSMP when a treatment technology has been selected and its effectiveness validated.

Storage and Distribution Facilities

The distribution system has two storage facilities. A 100,000-gallon "Mt Baker Silo" (covered concrete storage tank) situated at the top of Cove Road (SW 168th -map key 05) serving the residences on Cove Road and 115th SW (referred to as the Upper Zone) and a 153,000-gallon covered bolted steel storage tank (standpipe) located on SW 156th (map key 06) which supplies users to the north and west of the system (referred to as the Lower or Gravity Zone). The tops of both tanks are at an elevation of 460' and were built in 1973 and 1989, respectively. The concrete tank is designed to prioritize the supply of water with pressure induced by booster pumps to residences in the Upper Zone.

The concrete tank is in series with the steel tank although the piping to and between the tanks is configured in such a way that either tank could supply the entire system should that become necessary and source water can be directed to either tank. Normally, to ensure sufficient Contact Time (CT) values, source water is pumped from the source to the 156th Street tank on demand. Water is supplied by gravity to users in the Lower Zone and, upon a call for water from the concrete tank on Cove Road, to that tank. Pressure is maintained in the Upper Zone by means of a booster/transfer pump acting in consort with a back pressure control on a Cla- (hytrol) valve that keeps the pressure in the Upper Zone above 30 psi while the concrete tank is filling.

Source water from SO1 and SO3 flows under the influence of gravity and collects in a 15,000-gallon fiberglass tank buried under the well house (map key 03). Water from SO6, the "Canyon Well" also flows into this holding tank if blending from this source is required. One

of two submersible water pumps delivers water to the storage tanks upon a call for water at a nominal rate of ~120 gpm.

Source water is chlorinated prior to entry into the holding tank. When the call for water is satisfied, source water continues to fill the 15,000 tank until it is full at which point a Hayward valve closes and source water is diverted around the chlorination injection point and holding tank and flows back into Shinglemill Creek.

The distribution system includes 5000' of 8" PVC line; ~ 2400' of 6 PVC; 15,000' of 4" AC and steel pipeline; 1300' of 3" steel line; 4000' of 3"HDPE; and approximately 2000' of 2" extensions of varying material. Lateral service connections may be 3/4", 1",1-1/4", or 1-1/2" depending upon the residential preference. Copper, steel, HDPE and PVC materials have been used for this purpose.

Source Water Protection Program

Westside owns 40 acres of the Shinglemill Creek watershed from which the Canyon pump station sources are gathered. Susceptibility studies including Calculated Fixed Ratio analyses have been undertaken and completed for all Westside sources and are on file with DOH. The watershed itself is remarkably intact and undisturbed. One branch of the Shinglemill Creek basin originates in Vashon town center. The Vashon Groundwater Coalition has worked with area merchants to put in place programs to reduce contamination from this source. Since WWA does not use Shinglemill Creek itself as a water source, it is not vulnerable to even the low concentrations of upstream contamination.

There are no protective covenants needed for the sources (SO1,SO3 and SO6) associated with Shinglemill Creek basin.

The Anderson Well field was obtained in 2014. A Restrictive Covenant for Public Water Supply - Drilled Well was filed October 1st, 2014. Document number is 20141001000381

The recently acquired Back 40A well also has a Restrictive Covenant document number 20200318000024

Completed	Task	Completion Date
☒	Step 1: Complete a susceptibility assessment form for each source and submit to us. (DOH)	DONE. Varies by source
☒	Step 2: Create a map showing all sources, sanitary control areas, and source water protection areas. Include the 6-month, and 1-, 5-, and 10-year time of travel zones.	DONE. Varies by source
☒	Step 3: Secure control of your sanitary control area or watershed control area. Attach a copy of your legal documentation.	Appropriate Covenants are recorded for wells. Ownership of watershed
☒	Step 4: Conduct survey to identify contaminant sources in your source water protection area and develop a contaminant inventory list.	1993 and on-going
☒	Step 5: Send letters to landowners and facility operators in your inventory area, regulatory agencies, local governments with land use decision authority, and emergency responders.	97% residential. All Members regularly notified and/or contacted
☒	Step 6: Develop a contingency plan to provide an alternate source of potable water as part of your emergency response plan.	See WWA Emergency Response Plan
☐	Continuous: Update contaminant inventory list every two years and resend notification letters as needed.	Ongoing

Emergency Response Plan

See: WWA Emergency Response Plan (Copied, below chart)

Emergency Power

In the event of a power failure, the storage facilities can supply water via gravity for an estimated 2.5 - 7 days at a normal usage pattern depending upon the season and 5 - 10 days with conservation measures in effect. There is some potential for low pressures on a small part of the upper system (Cove Road) during power outages. This situation has been mitigated by being able to use the booster station on SW 156th in lieu of the Cove Road station when necessary. In 2019 a 22kw LP generator and a 500 gallon LP tank were installed at S09 to provide emergency power to that source.

Emergency Response Plan

Section 1 – System Information
Document basic system information. This should be readily available to system personnel, local emergency responders, repair contractors, and us.

Basic description and location of system facilities	**(See sources on Facilities Map)** **As of 2020 Westside has two sources: 1) Canyon Pump Station with sources (SO1,3 & 6) associated with the Shinglemill Creek watershed and, 2) Anderson Well Field (SO9)**	
Population served and number of service connections	**People: 550**	**Connections: 235**
Person(s) responsible for maintaining and implementing the emergency plan ***At least two people should share this responsibility to ensure backup coverage.***	**Name:** **IWM, Inc and WWA Board** **Title:** **Contract Operations & Management**	**Phone Number:** **206-567-4568 *1** **Cell Number:** **206-715-3805**

Chain of Command

Name and title	Responsibilities during an emergency	Contact numbers
Doug Dolstad	**Initiate protocol and Coordinate activity**	**206-567-4568 *1**

Board President	**Initiate contact protocol**	**Changes year to year. See: WWA Board and Operations info (Appendix 7)**
Board members	**Implement contact protocol**	**see above link**

WESTSIDE WATER ASSOCIATION
EMERGENCY RESPONSE PLAN

Water System ID number: 949500
Location: West side of Vashon Island, Cove Road – Cedarhurst & McCormick Pl

24 hr emergency contact phone: 206-715-3805 or 206-567-4568 *1

Sources:

1. **Canyon Pump Station. East of 115th Ave SW & SW 156th ~ 2000' down steep service road. Parcel 1923039023**
2. **Anderson Well Field 15245 115th Ave SW, Parcel 2423029053**
3. **Back 40A Well. (Pending approval) 11705 SW 156th. Parcel 2423029038**

Storage Facilities:

1. **11605 SW 156th, 156,000 gallon standpipe, bolted steel tank, Parcel 2423029095**
2. **West of: 12233 SW Cove Road, 100,000 gallon concrete tank + Booster pump station, Parcel 2523029161**

There are three types of disasters that may affect the consumers of Westside Water Association: Bacteriological; Chemical; and, Physical

1- Bacteriological Emergency

Notification procedures for notifying system customers, the local health department and DOH of water quality emergencies are an important component of an emergency response program. Many public water systems will occasionally detect positive coliform samples, mainly as a result of minor contamination in distribution mains or sample taps, or improper bacteriological sampling techniques. Persistent detection of coliform in the water supply particularly E.

coli or fecal bacteria, may require issuing a public boil water notice to ensure the health and safety of the water customers.

1- Chemical Emergency

Chemical emergencies are those related to the introduction of toxic levels of chemical contaminants into the drinking water supply. These contaminants may be detected by routine testing but more likely will originate from some catastrophic incident accident such as a spill or vandalism or a naturally occurring act e.g. earthquake, volcanic eruption.

Contamination Communication protocol:

1. **Contact system Manager 206-715-3805 (Cell)**
2. **System Manager will contact:**
    a. **Board President. If Board President is unavailable, Manager will contact any Board member.**
    b. **Regional Engineer of the State Department of Health, Northwest Regional Office**
3. **Any directly affected parties**
4. **"Water Alert" or "Water Emergency" signs posted at:**
    1. **115th Ave SW & SW Cove Road**
    2. **McCormick Pl & Cedarhurst Road**
5. **Message posted on WWA answering machine**
6. **Write up of incident posted on "Westside Water News"**
7. **Follow up message to users as warranted.**

Emergency phone list: (Effective 1-1-2005)

2- Agency/Group	3- Contact person	4- Phone Number
Water System Contract Operator/Manager	Doug Dolstad	206-715-3805
Board President	Jeff Thurlow	206-940-4646
Board Vice President	Pat Call	650-867-9083
Board Treasurer	Richard Perret	206-579-9985

Board member	**Adrian Witherspoon**	**206-356-5891**
Board Secretary	**Jim Cross**	**206-463-9465 (Home)** **551-580-6956 (mobile)**
Fire/Police	**---**	**911**
King County Fire District	**---**	**911,** **206-463-2405**
Puget Sound Energy (Electrical and Gas)	**Office 11603 SW 156th** **Accnt 200004628802** **Meter # U12 229 914** **Canyon 15730 115th** **Accnt 200000575569** **Meter # Z 007354480** **Cove 12315 SW Cove Rd** **Accnt 200013671157** **Meter # Z001978507** **Anderson 15245 115th** **Accnt: 220004364497** **Meter # A011950762** **Fused Breakers: Canyon Srvc Road T-Pole # 317413-159280**	**1-800-321-4123**
Telephone Company	**CenturyTel** **Lineman: Don Bartley**	**1-800-533-4171** **253-405-9307**
Chemical Supplies, Chlorine	**Wesmar**	**1-206-783-5344**
Chemical Supplies	**Hach**	**1-800-227-4224**
Waterwork Supplies	**HD Fowler**	**3660-377-4507**
Testing Laboratory **Bacteriology** **Chemistry** **Bact T Bottles/Accounts**	**Washington State DOH Lab**	**206-361-2879** **206-361-2898** **206-361-2800**
Testing Laboratory **Bacteriology** **Chemistry**	**Centric Analytical** **1786 SE Mile Hill Drive** **Port Orchard, WA 98366**	**360-443-7845**

DOH Regional Engineer	Brietta Carter, P.E.	1-253-395-6770
DOH Emergency Line		877-481-4901
Emergency Management	King Co.	206-296-3830
King Co Roads:	24 hr numbers	1-800-527-6237
Underground Locating Service	Utility Locates WWA ID: 26748 IWM ID: 94165	1-800-424-5555

Emergency Notification

Emergency notification is provided via the Public Alert system Westside Water has subscribed to. (www.public-alert.com/) Public Alert is able to contact virtually all users of the water provided by Westside Water via email, text messaging and voice messaging to land and mobile phones. A short list of members known to be most susceptible to any kind of water emergency are directly contacted by the operator and/or Board members either by telephone or in person. Sign boards are also posted notifying users of a "Water Emergency," or in less severe cases, a "Water Alert". These boards carry a telephone number through which users can listen to a recorded message describing the situation and what part of the system is affected as well as an emergency contact number to contact the system operator (IWM). Less critical notifications can also be posted via the Public Alert provider as well as being posted on the WWA website (www.westsidewater.org)

The system notifies its customers as follows:	How does the system provide customers with system contact information?

☒ **Phone calls. Include phone list location:** ☐ **Media release** ☒ **Door to door** **x Other Public Alert (www.public-alert.com)**	☒ **Billing** ☒ **Newsletter** ☐ **Other**

Emergency Notification (Priority customers)
If you have priority customers or serve vulnerable populations, maintain a list of these customers so you can notify them first. You should review and update this list annually.

Does the system serve priority customers? N/A ***Check all that apply. Include names and addresses.***	
☐ **Hospitals and clinics**	**None**
☐ **Nursing homes**	**None**
☐ **Schools**	**None**
X Other	**Hostel on Cove Road. 2 churches, & Havurat Ee Shalom**

Response Actions for Specific Events

	Immediate actions to take ***(assess damage, contact us, contact repair service)***	**Who should be notified** ***(Us, customers, repair service, county)***
Power outage	**Assess situation, determine cause**	**PSE**
Transmission or line break	**Reduce or stop flow with nearest isolation**	**IWM, Inc , Insurance**
Chlorine treatment failure	**Assess problem**	**IWM Inc**
Source pump failure	**Assess problem**	**IWM, Inc**
***E. coli*-MCL Violation**	**Contact DOH and WWA President**	**Regional Engineer (DOH), WWA President**
Severe reduction or loss of water in source	**Assess problem**	**IWM, Inc**
Flood	**Assess risk to Canyon Pump Station**	**IWM, Inc, WWA Board President**

Earthquake	**Assess damage**	**IWM, Inc. Insurance Co**

Alternative Water Supplies

Emergency sources
List available emergency sources and existing emergency interties.

Emergency source name	WFI source number	Maintained in operable condition?	Availability *How much water can be produced each day, how soon can it begin?*	Is the water safe for drinking?
Shinglemill Creek	SO4		<100,000 gpd	Boiled
Private wells in Service Area	N/A	N/A	Variable	Likely. Not documented

Short-term alternative supplies
List bottled water suppliers or tanker trucks that may be able to deliver bulk water in your area.

	Vendor or supplier	Phone number	Availability *How much water can be delivered each day, how soon can it begin?*	Is the water safe for drinking?
Bottled	Vashon Thriftway			
Bottled	Vashon IGA			

Long-term potential alternative supplies
List any potential interties with an adjacent water system. Do not include existing interties.

Water systems located within one-quarter mile	Feasibility of connecting?	Has any contact been made with this system?
WD 19	Low	Yes

Certified Operator

Position	Name	Certification class and level	Employed by your system since (date)
Certified Operator (lead)	**Doug Dolstad**	**WDM 2, Certificate # 5538**	**Contracted since 1992**
Certified Operator (assistant or backup)			
Cross-Connection Control Specialist	**Doug Dolstad**	**CCR**	

Further action

- **Do the governing board and certified operator agree that it is the operator's responsibility to perform the "typical operator duties" listed in this section?**
  ☒ Yes ☐ No.

- **Do the governing board and certified operator meet on a regular basis to discuss past activities, the system's current operational status, regulatory requirements, and planning for future system needs?**
  ☒ Yes ☐ No.

- **If the certified operator is unavailable during an emergency, is a back-up operator available?**
  ☒ Yes ☐ No. IWM Inc provides back up operator

- **If the certified operator leaves, do you have a plan for obtaining a new one?**
  ☐ Yes ☒ No. Board is working on that issue…..

Operations and Maintenance

Routine Maintenance Schedule

Maintenance and operational activity	Applicable? (check box)		Responsible party	Frequency
	Yes	No		
Measure and record production from each source and any interties	☒	☐	IWM Inc	Daily
Replace source meters	☒	☐	IWM Inc	As needed
Read service meters	☒	☐	IWM Inc	Bi-monthly
Replace service meters	☒	☐	IWM Inc	As needed ~ 15 years
Measure water level in each well (static and pumping level)	☒	☐	IWM Inc	Monthly, (Static) Periodic (Dynamic)
Measure chlorine residual in distribution system	☒	☐	IWM Inc	Daily
Flush dead ends	☒	☐	IWM Inc	Periodic
Exercise main line valves	☒	☐	IWM Inc	Periodic < 1 year
Record use of treatment chemicals (corrosion control, disinfection, iron or manganese removal)	☒	☐	IWM Inc	Periodic >4 x's month
Maintain chemical feed pumping equipment	☒	☐	IWM Inc	As needed
Conduct leak detection in the distribution system	☒	☐	IWM Inc	As needed

Recalibrate water quality monitoring instruments N/A	☐	☐		
Inspect reservoir hatches, vents, and overflow outlets for tight seals and intact screens	☒	☐	**IWM Inc**	**Annual**
Inspect and clean reservoir interior	☒	☐	**IWM Inc**	**As needed +/- 7 years**
Inventory spare parts, chemical supplies, and equipment.	☒	☐	**IWM Inc**	**As needed**
Check air-water level in hydropneumatic tank(s) N/A	☐	☐		
Test cross-connection control devices (by a backflow assembly tester)	☒	☐	**IWM Inc arranges**	**Must be completed once a year**
Conduct safety training needed to comply with OSHA and WISHA standards N/A	☐	☐		
Conduct routine and repeat coliform monitoring	☒	☐	**IWM Inc**	**Monthly**
Review coliform monitoring plan to ensure it reflects current customer base and service area	☒	☐	**IWM Inc**	**As needed**
Review water system security features and processes (fencing, locks)	☒	☐	**IWM Inc**	**As needed.**
Conduct source chemical monitoring as described in your water quality monitoring report	☒	☐	**IWM Inc**	**Per WQMR**
Test all alarm functions	☐	☐	**NONE**	**NONE**
Complete and distribute consumer confidence report	☒	☐	**IWM Inc**	**Must be completed once a year**

Control Position for Valves, Switches, Relays, and Timers

Indicate normal settings, positions, or readings for pump controls, electrical switches, valves, or gauges. Describe any seasonal differences in pump, reservoir, and valve control settings.

Type of switch, valve or control	Normal and seasonal settings
Herrin timer/relay, SO9 & SO10	Settings: Time "ON": 6 hrs. Time "OFF": 45 minutes
Clay Valve @ Cove Station	Set to 30 psi back pressure
Timer at Cove Station	Set to prevent filling 3 hrs during morning and 3 hrs at evening meal times. Adjusts seasonally

Suppliers List

Develop a list of supplies you periodically order and include the supplier's name and phone number.

Type of supply, spare part, or specialty service	Name of supplier or contractor	Phone number(s)
All Water Works	HD Fowler	360-377-4507
All Water Works	Ferguson	253-538-8275

Further action

- **Have any parts of Table 2-2 caused you to think about changing your current O&M practices?**
  ☐ **Yes.** ☒ **No.**

Water Quality Monitoring Program

Coliform Monitoring Plan for: Westside Water Association

A. System Information

Water System Name	County	System I.D. Number
Westside Water	King	949500
Attach copy of current WFI		
Number of Routine Samples Required Monthly by Regulation: 1	Number of Sample Sites Needed to Represent the Distribution System: 3	

Laboratory Information

Laboratory Name	Office Phone 360-443-7845
Spectrum (Centric)_	After Hours Phone 360-443-7845
Address	Cell Phone 360-649-8577
1786 Mile Hill Drive, Port Orchard	Email soraK@spectra-lab.com
Hours of Operation	
9-5 M-F Drop off open 24 hrs	
Contact Name	
Jessica	

Emergency Laboratory Name **Edge Analytical**	Office Phone 360-757-1400 After Hours Phone 360-757-1400
Address **1620 S Walnut Street, Burlington, WA 98233**	Cell Phone - - Email
Hours of Operation **9-5 M-F**	

B. Routine and Repeat Sample Locations

Location/Address for Routine Sample Sites		Location/Address for Repeat Sample Sites
X1. Office		**11605 SW 156th**
		1-1. 11617 SW 156th ST (#485, Pankratz)
		1-2. Canyon Station Pump House
11605 SW 156th		**1-3. Office**
		1-4. 11228 SW 160th St, # 436

X2. Havurat Building		**15401 Westside Hwy SW**
		2-1. 12203 SW 153rd St (# 117, Harrington)
		2-2. 15303 Westside Hwy SW (#97, Snyder)
		2-3. 15401 Westside Hwy SW (# 114, Havurat)
		2-4. 15509 Westside Hwy SW (#118, Candy)
X3. Cove Station,		**Appx. 12255 SW Cove RD**
		3-1. 12233 SW Cove Rd (Rockwell)
		3-2. 12321 SW Cove Rd (Tuma)
		3-3. 12424 SW Cove Rd (Hanson)
		3-4. Cove Station
X4. McCormick Pl Blow Off		**11355 SW McCormick Pl**
		4.1 Residence at same address (#3, Beardsley)

			4.2 11344 SW McCormick Pl (#2, Malshuk)
			4.3 11312 SW McCormick PL (#1, Radke)
			4.4 Blow off, 11611 Westside Hwy

*NOTE: If you need more than three routine samples to cover the distribution system, attach additional sheets as needed.

** When you collect the repeats, you must sample every groundwater source that was in use when the original routine sample was collected.

Important Notes for Sample Collector:

_____
_____
_____
_____
_____
_____
_____

C. Routine Sample Rotation Schedule

Month	Routine Site(s)	Month	Routine Site(s)
January	Office	July	Office
February	Havurat	August	Havurat
March	Cove	September	Cove

April	Office	October	Office
May	Havurat	November	Havurat
June	Cove	December	Cove

D. Month Following Unsatisfactory Samples

Location/Address for Routine Sample Site(s) Unsatisfactory the Previous Month		Location/Address for the five Routine Sample Sites
X1. Office		1. 11605 SW 156th
		2. 11617 SW 156th ST (Pankratz)
		3. 11228 SW 160th St (#436)
		4. 11927 SW 148th St. (Bethel Church)
		5. 15401 Westside Hwy SW (Havurat)
X2. Havurat Building		1. 15401 Westside Hwy SW (Havurat)

			2. 12203 SW 153rd St (Harrington)
			3.15822 Westside HWY SW (Lorentzen)
			4. Office
			5. 11312 SW McCormick (Radke (#1)
X3. Cove Station			**1. Cove Station**
	12255 SW Cove RD		**2. Office**
			3. Havurat
			4. 12321 SW Cove Rd (Tuma)
			5. 11312 SW McCormick (Radke)

E. Preparation Information

System Name	**Date Plan Completed**	**Dates Modified**
Westside Water Association	**~ 2003**	**2008, 2013, 2020**
Name of Plan Preparer **Position**		**Daytime Phone #**
Douglas P Dolstad, Island Water Management, Inc. Operator/Manager		**(206) 715-3805**

State Reviewer	Date Last Review

Distribution System *E. coli* Response Checklist

Background Information	Yes	No	N/A	To Do List
We inform staff members about activities within the distribution system that could affect water quality.	x			
We document all water main breaks, construction & repair activities, and low pressure and outage incidents.	x			
We can easily access and review documentation on water main breaks, construction & repair activities, and low pressure and outage incidents.	x			
Our Cross-Connection Control Program is up-to-date.	x			
We test all cross-connection control devices annually as required, with easy access to the proper documentation.				x
We routinely inspect all treatment facilities for proper operation.	x			
We identified one or more qualified individuals who are able to conduct a Level 2 assessment of our water system.	x			
We have procedures in place for disinfecting and flushing the water system if it becomes necessary.	x			

We can activate an emergency intertie with an adjacent water system in an emergency.			x	
We have a map of our service area boundaries.	x			
We have consumers who may not have access to bottled or boiled water.		x		
There is a sufficient supply of bottled water immediately available to our customers who are unable to boil their water.	x			
We have identified the contact person at each day care, school, medical facility, food service, and other customers who may have difficulty responding to a Health Advisory.	x			
We have messages prepared and translated into different languages to ensure our consumers will understand them.		x		
We have the capacity to print and distribute the required number of notices in a short time period.	x			

Policy Direction	Yes	No	N/A	To Do List
We have discussed the issue of *E. coli*-present sample results with our policy makers.	x			
If we find *E. coli* in a routine distribution sample, the policy makers want to wait until repeat test results are available before issuing advice to water system customers.	x			

(Cont.)

Distribution System *E. coli* Response Checklist

Potential Public Notice Delivery Methods	Yes	No	N/A	To Do List
It is feasible to deliver a notice going door-to-door.	x			
We have a list of all of our customers' addresses.	x			
We have a list of customer telephone numbers or access to a Reverse 9-1-1 system.	x			
We have a list of customer email addresses.	x			
We encourage our customers to remain in contact with us using social media.			x	
We have an active website we can quickly update to include important messages.	x			
Our customers drive by a single location where we could post an advisory and expect everyone to see it.	x			
We need a news release to supplement our public notification process.		x		

Distribution System *E. coli* Response Plan

If we have *E. coli* in our distribution system we will immediately:

1. **Call DOH.**
2. **Collect repeat and triggered source samples per Part D. Collect additional investigative samples as necessary.**
3. **Immediately convene Incident response team from Westside Board**
4.
5.
6.
7. **Discuss with DOH whether to issue a Health Advisory based on the findings of steps 3-6.**

Generated on: 08/31/2020

Page 1 of 5

Water Quality Monitoring Schedule

System: WESTSIDE WATER ASSN
Contact: Douglas P Dolstad

PWS ID: 94950 0
Group: A - Comm

Region: NORTHWEST
County: KING

NOTE: To receive credit for compliance samples, you must fill out laboratory and sample paperwork completely, send your samples to a laboratory accredited by Washington State to conduct the analyses, AND ensure the results are submitted to DOH Office of Drinking Water. There is often a lag time between when you collect your sample, when we credit your system with meeting the monitoring requirement, and when we generate the new monitoring requirement.

Coliform Monitoring Requirements

	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021
Coliform Monitoring Population	560	542	538	538	538	538	540	538	538	548	562	560
Number of Routine Samples Required	1	1	1	1	1	1	1	1	1	1	1	1

- Collect samples from representative points throughout the distribution system.
- Collect required repeat samples following an unsatisfactory sample. In addition, collect a sample from each operating groundwater source.
- For systems that chlorinate, record chlorine residual (measured when the coliform sample is collected) on the coliform lab slip.

Chemical Monitoring Requirements

Distribution Monitoring

Test Panel/Analyte	*# Samples Required*	*Compliance Period*	*Frequency*	*Last Sample Date*	*Next Sample Due*	
Lead and Copper	10	Jan 2020 - Dec 2022	standard - 3 year	09/25/2019	Aug 2022	
Asbestos	1	Jan 2020 - Dec 2028	standard - 9 year	12/23/2019	Jul 2021	
Total Trihalomethane (THM)	1	Jan 2020 - Dec 2020	reduced - 1 year	12/23/2019	***Jul 2020***	***Due Date***
Halo-Acetic Acids (HAA5)	1	Jan 2020 - Dec 2020	reduced - 1 year	12/23/2019	***Jul 2020***	***Due Date***

Component Inventory and Assessment

See: Asset Inventory and Replacement Schedule (Appendix 10)

This document on the Westside Water website is a comprehensive accounting of the Association's fixed assets and details a schedule for replacing them. This schedule is reviewed and updated every year by the incoming Board of Directors.

Water Rights

Westside Water Association: Water Right Self-Assessment Form for Small Water System Plan

Water Right Permit, Certificate, or Claim # *If water right is interruptible, identify limitation in yellow section below	WFI Source # If a source has multiple water rights, list each water right on separate line	Existing Water Rights Qi= Instantaneous Flow Rate Allowed (GPM or CFS) Qa= Annual Volume Allowed (Acre-Feet/Year) This includes wholesale water sold				Current Source Production – Most Recent Calendar Year Qi = Max Instantaneous Flow Rate Withdrawn (GPM or CFS) Qa = Annual Volume Withdrawn (Acre-Feet/Year) This includes wholesale water sold				10-Year Forecasted Source Production (determined from WSP) This includes wholesale water sold				20-Year Forecasted Source Production (determined from WSP) This includes wholesale water sold			
		Primary Qi Maximum Rate Allowed	Non-Additive Qi Maximum Rate Allowed	Primary Qa Maximum Volume Allowed	Non-Additive Qa Maximum Volume Allowed	Total Qi Maximum Instantaneous Flow Rate Withdrawn	Current Excess or (Deficiency) Qi	Total Qa Maximum Annual Volume Withdrawn	Current Excess or (Deficiency) Qa	Total Qi Maximum Instantaneous Flow Rate in 10 Years	10-Year Forecasted Excess or (Deficiency) Qi	Total Qa Maximum Annual Volume in 10 Years	10-Year Forecasted Excess or (Deficiency) Qa	Total Qi Maximum Instantaneous Flow Rate in 20 Years	20-Year Forecasted Excess or (Deficiency) Qi	Total Qa Maximum Annual Volume in 20 Years	20-Year Forecasted Excess or (Deficiency) Qa
1 G1-28778	SO6 (Canyon Well) S09 (Anderson Well Field S010 (Back 40)		130		150	49.5	80.5	33.28 ac-ft	116.7 ac-ft	75 gpm	55 gpm	39 ac-ft	111 ac-ft excess	90 gpm	45 gpm	44.82 ac-ft excess	105.18 ac-ft
2 S100526C	S01 (Sand Spring) SO3 (Well Pts 1-9) SO4 (Shinglemill Creek) S05 (Wells 1-9)	2 cfs (897.6 gpm)		250 ac-ft		31	866.6	12.79	237.21	25	872.6	12	238 (excess)	25	872.69	12	238
3 S1-02339C	S01 (Sand Spring) SO3 (Well Pts 1-9) SO4 (Shinglemill Creek) S05 (Wells 1-9)	0.05 cfs (22.4 gpm)		36.2		2	20.4	3.23	32.97	2	20.23	3.23	32.97	2	20.23	3.23	32.97
4																	
5																	
6																	
	TOTALS =	2.05 cfs (920.10 gpm)		286.2		82.5	139.5	49.3	236.9	102	120	54.33	231.87	117	105	60.05	226.15
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
N/A						

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 Current quantity purchased through intertie				10-Year Forecasted Purchase Forecasted quantity purchased through intertie				20-Year Forecasted Purchase Forecasted quantity purchased through intertie			
	Maximum Qi Instantaneous Flow Rate	Maximum Qa Annual Volume		Maximum Qi Instantaneous Flow Rate	Current Excess or (Deficiency) Qi	Maximum Qa Annual Volume	Current Excess or (Deficiency) Qa	Maximum Qi 10-Year Forecast	Future Excess or (Deficiency) Qi	Maximum Qa 10-Year Forecast	Future Excess or (Deficiency) Qa	Maximum Qi 20-Year Forecast	Future Excess or (Deficiency) Qi	Maximum Qa 20-Year Forecast	Future Excess or (Deficiency) Qa
1 N/A															
2															
3															
TOTALS =															
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:

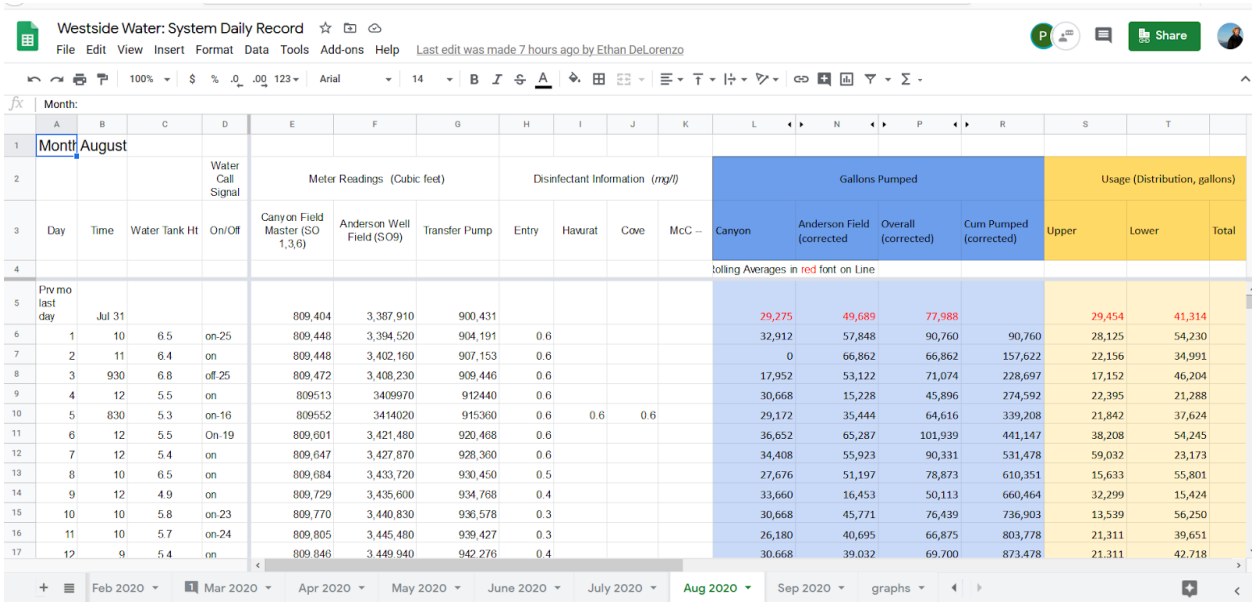
1. ERU established by Westside Water Board based on historical use data is 500g/connection/day. This ERU was confirmed by BHC Consultants as Professional Engineers
2. 10 year forecast assumes 40 additional connections
3. 20 year forecast assumes another 40 additional connections

Water Production and Sales

Island Water Management Inc maintains a daily record of water production on a google spreadsheet that is available to all WWA Board members and is actively used by the management team (selected Board members and IWM staff)

For illustrative purposes, the following is an image of a spreadsheet of the Westside Water: System Daily Record presented, due to space limitations, in two photos:

Photo 1,



Westside Water: System Daily Record

File Edit View Insert Format Data Tools Add-ons Help Last edit was made 7 hours ago by Ethan DeLorenzo

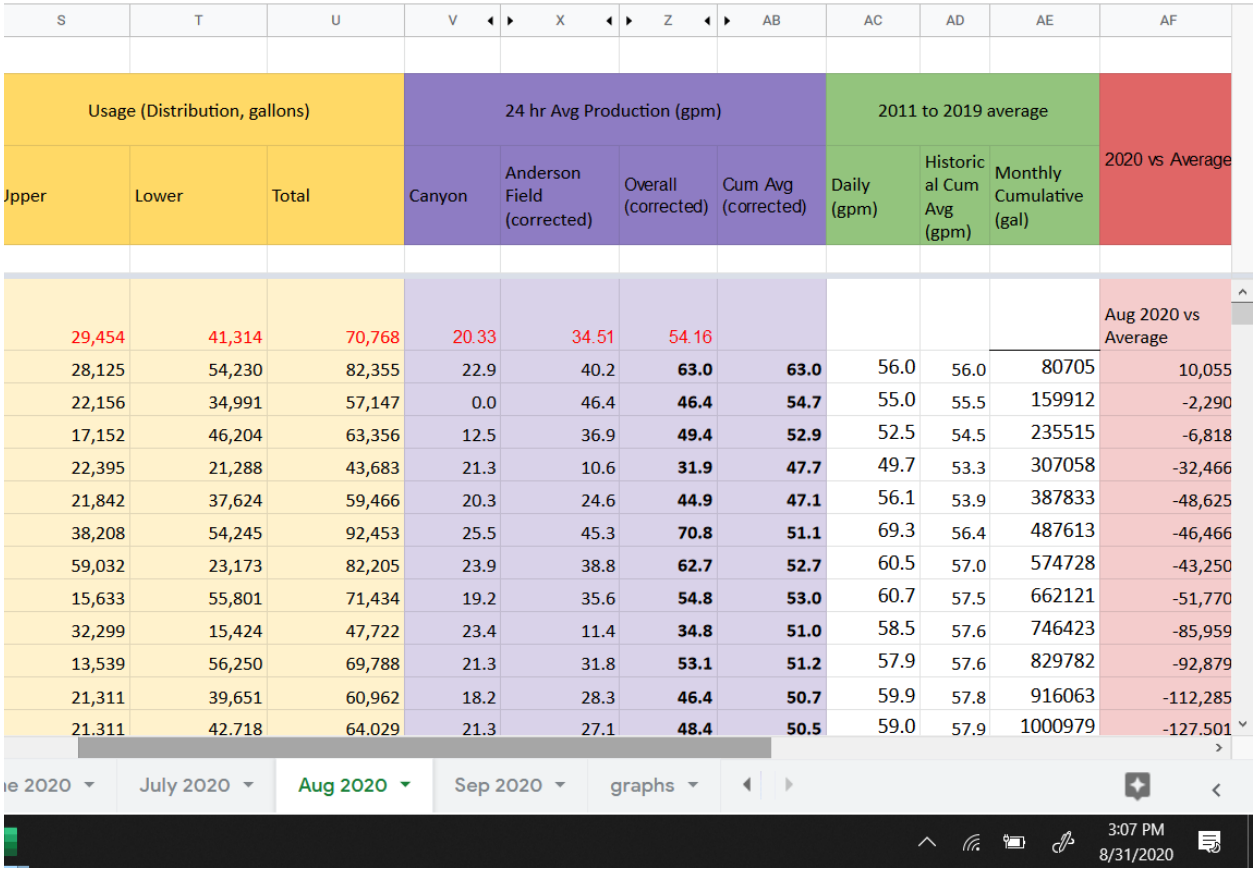
Share

Month:

	A	B	C	D	E	F	G	H	I	J	K	L	N	P	R	S	T
1	Month	August															
2				Water Call Signal	Meter Readings (Cubic feet)			Disinfectant Information (mg/l)				Gallons Pumped				Usage (Distribution, gallons)	
3	Day	Time	Water Tank Ht	On/Off	Canyon Field Master (SO 1,3,6)	Anderson Well Field (SO9)	Transfer Pump	Entry	Havurat	Cove	McC --	Canyon	Anderson Field (corrected	Overall (corrected)	Cum Pumped (corrected)	Upper	Lower	Total
4												Rolling Averages in red font on Line						
5	Prv mo last day	Jul 31			809,404	3,387,910	900,431					29,275	49,689	77,988		29,454	41,314	
6	1	10	6.5	on-25	809,448	3,394,520	904,191	0.6				32,912	57,848	90,760	90,760	28,125	54,230	
7	2	11	6.4	on	809,448	3,402,160	907,153	0.6				0	66,862	66,862	157,622	22,156	34,991	
8	3	930	6.8	off-25	809,472	3,408,230	909,446	0.6				17,952	53,122	71,074	228,697	17,152	46,204	
9	4	12	5.5	on	809513	3409970	912440	0.6				30,668	15,228	45,896	274,592	22,395	21,288	
10	5	830	5.3	on-16	809552	3414020	915360	0.6	0.6	0.6		29,172	35,444	64,616	339,208	21,842	37,624	
11	6	12	5.5	On-19	809,601	3,421,480	920,468	0.6				36,652	65,287	101,939	441,147	38,208	54,245	
12	7	12	5.4	on	809,647	3,427,870	928,360	0.6				34,408	55,923	90,331	531,478	59,032	23,173	
13	8	10	6.5	on	809,684	3,433,720	930,450	0.5				27,676	51,197	78,873	610,351	15,633	55,801	
14	9	12	4.9	on	809,729	3,435,600	934,768	0.4				33,660	16,453	50,113	660,464	32,299	15,424	
15	10	10	5.8	on-23	809,770	3,440,830	936,578	0.3				30,668	45,771	76,439	736,903	13,539	56,250	
16	11	10	5.7	on-24	809,805	3,445,480	939,427	0.3				26,180	40,695	66,875	803,778	21,311	39,651	
17	12	9	5.4	on	809,846	3,449,940	942,276	0.4				30,668	39,032	69,700	873,478	21,311	42,718	

Feb 2020 | Mar 2020 | Apr 2020 | May 2020 | June 2020 | July 2020 | Aug 2020 | Sep 2020 | graphs

Photo 2,



S	T	U	V	X	Z	AB	AC	AD	AE	AF
Usage (Distribution, gallons)			24 hr Avg Production (gpm)				2011 to 2019 average			
Upper	Lower	Total	Canyon	Anderson Field (corrected)	Overall (corrected)	Cum Avg (corrected)	Daily (gpm)	Historical Cum Avg (gpm)	Monthly Cumulative (gal)	2020 vs Average
29,454	41,314	70,768	20.33	34.51	54.16					Aug 2020 vs Average
28,125	54,230	82,355	22.9	40.2	**63.0**	**63.0**	56.0	56.0	80705	10,055
22,156	34,991	57,147	0.0	46.4	**46.4**	**54.7**	55.0	55.5	159912	-2,290
17,152	46,204	63,356	12.5	36.9	**49.4**	**52.9**	52.5	54.5	235515	-6,818
22,395	21,288	43,683	21.3	10.6	**31.9**	**47.7**	49.7	53.3	307058	-32,466
21,842	37,624	59,466	20.3	24.6	**44.9**	**47.1**	56.1	53.9	387833	-48,625
38,208	54,245	92,453	25.5	45.3	**70.8**	**51.1**	69.3	56.4	487613	-46,466
59,032	23,173	82,205	23.9	38.8	**62.7**	**52.7**	60.5	57.0	574728	-43,250
15,633	55,801	71,434	19.2	35.6	**54.8**	**53.0**	60.7	57.5	662121	-51,770
32,299	15,424	47,722	23.4	11.4	**34.8**	**51.0**	58.5	57.6	746423	-85,959
13,539	56,250	69,788	21.3	31.8	**53.1**	**51.2**	57.9	57.6	829782	-92,879
21,311	39,651	60,962	18.2	28.3	**46.4**	**50.7**	59.9	57.8	916063	-112,285
21,311	42,718	64,029	21.3	27.1	**48.4**	**50.5**	59.0	57.9	1000979	-127,501

ıe 2020 | July 2020 | Aug 2020 | Sep 2020 | graphs

3:07 PM 8/31/2020

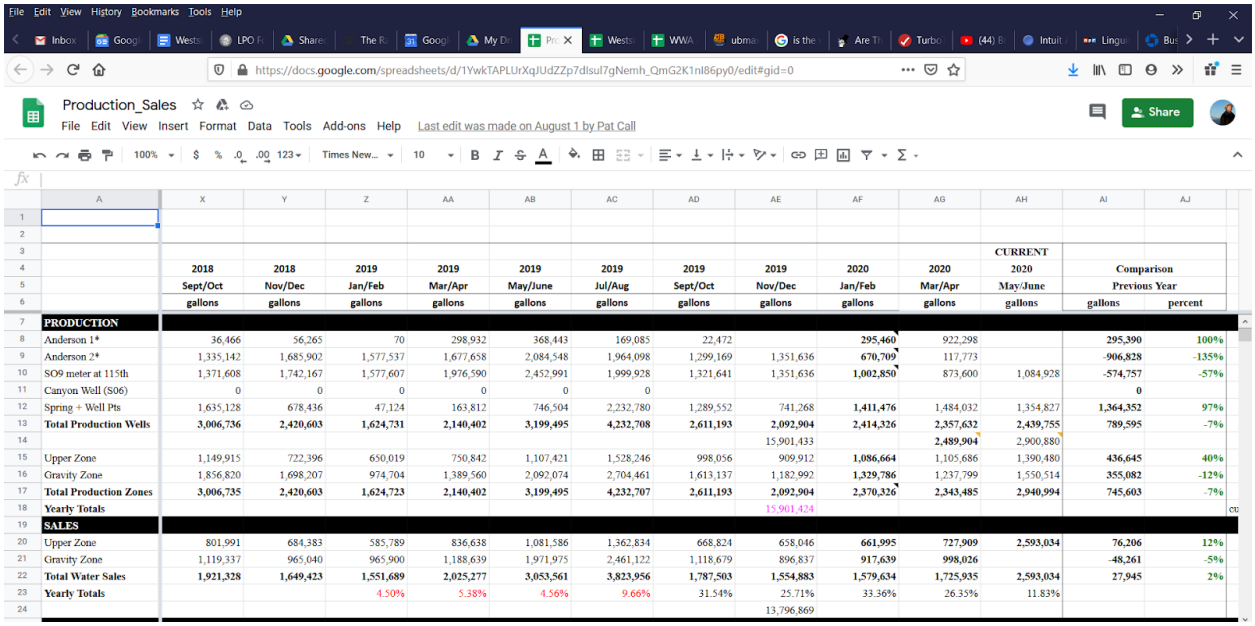
As can be seen, all sources are monitored and compared to previous years. Distribution to zones is reviewed daily as are the daily gpm per source and overall production.

This is the link to that dynamic document: [Westside Water: Daily System Record]

Similarly, a Production and Sales spreadsheet is reviewed no less than bi-monthly in coordination with the bi-monthly billing cycle of the system.

Here are two photos of that spreadsheet that reflect the comprehensive data collection:

Photo 1



Production_Sales

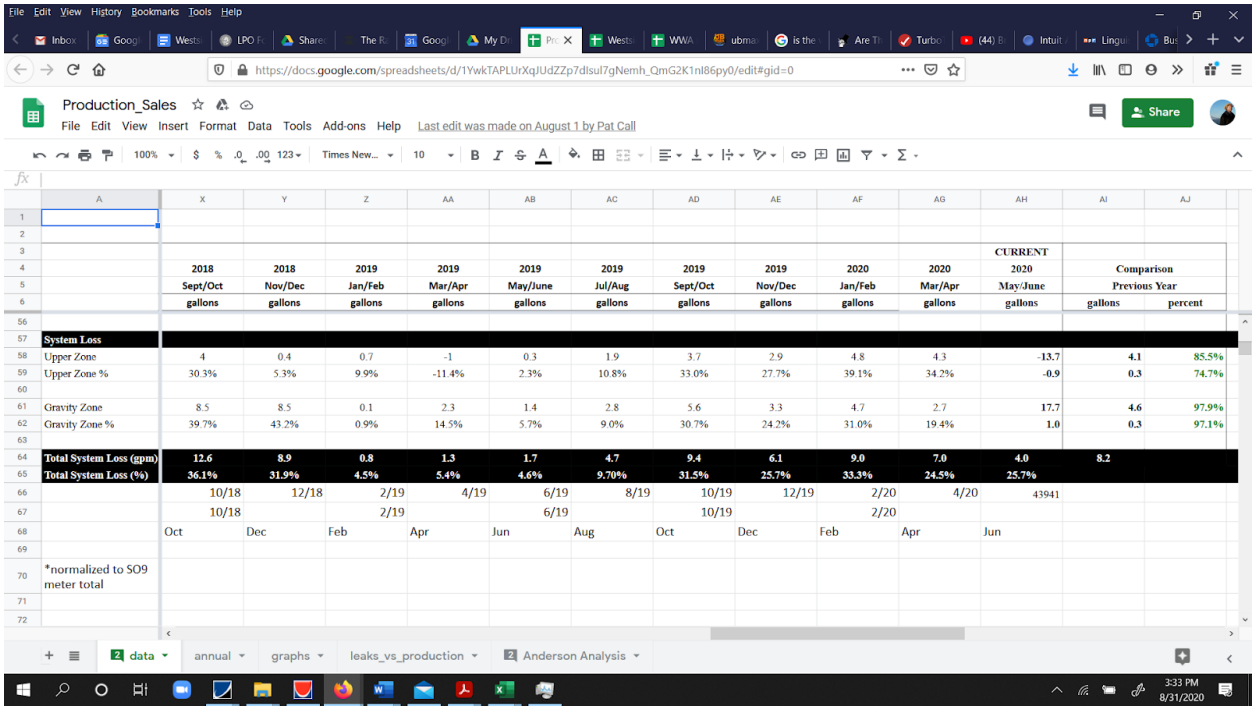
File Edit View Insert Format Data Tools Add-ons Help Last edit was made on August 1 by Pat Call

Share

https://docs.google.com/spreadsheets/d/1YwkTAPLUrXqJUdZZp7dlsul7gNemh_QmG2K1nl86py0/edit#gid=0

											CURRENT		
	2018	2018	2019	2019	2019	2019	2019	2019	2020	2020	2020	Comparison	
	Sept/Oct	Nov/Dec	Jan/Feb	Mar/Apr	May/June	Jul/Aug	Sept/Oct	Nov/Dec	Jan/Feb	Mar/Apr	May/June	Previous Year	
	gallons	gallons	gallons	gallons	gallons	gallons	gallons	gallons	gallons	gallons	gallons	gallons	percent
PRODUCTION													
Anderson 1*	36,466	56,265	70	298,932	368,443	169,085	22,472		295,460	922,298		295,390	100%
Anderson 2*	1,335,142	1,685,902	1,577,537	1,677,658	2,084,548	1,964,098	1,299,169	1,351,636	670,709	117,773		-906,828	-135%
SO9 meter at 115th	1,371,608	1,742,167	1,577,607	1,976,590	2,452,991	1,999,928	1,321,641	1,351,636	1,002,850	873,600	1,084,928	-574,757	-57%
Canyon Well (S06)	0	0	0	0	0	0						0	
Spring + Well Pts	1,635,128	678,436	47,124	163,812	746,504	2,232,780	1,289,552	741,268	1,411,476	1,484,032	1,354,827	1,364,352	97%
Total Production Wells	**3,006,736**	**2,420,603**	**1,624,731**	**2,140,402**	**3,199,495**	**4,232,708**	**2,611,193**	**2,092,904**	**2,414,326**	**2,357,632**	**2,439,755**	789,595	-7%
								15,901,433		**2,489,904**	2,900,880		
Upper Zone	1,149,915	722,396	650,019	750,842	1,107,421	1,528,246	998,056	909,912	**1,086,664**	1,105,686	1,390,480	436,645	40%
Gravity Zone	1,856,820	1,698,207	974,704	1,389,560	2,092,074	2,704,461	1,613,137	1,182,992	**1,329,786**	1,237,799	1,550,514	355,082	-12%
Total Production Zones	**3,006,735**	**2,420,603**	**1,624,723**	**2,140,402**	**3,199,495**	**4,232,707**	**2,611,193**	**2,092,904**	**2,370,326**	**2,343,485**	**2,940,994**	745,603	-7%
Yearly Totals								15,901,424					
SALES													
Upper Zone	801,991	684,383	585,789	836,638	1,081,586	1,362,834	668,824	658,046	**661,995**	727,909	2,593,034	76,206	12%
Gravity Zone	1,119,337	965,040	965,900	1,188,639	1,971,975	2,461,122	1,118,679	896,837	**917,639**	**998,026**		-48,261	-5%
Total Water Sales	**1,921,328**	**1,649,423**	**1,551,689**	**2,025,277**	**3,053,561**	**3,823,956**	**1,787,503**	**1,554,883**	**1,579,634**	**1,725,935**	**2,593,034**	27,945	2%
Yearly Totals			4.50%	5.38%	4.56%	9.66%	31.54%	25.71%	33.36%	26.35%	11.83%		
								13,796,869					

Photo 2



Production_Sales

https://docs.google.com/spreadsheets/d/1YwkTAPLUrXqJUdZZp7dlsuI7gNemh_QmG2K1nI86py0/edit#gid=0

	2018 Sept/Oct gallons	2018 Nov/Dec gallons	2019 Jan/Feb gallons	2019 Mar/Apr gallons	2019 May/June gallons	2019 Jul/Aug gallons	2019 Sept/Oct gallons	2019 Nov/Dec gallons	2020 Jan/Feb gallons	2020 Mar/Apr gallons	CURRENT 2020 May/June gallons	Comparison Previous Year gallons	Comparison Previous Year percent
System Loss													
Upper Zone	4	0.4	0.7	-1	0.3	1.9	3.7	2.9	4.8	4.3	-13.7	4.1	85.5%
Upper Zone %	30.3%	5.3%	9.9%	-11.4%	2.3%	10.8%	33.0%	27.7%	39.1%	34.2%	-0.9	0.3	74.7%
Gravity Zone	8.5	8.5	0.1	2.3	1.4	2.8	5.6	3.3	4.7	2.7	17.7	4.6	97.9%
Gravity Zone %	39.7%	43.2%	0.9%	14.5%	5.7%	9.0%	30.7%	24.2%	31.0%	19.4%	1.0	0.3	97.1%
Total System Loss (gpm)	**12.6**	**8.9**	**0.8**	**1.3**	**1.7**	**4.7**	**9.4**	**6.1**	**9.0**	**7.0**	**4.0**	**8.2**	
Total System Loss (%)	**36.1%**	**31.9%**	**4.5%**	**5.4%**	**4.6%**	**9.70%**	**31.5%**	**25.7%**	**33.3%**	**24.5%**	**25.7%**		
	10/18	12/18	2/19	4/19	6/19	8/19	10/19	12/19	2/20	4/20	43941		
	10/18		2/19		6/19		10/19		2/20				
	Oct	Dec	Feb	Apr	Jun	Aug	Oct	Dec	Feb	Apr	Jun		

*normalized to SO9 meter total

data | annual | graphs | leaks_vs_production | Anderson Analysis

As can be seen, there are several sheets listed along the bottom of the spreadsheet and named "annual" "graphs", "leaks vs production" that assist in analyzing the data of the spreadsheet.

A synopsis of the DSL relative to production and sales is as follows:

Year	2015	2016	2017	2018	2019
Production	17,661,102	16,884,053	15,956,957	17,768,515	15,901,433
Sales	15,317,730	14,498,635	14,603,263	14,812,526	13,796,869
Loss	2,343,372	2,385,418	1,353,694	2,955,989	2,104,564
% Loss	13.30%	14.10%	8.50%	16.60%	13.24%

Clarification regarding the above table and discussion of WWA plans to mitigate DSL.

The first Anderson Well (A1/S07) began production in summer 2015 with the second well (A2/S08) being added in the summer of 2016. Each of these two wells has an independent meter that is read roughly monthly. A single transmission line connects the Anderson Well Field (AWF) to the rest of supply coming from the Canyon Pump Station at SW 156th St and 115th Ave SW. A summing meter (S09)

is located at this junction and it has been this meter reading that we used to report the water pumped from the AWF on a bi-monthly basis. In January 2020 the S09 meter failed and was replaced with a new meter. Subsequent to replacing the S09 meter we started noticing production values for the AWF that didn't align with historical data and in July 2020 we ran some tests to determine that the new S09 meter was reading about 17% low. Continuing bi-monthly data collection showed additional non-normal results and on January 1, 2021 we replaced the S09 meter again. We ran a series of careful tests that showed that the S07 and S09 meters show identical values and the S08 meter is 4% below S09. Having now been alerted to the possibility of meters not being accurate we will monitor and calibrate our equipment regularly so that we don't incur this confusion going forward. The question remains as to how to look at our historical data. If we assume that S07 and S08 have been consistent over time (these meters have not been changed) and apply the algorithm [S09]=[S07]+1.04*[S08] we get the data in the table below. These data show a marked increase in Production values across most of the period and since 2020 has concluded since the original draft of the SWSMP was submitted, those data are included as well. Since the Sales amounts have not changed, the DSL numbers have increased from our earlier report.

Year	2015	2016	2017	2018	2019	2020
Production	17,707,741	17,341,596	17,281,896	18,825,335	17,127,703	18,306,487
Sales	15,317,730	14,498,635	14,603,263	14,812,526	13,796,869	14,841,455
Loss	2,390,011	2,842,961	2,678,633	4,012,809	3,330,834	3,465,032
% Loss	13.5%	16.5%	15.5%	21.3%	19.4%	18.9%

Given the work that we have done over the past 5 years to reduce leakage we are somewhat skeptical of these data. But assuming they are correct we would offer the following explanations:

1) We have had some known and documented large leaks in service lines most of which were addressed promptly but still may contribute to substantial amounts of water loss (100K's of gallons) between diagnosis, discovery and repair.
2) We have had accidents (e.g. a heavy truck driving over a meter housing) that likewise have contributed major short term losses. These are repaired quickly because the diagnosis and discovery phases are short.

3) **We do see weather induced leakage (e.g. freezing/earth slippage) but this mostly occurs on metered water.**
4) **Because our baseline leakage rate appears to be at least 3 gpm and if this amount of leakage were coming from one source it would likely be discoverable, we hypothesize that there are a number of smaller leaks in the service lines and mains.**

Addressing the question regarding WWA's plan to get its DSL below 10%:

1) **As described above on page 41, WWA has a daily tracking page that compares the previous day's production against historical norms. This page is useful in identifying large leaks especially in the wetter season when consumption is low and stable. It is less useful in hotter, dryer periods when consumption can fluctuate substantially.**
2) **WWA has installed nine leak detection meters. There are leak detection meters on 5 of six spur mains and the remaining meters are installed on the distribution mains in such a way as to take advantage of downstream valves to isolate zones. When a major leak is suspected these meters can either rule out or verify the section of the system that is responsible. Several sections of the system do not have this coverage and at best the leak detection meters are only a crude tool for identifying the precise source of a leak.**
3) **We recently have started working with Evergreen Rural Water of Washington (ERWOW) to take advantage of their sonic leak detection service. One trial test of 0.8 miles of main with service connections discovered one minor leak in a main. We feel that using this approach routinely will help us find the "several smaller leaks" that we think make up our baseline DSL.**

In summary, WWA is extremely eager to reduce its DSL and believes that the tools described above in combination will do so. One additional note: all of the demand numbers INCLUDE the DSL so when calculating adequacy of supply DSL is NOT an additional factor.

Future Water Demand

WWA annually receives about 6 inquiries for water availability and approximately 1.5 private wells are drilled within the service district. The Association's by-laws stipulate that any new shares be first offered to existing members. In addition the By Laws restrict growth in new membership to 4% per year. Since the Association hasn't offered new

shares to members or the community at large since 1988, the exact demand for new shares is unknown.

WWA has completed the purchase of a newly drilled private well. The submittal for Source Approval of the Back 40A Well was submitted separately and approved by DOH with the understanding that WWA will submit this SWSMP planning document. With the approval of this additional source, the ability of Westside Water to resolve not only a historical problem of being oversubscribed by 6 connections but also to provide for as many as 245 total connections within its Service Area is very likely. The following review of system production capacity, historical usage and accompanying chart present the rationale for increasing the number of connections granted to the system to 245.

Adequacy of WWA system to meet peak daily water demand

WWA has established its maximum ERU value at 500 gpd/connection per day based on historical usage patterns. 500 gpd/connection equates to a 80.9 gpm consumption rate. WWA believes that the three day average value for production is most indicative of peak consumption and thus the peak values observed over the past four years equate to an ERU of 460 gpd/connection -- picking 500 gpd as our metric provides some conservativism. A summary of the supply/demand situation for WWA is shown in the table below. This table includes the Back 40A well as part of the supply side and shows that at the established maximum ERU, WWA could service up to 259 connections without any blending of the SO6 (Canyon) well with its elevated As levels.

	# of connections								
GPD/connection	228	233	240	245	250	255	260	270	280
300	47.5	48.5	50.0	51.0	52.1	53.1	54.2	56.3	58.3
350	55.4	56.6	58.3	59.5	60.8	62.0	63.2	65.6	68.1
400	63.3	64.7	66.7	68.1	69.4	70.8	72.2	75.0	77.8
450	71.3	72.8	75.0	76.6	78.1	79.7	81.3	84.4	87.5
500	79.2	80.9	83.3	85.1	86.8	88.5	90.3	93.8	97.2
550	87.1	89.0	91.7	93.6	95.5	97.4	99.3	103.1	106.9
600	95.0	97.1	100.0	102.1	104.2	106.3	108.3	112.5	116.7
650	102.9	105.2	108.3	110.6	112.8	115.1	117.4	121.9	126.4

		gpm		As conc		
Sources		ind	cum	ind	cum	current
A2		35	35.0	2	2	
A1		15	50.0	2	2	
Well Points		20	70.0	2	2	
interference losses		-5	65.0	2	2	
Back 40A		25	90.0	4.3	2.6	
SO6 Blending (@%)	5	4.5	94.5	33	4.1	
	10	4.5	99.0	33	5.4	
	15	4.5	103.5	33	6.6	
	30	13.5	117.0	33	9.6	

As this table may be an unconventional way to view supply vs demand, here is an explanation. The supply side is the lower part of the figure with the sources, their contribution and their Arsenic concentrations. A cumulative (cum) column adds the flow contributions and calculates the resulting Arsenic concentrations. The individual source values for A2, A1 and the Well Points are accurate for each measured alone, however when they are all on there is some interference that reduces the total production by 5 gpm. So with the Back 40A well and without blending, WWA has a production capacity of 90 gpm and with blending up to 8% with the SO6 (Canyon Well) source to a maximum capacity of 97 gpm while keeping the combined As concentration below 5%.

The top table shows the number of potential connections in columns against values for the maximum ERU in the rows. Each intersection between the number of connections and ERU shows the calculated average flow (in gpm) required to fulfill that connection. The cell coloring then maps that flow back to the WWA supply table. The light green coloration shows WWA capacity with the Back 40A well addition but without reliance on any blending. The red cells indicate connection/ERU combinations that WWA cannot satisfy. Other colors indicate cases where blending is required for WWA to be able to meet the condition.

Consistent with the analysis presented above and the calculations contained in the following section regarding Worksheet 4-1 from the Water System Design Manual WWA is requesting that DOH increase the number of approved shares from 227 to 259.

New Section relating to Worksheet 4-1

Specific Single-Family Residential Connection Criteria (measured or estimated demands)

Average Day Demand (ADD): 208[1] gpd/ERU Maximum Day Demand (MDD) 500 gpd/ERU

Water System Connections Correlated to ERUs			
Service Classification	**Total MDD for the classification, gpd**	**Total # Connections in the classification**	**ERUs**
Residential			
Single-family	116,000	232	232
Multifamily			
Nonresidential			
Industrial			
Commercial			
Governmental			
Agricultural			
Recreational			
Other (2 churches, youth hostel)	1,500	3	3
DSL		N/A	
Other (identify)			
Total existing ERUs (Residential + Nonresidential + DSL + Other) =			235

Service Capacity as ERUs and Gallons Per Day		
Water System Component (Facility)	**ERU Capacity for Each Component**	**GPD Capacity for Each Component**
Source(s)[2]	259	129600
Treatment[3]	259	129600
Equalizing Storage[4]	263	20366
Standby Storage[5]	263	52528
Transmission[6]	337	168500

Water Rights (Qa and Qi) Qa Qi	 511 639	 255500 319500
Other (specify)		
Water System Service Capacity (ERUs) = (based on the limiting water system component shown above)	259	

Footnotes:

(1) The ADD is based on the 6 years of annual production data in the table on page 50 above and 233 connections as the actual number of connections through that period.

(2) Assumes peak daily average supply rate from S01, S03, S07, S08 and S10 of 90 gpm. Although WWA has DOH approval to blend up to 10 ppb As (117 gpm total production) and the board has approved blending to 5 ppb (97 gpm total production), for the purposes of this document we have chosen the more conservative 90 gpm on which to base this submission.

(3) Treatment is from Chlorination for all sources plus Manganese filtration for S10. Treatment scales with supply.

(4) Peak hourly demand calculated at 225.8 gpm using Equation 3-1 and N=263.

Equation 3-1: Determine PHD

$$PHD = (ERU_{MDD} / 1440)\,[(C)(N) + F] + 18$$

Where

PHD = Peak Hourly Demand, total system (gallons per minute)
C = Coefficient Associated with Ranges of ERUs
N = Number of ERUs based on MDD
F = Factor Associated with Ranges of ERUs
ERU_{MDD} = Maximum Day Demand per ERU (gallons per day)

Table 3-1 identifies the appropriate coefficients and factors to substitute into Equation 3-1 for the ranges of single-family residential connections:

Table 3-1

Number of ERUs (N)	C	F
15 – 50	3.0	0
51 – 100	2.5	25
101 – 250	2.0	75
251 – 500	1.8	125
> 500	1.6	225

The required Equalizing Storage is then defined by Equation 7-1. And is found to be

20,366 gallons. Since Table 3-1 has a break point very close to our operating case, the math is influenced substantially by the choice of F and C. For conservatism we have chosen to use F = 125 and C = 1.8.

Equation 7-1:

$$ES = (PHD - Q_S)(150 \text{ minutes}), \text{ but in no case less than zero}$$

Where:

ES	=	Equalizing storage component, in gallons
PHD	=	Peak hourly demand, in gpm, as defined in Chapter 3 of this manual
Q_S	=	Sum of all installed and active supply source capacities except emergency supply, in gpm. See Section 7.1.3 for definition of sources as it applies to this equation.

(5) Standby storage is calculated using the ADD of 208 gpd per ERU. Using this standard yields a value of 54,717 gallons for 263 ERU. 263 ERUs were chosen for both standby and equalizing storage as the maximum values allowed while keeping fire suppression storage above sixty thousand gallons; a value confirmed by the Vashon Fire Department to be adequate.

(6) There are 5 miles of mains in the WWA system all of them are 4", 6" or 8". WWA doesn't foresee any limitation due to transmission.

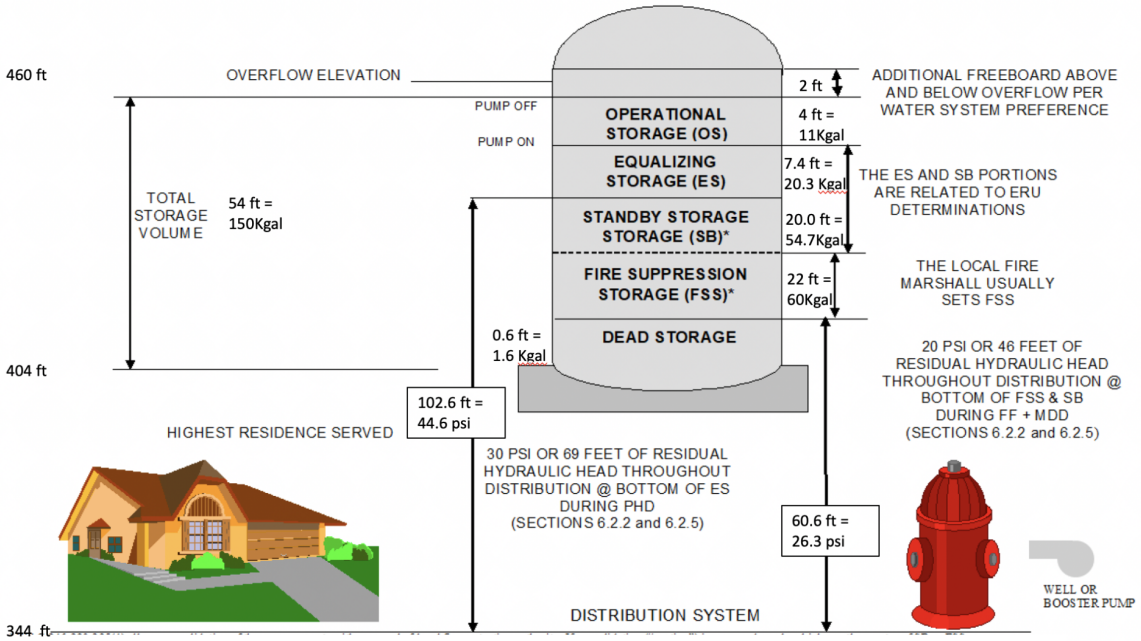
Discussion

WWA has two zones in its distribution system: an upper (induced pressure zone) and a lower (gravity fed) zone. Approximately ⅓ of WWA users are in the pressure induced zone. There are 4 pumps capable of pressurizing this zone (pump locations: Cove tank station, steel tank station, Anderson Well Field and Canyon station) and one of these 4 (the Anderson Well Field) has a propane backup generator in the case of power failure. For the purposes of this analysis only the gravity zone is considered.

The top of the steel tank is at 460 feet above sea level. For the lower/gravity zone there are 5 properties that don't meet the height requirements specified in the water system design manual. Three of these (directly to the west of the steel tank and at a meter elevation of 387 feet) are new construction. One property directly to the north of the steel tank (and across 156th St) has been built since the steel tank was constructed and at 393 feet meter elevation is the most vulnerable with respect to water level. The fifth property which is to the

northwest of the steel tank and also across 156th St has a meter elevation of 370 feet which meets the 69 foot (30 psi) Equalizing Storage criterion but does not meet the 46 foot (20 psi) fire flow criterion. Interestingly neither of the properties north of 156th St have ever complained about low water pressure. To remediate this situation WWA will either install individual pressure tanks at these properties or move some or all of them to the upper (pressurized) zone. See Figure 7-1 for details.

Figure 7-1: Reservoir Storage Components



Water Use Efficiency

Water Use Efficiency
Annual Performance Report - 2019

WS Name: WESTSIDE WATER ASSN Water System ID# : 94950 WS County: KING

Report submitted by: *Douglas Dolstad*

Meter Installation Information:

Estimate the percentage of metered connections: *100%*

If not fully metered - Current status of meter installation:

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: *01/01/2019* To *12/31/2019*

Incomplete or missing data for the year? *No*

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	*15,901,433* gallons
Authorized Consumption (AC) – Annual Volume	*13,796,869* gallons
Distribution System Leakage – Annual Volume TP – AC	*2,104,564* gallons
Distribution System Leakage – Percent DSL = [(TP – AC) / TP] x 100	*13.2 %*
3-year annual average	*12.1 %*

Goal-Setting Information:

Date of Most Recent Public Forum: *05/30/2020* Has goal been changed since last performance report? *No*

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

WUE Goals:

Customer Goal (Demand Side):

Capital Asset Replacement (CAR)

(See also page 37 of this document for a complete list of system assets and replacement schedule.)

Capital Asset Replacement Program

The CAR program is a long term commitment to accrue the funds for and replace infrastructure against a depreciation schedule for all capital components. As of 2020, WWA allocates $45,000/year to this program. Over 90 major system components are tracked in this program. A high level summary of the CAR program is shown in the table below.

Approximate Capital Asset Valuation by major category				
Component	Total Cost	% of Total	Lifetime (yrs)	Cost/year
Mains	$2,769,058	76%	80	$34,613
Meters	$68,100	8%	20	$3,405
Storage Tanks	$300,000	7%	100	$3,000
Structures	$80,000	4%	50	$1,600
Pumps	$30,000	3%	20	$1,500
Hydrants	$42,000	2%	60	$700
Valves	$50,000	1%	100	$500
Total	$3,339,158			$45,318

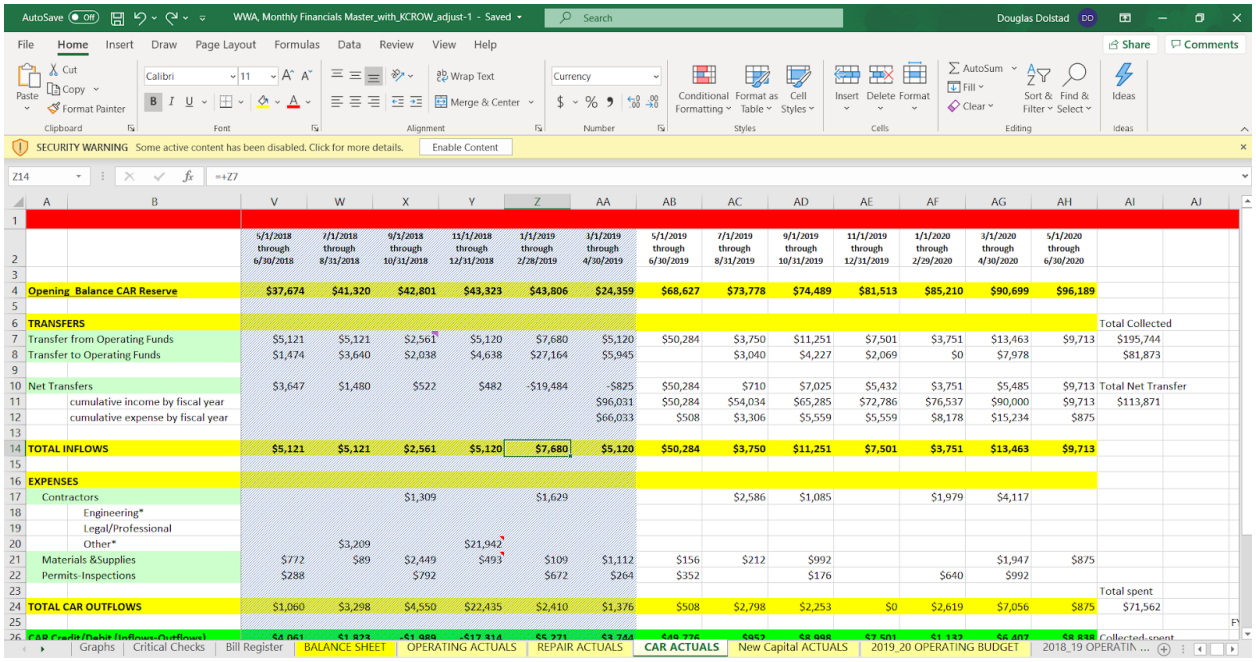
Near Term Planned Improvements

Short-Lived Asset Replacement or Other Improvement Project	Estimated Cost	Anticipated Year
200' from SW 158th thence 200' South, 3 services replaced	$ 25,000	2020
800' to complete Cove Road main replacement project	$ 67,000	2021
Replace 115th SO9 Meter	$ 800	2020

Financial Viability/Capacity

Westside Water has taken an active stance regarding its financial health. As the following spreadsheet shows, multiple layers of analysis occur on at least a bi-monthly schedule and are presented at regular WWA Board meetings.

Monthly financial spreadsheet:



		V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
2		5/1/2018 through 6/30/2018	7/1/2018 through 8/31/2018	9/1/2018 through 10/31/2018	11/1/2018 through 12/31/2018	1/1/2019 through 2/28/2019	3/1/2019 through 4/30/2019	5/1/2019 through 6/30/2019	7/1/2019 through 8/31/2019	9/1/2019 through 10/31/2019	11/1/2019 through 12/31/2019	1/1/2020 through 2/29/2020	3/1/2020 through 4/30/2020	5/1/2020 through 6/30/2020	
4	Opening Balance CAR Reserve	$37,674	$41,320	$42,801	$43,323	$43,806	$24,359	$68,627	$73,778	$74,489	$81,513	$85,210	$90,699	$96,189	
6	TRANSFERS														Total Collected
7	Transfer from Operating Funds	$5,121	$5,121	$2,561	$5,120	$7,680	$5,120	$50,284	$3,750	$11,251	$7,501	$3,751	$13,463	$9,713	$195,744
8	Transfer to Operating Funds	$1,474	$3,640	$2,038	$4,638	$27,164	$5,945		$3,040	$4,227	$2,069	$0	$7,978		$81,873
10	Net Transfers	$3,647	$1,480	$522	$482	-$19,484	-$825	$50,284	$710	$7,025	$5,432	$3,751	$5,485	$9,713	Total Net Transfer
11	cumulative income by fiscal year						$96,031	$50,284	$54,034	$65,285	$72,786	$76,537	$90,000	$9,713	$113,871
12	cumulative expense by fiscal year						$66,033	$508	$3,306	$5,559	$5,559	$8,178	$15,234	$875	
14	TOTAL INFLOWS	$5,121	$5,121	$2,561	$5,120	$7,680	$5,120	$50,284	$3,750	$11,251	$7,501	$3,751	$13,463	$9,713	
16	EXPENSES														
17	Contractors			$1,309		$1,629			$2,586	$1,085		$1,979	$4,117		
18	Engineering*														
19	Legal/Professional														
20	Other*		$3,209		$21,942										
21	Materials &Supplies	$772	$89	$2,449	$493	$109	$1,112	$156	$212	$992			$1,947	$875	
22	Permits-Inspections	$288		$792		$672	$264	$352		$176		$640	$992		
23															Total spent
24	TOTAL CAR OUTFLOWS	$1,060	$3,298	$4,550	$22,435	$2,410	$1,376	$508	$2,798	$2,253	$0	$2,619	$7,056	$875	$71,562

Westside has two separate checking accounts, one for General operations and the other for Capital Asset Replacement (CAR) In addition, funds are stored in CD's and financially managed and reviewed on a regular basis. Accounts are reconciled monthly and funds accruing for CAR are regularly reviewed with the amount being collected and adjusted as needed.

In addition to the two checking accounts, Westside has created and tracks funds into two more reserves: Repairs and Emergency as seen in this typical financial report:

8:06 AM
07/16/20
Cash Basis

Westside Water Association
All WWA Bank accnts (Detail)
As of July 15, 2020

	Type	Date	Memo	Split	Paid Amount	Balance
3250 Emergency Savings Acct						30,699.07
CD-2440 Emergency Fund						25,693.92
Total CD-2440 Emergency Fund						25,693.92
3250 Emergency Savings Acct - Other						5,005.15
	Deposit	05/26/2020	Interest	Interest Earned	0.04	5,005.19
	Deposit	06/23/2020	Interest	Interest Earned	0.03	5,005.22
Total 3250 Emergency Savings Acct - Other					0.07	5,005.22
Total 3250 Emergency Savings Acct					0.07	30,699.14
3496 Repairs Savings Acct						7,795.49
	Deposit	05/26/2020	Interest	Interest Earned	0.07	7,795.56
	Transfer	05/28/2020	Funds Transfer to 9496 Repairs	100 · Checking, Operating Account	4,205.00	12,000.56
	Deposit	06/26/2020	Interest	Interest Earned	0.09	12,000.65
Total 3496 Repairs Savings Acct					4,205.16	12,000.65
CAR Master category						15,173.80
CD-2457 CAR						15,173.80
Total CD-2457 CAR						15,173.80
200 · CAR - Checking 9406						0.00
	Deposit	06/11/2020	Account Opening Balance	Equity	0.00	0.00
	Transfer	06/11/2020	Branch Account Transfer 3488 to CAR 9406	CAR Savng Accnt (Closed)	84,765.31	84,765.31
	Transfer	06/15/2020	Branch Transfer from CAR 9406 to 6146	100 · Checking, Operating Account	-84,765.31	0.00
	Check	06/15/2020	CAR checking 9406 via deposit	100 · Checking, Operating Account	84,765.31	84,765.31
Total 200 · CAR - Checking 9406					84,765.31	84,765.31
Total CAR Master category					84,765.31	99,939.11
CAR Savng Accnt (Closed)						75,051.64
	General Journal	05/26/2020	Adjustment	Discrepancies	0.00	75,051.64
	Deposit	05/26/2020	Interest	Interest Earned	0.67	75,052.31
	Transfer	05/28/2020	Funds Transfer	Account	5,963.00	81,015.31
	Transfer	06/11/2020	Funds Transfer	Account	3,750.00	84,765.31
	Transfer	06/11/2020	Funds Transfer Branch Account Transfer to new CAR acct 9406	200 · CAR - Checking 9406	-84,765.31	0.00
Total CAR Savng Accnt (Closed)					-75,051.64	0.00

Page 1 of 2

Rate Card

WWA operates on a May to April Fiscal calendar publishing an annual budget each May at an Annual Membership meeting. As a non-profit WWA collects fees through water sales that fund both operations and a long term Capital Asset Replacement program. Expenses and fees are adjusted annually in accordance with the April Federal Consumer Price Index. As illustrated in the following table, water usage fees escalate as individual usage increases for each bi-monthly billing cycle. This escalation is designed to incentivize water conservation as well as transfer a larger share of the system costs to the higher usage members who drive system infrastructure costs.

		2012/13	2016/18	2017/18	2018/19	2019/20	2020/21
	Base Rate	$57	$61.56	$63.04	$69.05*	$70.15*	$70.21*
Cost ($/cubic foot)	> 600 cf	$0.017	$0.0184	$0.0188	$0.0193	$0.0196	$0.0200
	> 1000 cf	$0.019	$0.0205	$0.0209	$0.0214	$0.0218	$0.0221
	> 2000 cf	$0.029	$0.0313	$0.0321	$0.0329	$0.0335	$0.0340
	> 5000 cf	$0.056	$0.0605	$0.0619	$0.0634	$0.0645	$0.0656
	> 10000 cf	$0.11	$0.1188	$0.1216	$0.1245	$0.1266	$0.1288
	> 19000 cf	$0.12	$0.1296	$0.1327	$0.1359	$0.1382	$0.1406

*** includes $4.50 King County Right of Way Fee**

New capital projects are subject to an assessment charge separate from the sale of water.

Budget Planning

The annual Operating budget is adjusted annually by the Board and presented to the Membership at the Annual Meeting of Members (late May) The operations budget is remarkably consistent year to year but is COLA-adjusted annually. The Capital Asset Replacement (CAR) is also reviewed, at a minimum, annually and adjusted as needed.

Budget planning is reflected in previously included "Monthly Financial Spreadsheet".

Appendix 1

2016-2019 Peak Daily Avg Production (gpm)

1-day avg	3-day avg	7-day avg
83.6	73.4	69.6
82.2	72.7	67.9
80.2	71.9	67.7
79.3	71.3	66.2
79.2	70.7	66.1
78.7	70.3	65.6
78.6	70.0	65.6
78.5	69.2	65.5
77.8	68.3	65.5
76.7	68.1	65.4
76.4	67.9	65.2
75.4	67.7	65.2
74.7	67.7	65.1
74.3	67.4	65.0
73.9	66.9	64.8
73.7	66.5	64.6
73.7	66.4	64.5
73.5	65.8	64.2
72.7	65.5	63.9
72.1	65.4	63.7
72.1	64.9	63.4
71.9	64.9	63.1
71.9	64.6	63.1

71.7	64.2	62.6
71.4	64.2	62.6
70.9	64.1	62.5
70.7	64.1	62.5
69.0	63.9	62.3
68.9	63.8	62.3
68.5	63.6	61.9
67.8	63.1	61.9
67.7	62.5	61.8
67.6	62.4	61.4
67.6	62.4	61.1
67.6	62.2	61.1
67.5	62.1	61.0
67.1	61.9	60.9
67.1	61.9	60.9
66.4	61.7	60.6
66.2	61.7	60.4
66.1	61.5	60.2
66.1	61.5	60.2
66.0	61.5	59.6
65.6	61.3	59.6
65.4	61.2	59.3
65.3	60.6	59.2
65.2	60.6	59.2
65.2	60.5	59.1
65.0	60.5	59.0
65.0	60.4	58.9

Appendix 2: Water Facilities Inventory Form

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

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter: 2
Updated: 01/02/2020

Printed: 7/28/2020
WFI Printed For: On-Demand
Submission Reason: Contact 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
94950 0	WESTSIDE WATER ASSN	KING	A	Comm

6. PRIMARY CONTACT NAME & MAILING ADDRESS	7. OWNER NAME & MAILING ADDRESS
DOUGLAS P. DOLSTAD [MANAGER] ISLAND WATER MANAGEMENT INC 11205 SW CORBIN BEACH ROAD #2 VASHION ISLAND, WA 98070	WEST SIDE WATER ASSN JEFF THURLOW PO BOX 267 VASHON, WA 98070 PRESIDENT
STREET ADDRESS IF DIFFERENT FROM ABOVE	**STREET ADDRESS IF DIFFERENT FROM ABOVE**
ATTN ADDRESS CITY STATE ZIP	ATTN ADDRESS 11605 SW 156TH CITY VASHON ISLAND STATE WA ZIP 98070

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (206) 715-3805		Owner Daytime Phone: (206) 994-0464 x6	
Primary Contact Mobile/Cell Phone: (206) 715-3805		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone: (xxx)-xxx-xxxx		Owner Evening Phone:	
Fax:	E-mail: xxxxxxxxxxxxxxxxxxx	Fax: (206) 567-4568	E-mail: xxxxxxxxxxxxxxxxxxx

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [x] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number:

12. WATER SYSTEM CHARACTERISTICS (mark all that apply)

[ ] Agricultural	[ ] Hospital/Clinic	[x] Residential
[x] Commercial / Business	[ ] Industrial	[ ] School
[ ] Day Care	[ ] Licensed Residential Facility	[ ] Temporary Farm Worker
[ ] Food Service/Food Permit	[x] Lodging	[x] Other (church, fire station, etc.):
[ ] 1,000 or more person event for 2 or more days per year	[ ] Recreational / RV Park	

13. WATER SYSTEM OWNERSHIP (mark only one)				14. STORAGE CAPACITY (gallons)
[x] Association	[ ] County	[ ] Investor	[ ] Special District	259,000
[ ] City / Town	[ ] Federal	[ ] Private	[ ] State	

- 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
94950 0	WESTSIDE WATER ASSN	KING	A	Comm

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)		220	227
A. Full Time Single Family Residences (Occupied 180 days or more per year)	209		
B. Part Time Single Family Residences (Occupied less than 180 days per year)	11		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
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		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	2	2	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	3	3	0
28. TOTAL SERVICE CONNECTIONS		225	227

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or more days per year? 520

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?					10	22	22	22	10			
B. How many days per month are they present?					5	20	20	20	5			

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?	550	550	550	550	800	800	800	800	600	550	550	550
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

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: _____

Appendix 3, Annual Operating Permit

Here is a summary of what each operating permit color signifies:

Permit Color	Compliance Parameters
Green	**The system is in substantial compliance with the operating permit criteria in WAC 246-294-040(2)(9).**
Yellow	**One or more of the following conditions exist:** ● **The system failed to comply with water system plan requirements (WAC 246-290-100).** ● **The system failed to comply with water system financial viability requirements (RCW 70.119A.100 and WAC 246-290-100(4)(h)).** ● **The system failed to comply with operator certification requirements (246-292 WAC).** ● **The system failed to comply with coliform or inorganic chemical monitoring requirements (WAC 246-290-300).** ● **The system failed to comply with inorganic or volatile organic chemical MCLs (WAC 246-290-310).**
Red	**One or more of the following conditions exist:** ● **The system is under a Health Order issued under WAC 246-290-050.** ● **The system is in violation of a departmental order (WAC 246-290-050) or federal administrative order (section 1414(g) of the Safe Drinking Water Act).** ● **The system is an unresolved State Significant Non-Complier (SSNC) (WAC 246-294-040).**
Blue	**One or more of the following conditions exist:** ● **The system exceeded the maximum number of connections approved by us.** ● **The system has not received design approval from us.**

Annual Operating Permit (from DOH Sentry Internet website)

Last Permit Color Issued: Green
Last Permit Issued Date: 9/1/2020

Last Permit Issued Definition: Green: Systems in this category are considered adequate for existing uses and adding new service connections up to the number of approved service connections.

Current Color: Blue **Current Color is what the calculated permit color would be based on information as of 8/27/2020**

Current Color Definition: Blue: Systems in this category are considered adequate for existing uses but are not considered adequate for adding new service connections.

The inadequacy cited above is related to a needed update of the planning documents that pertain to Westside Water. That is the purpose of this submittal.

Appendix 4. DOH response and comments 2/9/21

State of Washington
DEPARTMENT OF HEALTH
NORTHWEST DRINKING WATER REGIONAL OPERATIONS
20425 72nd Avenue South, Suite 310 • Kent Washington 98032-2388

February 9, 2021

DOUG DOLSTAD
IWM, INC.
11205 SW CORBIN RD. #2
VASHON WA 98070

Subject: Westside Water Assoc., ID# 94950
King County
Water System Plan Review - 2020
Submittal #20-1013

Dear Mr. Dolstad:

Thank you for submitting the Small Water System Management Program (SWSMP) for the Westside Water Association (the Association), received in this office on October 22, 2020 by email. We have reviewed the plan and offer the following comments. These comments must be adequately addressed prior to approval of the SWSMP.

We compliment you on a very well done Planning document.

System Description

1. Identify the Association's Retail Service Area (RSA) both on your service area map accompanied by a narrative description. A water utility has a "Duty to Serve" any new request for water within that identified RSA. This is a requirement of the Municipal Water Legislation and in part helps assure that a water utility'= water rights remain in good standing.

2. Provide this document to the King County Technical Review Committee for their review.

3. Prior to SWSMP approval, provide an adoption ordinance from the King County Council.

Basic Planning Data & System Analysis

4. Capacity seems to be based on source production alone. Include,
   a. Engineer's stamp
   b. Demand calculations (residential and non-residential)
      i. Average day demand.
      ii. Maximum day demand (already shown, 500gpd per connection).
      iii. Peak hour demand.

c. Calculate equivalent residential units (ERUs) based on the following and identify the limiting factor,
   i. Source physical capacity (it looks like this would be based on 90gpm, not including S06).
   ii. Source legal capacity (water rights).
   iii. Storage.
   iv. Treatment (this is probably the same as the source physical capacity).
d. Account for distribution system leakage.
e. Does the existing distribution system offer any limitations to serving the proposed 245 connections?

Water Use Efficiency Program (WUE) and Water Rights Assessment

Has Dept. of Ecology reviewed this Planning document? Respond to any issues they may have raised.

5. The 3-year average distribution system leakage rate exceeds 10%. Please include a water-loss control action plan.

Source Protection
No comment.

Operations & Maintenance: Cross-Connection Control Program

6. Consider revisiting WAC 246-290-490 and DOH publication 331-234 *Guidance Document: Cross-Connection Control for Small Water Systems*. Check the WWA Cross Connection Policy for completeness and update as appropriate (Backflow Incident Response Plan, for example).

7. Page 14 of the SWSMP references customers with auxiliary water sources. Consider including the Associations' requirements for properties with an auxiliary water source in the WWA program/policy. The policy for new service connections can be different from existing service connections. Many systems elect to require double check valve assemblies, reduced pressure backflow assemblies, or even decommission of auxiliary water source for new service connections due to the risk of unintentional connection of the auxiliary water source plumbing with the public water system.

Operations & Maintenance: Water Quality

8. Please use the most recent coliform monitoring plan template which includes an *E.coli* Response Plan checklist. Under the Revised Total Coliform Rule, sampling returns to baseline in the month following unsatisfactory samples.

Capital Improvement Program
No comment.

Financial Program
No comment.

Other Documentation

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

10. Please include in the hard copy submittal the documents found through hyperlinks in the pdf of the SWSMP. For example, the articles of incorporation or the Standard Operating Procedures.

Closing
We hope that you have found these comments to be clear, constructive and helpful in the development of your final draft SWSMP. We ask that you submit the revised SWSMP on or before **April 30, 2021.** 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 SWSMP and where each response is located (i.e., page numbers, Appendices, etc.)

Regulations establishing a schedule of fees for review of planning, engineering, and construction documents have been adopted (WAC 246-290-990). The total cost is **$1206.00**. An itemized invoice for the review of this project has been sent to the DOH primary contact on file for your water system. Please note that this fee covers our current review and one more submittal for this project. If additional submittals are required, then an invoice for additional fees will be included with our final approval letter. Please remit complete payment in the form of a check or money order within thirty days of the date of this letter in the enclosed envelope or mail payment to: WSDOH, Revenue Section, PO 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

Richard Rodriguez
WSDOH Regional Planner

Cc: Brietta Carter, DOH
Jae Hill, King County UTRC
Jay Cook, WSDOE-NWRO

Appendix 5 Articles of Incorporation

1928 Articles of Incorporation

ARTICLES OF INCORPORATION

of the

WEST SIDE WATER COMPANY

THIS IS TO CERTIFY that we, the undersigned, citizens of the United States and residents of the West side of Vashon Island, R. E. Stafford, D. B. Siegrist, Arthur Fosmark, Helen Peck, John Earth, Karl Steen, E. Kvisvik and Ben Huseby, have associated ourselves together for the purpose of forming a non-profit corporation under the laws of the State of Washington for the benefit of ourselves and others in order to obtain a community water system, and for that purpose by these presents do hereby adopt the following

ARTICLES OF INCORPORATION

I.

Name.

The name of the corporation shall be "West Side Water Company". The Company shall have no capital stock or shares.

II.

Purposes.

The purpose for which this corporation is formed is to obtain a supply of water for distribution to the members of the corporation for domestic purposes and without profit.

III.

Principal Place of Business.

The principal place of business of the corporation shall be located on Vashon Island at the town of Vashon, in King County, Washington.

IV.

Time of Existence.

The term for which the corporation is to exist shall be

fifty years.

V.
Trustees.

The number of trustees of the corporation shall be five (5), and the names of the trustees who shall manage the affairs of the corporation for the first three months, and until other trustees shall be elected by the members, are as follows: R. E. Stafford, D. S. Siegrist, John Zarth, Helen Peck and Karl Steen.

WITNESS the hands of the above named incorporators on Vashon Island this 12th day of June, 1928. In triplicate.

John G Zarth

Helen S. Peck

Karl Steen

Arthur Iverson

B. J. Huseby

D. S. Siegrist

L. Kvisvik

R. E. Stafford

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

On this 12th day of June, A. D. 1928, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared R. E. Stafford, D. S. Siegrist, Arthur Fosmark, Helen Peck, John Zarth, Karl Steen, E. Kvisvik and Ben Huseby, to me known to be the individuals described in and who executed the foregoing instrument, and acknowledged to me that they signed and sealed the said instrument as their free and voluntary act and deed for the uses and purposes therein mentioned.

Witness my hand and official seal hereto affixed the day and year in this certificate above written.

ALEX. STEWART NOTARY PUBLIC STATE OF WASHINGTON

Alex Stewart
Notary Public in and for the State of Washington, residing therein at Seattle.

S. F. No. 181—1921. Approved as to Form by Dept. of Efficiency. 4328.

State of Washington—Department of Licenses
CORPORATION LICENSE

Reception No. 94178 Amt. $ 15.00 Date 9-4-28
License No. 89331

Name
West Side Water Company
Alexander Stewart
Arctic Bldg
Seattle, Wash.

The corporation named hereon which is organized and exists under the laws of this state, having paid the fee hereon stated is hereby licensed to carry on business in the State of Washington until June 30, 192 9.

Charles R. Mayberry Director of Licenses
Geo L Berger Secretary.

-3-

1978 Articles of Incorporation

D286479
FILE NUMBER

DOMESTIC

STATE OF WASHINGTON | DEPARTMENT OF STATE

I, **BRUCE K. CHAPMAN,** Secretary of State of the State of Washington and custodian of its seal, hereby certify that

ARTICLES OF INCORPORATION

of WESTSIDE WATER ASSOCIATION

a domestic corporation of Seattle, Washington,

was filed for record in this office on this date, and I further certify that such Articles remain on file in this office.

In witness whereof I have signed and have affixed the seal of the State of Washington to this certificate at Olympia, the State Capitol,

February 15, 1979

Bruce K. Chapman

BRUCE K. CHAPMAN
SECRETARY OF STATE

SSF-57-A (11-70).

FILED

FEB 15 1979

SECRETARY OF STATE
STATE OF WASHINGTON

ARTICLES OF INCORPORATION

OF

WESTSIDE WATER ASSOCIATION

THE UNDERSIGNED, acting as the incorporator of a corporation under the provisions of the Washington Non-Profit Corporation Act (RCW 24.03), adopts the following Articles of Incorporation for such corporation:

ARTICLE I.

The name of the corporation shall be WESTSIDE WATER ASSOCIATION.

ARTICLE II.

The period of duration of the corporation shall be perpetual.

ARTICLE III.

The purpose for which the corporation is organized is to obtain a supply of water for distribution to the members of the corporation for domestic purposes and without profit. This corporation shall also be empowered and is hereby empowered to do any and all other acts or things authorized by the Washington State Non-Profit Corporation Act defining the general powers of a non-profit corporation.

ARTICLE IV.

The incorporator of this corporation is James G. Leach, whose address is 1010 Dexter Horton Building, Seattle, Washington 98104.

ARTICLE V.

The original board of directors is as follows:

Gary Mulhair Rt. 1 Box 705 Vashon, Wn. 98070
Gloria Chandler Rt. 1 Box 684 Vashon, Wn. 98070
C. W. Gus Swanberg Rt. 1 Box 710 Vashon, Wn. 98070
Eric Holst Rt. 1 Box 659 Vashon, Wn. 98070
Margery Smith Rt. 1 Box 577 Vashon, Wn. 98070

ARTICLE VI.

The corporation shall not have any power to have or issue shares of stock or declare dividends, and no part of its income or profit, if any, may be distributed to any member, director or officer. The corporation may confer benefits upon its members in conformity with its purposes. Upon dissolution or final liquidation, the board shall make distribution as hereinafter provided, i.e., all net assets of this corporation remaining after dissolution or liquidation shall be transferred and distributed only as is allowable by RCW 24.03.

ARTICLE VII.

The board of trustees shall consist of those persons who have been elected in accordance with the Articles and Bylaws of this corporation to the governing board.

ARTICLE VIII.

This corporation shall indemnify any director or officer or former director or officer of the corporation against expenses actually and reasonably incurred by him or her in connection with the defense of any action, suit or proceeding, civil or criminal, at which said person has been made a party by reason of being or having been such director or officer (except in relation to matters as to which he or she shall be adjudged to be liable for negligence or misconduct in the performance of duty to the corporation) and to make any other indemnification that may be authorized by the Bylaws or resolution of the board of directors.

ARTICLE IX.

The corporation shall have one class of members, all of whom shall be property owners of the district served by the association, subject to conditions adopted by the Bylaws of the corporation. Certificates evidencing membership in said corporation shall be issued by said corporation to all members.

ARTICLE X.

The address of the initial registered office of the corporation shall be 1010 Dexter Horton Building, Seattle, Washington 98104. The name of the initial registered agent of the corporation at such address shall be James G. Leach.

IN WITNESS WHEREOF, the undersigned incorporator has hereunto set his hand and seal this 28th day of November, 1978.

James G. Leach
JAMES G. LEACH, Incorporator

STATE OF WASHINGTON)
)ss.
COUNTY OF KING)

JAMES G. LEACH, being first duly sworn on oath, deposes and says:

That he is the original incorporator of Westside Water Association, a non-profit corporation, and has read the within and foregoing Articles of Incorporation, knows the contents thereof and believes the same to be true, and does hereby verify the commitments therein stated of the incorporator and does hereby attest to the purpose of establishing a non-profit corporation and association under the laws of the State of Washington as hereinabove set forth.

James G. Leach
JAMES G. LEACH

SUBSCRIBED AND SWORN TO before me this 6 TR ~~28th~~ day of ~~November~~ February, 1978.

Gail Turley
NOTARY PUBLIC in and for the State of Washington, residing at Seattle.

1989 Additions to Article VIII of the Articles of Incorporation May 1, 1989

Appendix 6 (WWA By-Laws)

WESTSIDE WATER ASSOCIATION BY-LAWS (ADOPTED MAY 27, 1986 AND AMENDED NOVEMBER 23, 2015)

ARTICLE I MEETING OF MEMBERS

Section 1. Annual Meeting.

The regular annual meeting of the members of the Association shall be held on Vashon Island, in the month of May at such place and time as the trustees direct. It shall be the duty of the Secretary to give ten (10) days' notice by mail to the members of such annual meeting.

Section 2. Special Meetings of the Members.

Special meetings may be held at any time in the service area on call of the President, or, by written call signed by three or more of the Trustees, or signed by not less than one-third of the members. Calls for special meetings shall specify time, place, and object of the meeting, not less than ten days before date set for such a meeting notice mailed by the Secretary to all members of record to the address on the Association's books will constitute a notice duly sent.

Section 3. Quorum.

One-fourth of the total number of members, represented either in person or by a proxy signed by a member, shall be necessary to constitute a quorum for conducting business. When a quorum is present at a meeting duly called, a majority of the members represented thereat shall decide any matter brought before such meeting. In the absence of a quorum, the members present may adjourn from day to day but until a quorum is secured, may transact no business.

Section 4. Order of Business at Meetings of Members.

All meetings will be conducted in accordance with Roberts Rules of Order.

ARTICLE II TRUSTEES

Section 1. Number and Authority.

The Board of Trustees shall consist of five (5) members and shall have entire charge of the property interests, business and transactions of the Association with full authority to manage the same, consistent with applicable federal, state arid local laws.

Section 2. Terms of Office.

Trustees shall be elected at the annual meeting of the members, three of whom shall serve until the first annual meeting thereafter and two of whom shall serve until the second annual meeting thereafter. At each annual meeting after said first meeting, trustees shall be elected for two-year terms, three the first year and so on. Trustees shall hold office until their successors are elected, and when elected to serve a vacancy, such trustee shall hold office during the unexpired term of the trustee whose place he is elected and until his successor is elected and qualified. Trustees shall be limited to no more than three (3) terms consecutively. Section 3. Vacancies.
Any vacancy in the Board shall be filled for the unexpired term by the majority vote of the remaining Trustees. If a Trustee is removed by a vote of the members at the same meeting or a subsequent meeting called for that purpose, members shall elect a successor.

Section 4. Removal of a Trustee.

Any Trustee may be removed from office by a two-thirds vote of the members at any special meeting of the members called for such purpose. The Board may remove without cause a trustee who has missed three (3) meetings without prior notification to the Board.

Section 5. Quorum.

A majority of the Board of Trustees shall constitute a quorum at any Board meeting and no action except as hereinafter expressly provided shall be taken unless a majority vote of all Trustees is given in favor thereof.

Section 6. Compensation for Trustees.

All Trustees shall perform their board duties without compensation. With minutes passed by the Board, Trustees may be compensated for other services to the Association.

Section 7. Election of Officers.

Regular annual meetings of the Trustees shall be held immediately after the conclusion of the annual meeting of the members, at which meetings the Trustees shall elect from their number a President, Vice president, Secretary, Treasurer, or a combined Secretary Treasurer. In the event of a vacancy, the Board at any meeting duly called shall fill such a vacancy.

Section 8. Duties of Officers.

The duties of the officers shall be such as are usually imposed upon such officers of a corporation and as required by law, and as such may be assigned to them by the Board of Trustees. The President shall preside at all meetings and in his absence the Vice-President shall preside. The Secretary shall keep a record of all proceedings of the Board meetings and general membership meetings. The Treasurer shall collect and have charge of all funds of the company and disburse the same by check. All checks shall be co-signed by two officers.

ARTICLE III CERTIFICATES OF MEMBERSHIPS

There is to be no capital stock of the corporation but certificates of membership shall be issued signed by the President and the Secretary to members who are qualified and eligible.

ARTICLE IV INTERESTS OF MEMBERS

It is understood that this corporation is formed under Chapter LV, of Title XXV, Corporations Not Formed for Profit, of Remington's Compiled Statutes of Washington, 1922; that the interest of each incorporation or member shall be equal to that of any other, and no incorporation or member can acquire any interest which shall entitle him to any greater voice, authority or interest in the corporation than any other member; that member certificates shall be assignable

when the property of members is sold but assignable only to the purchaser of said property.

ARTICLE V MEMBERSHIP

Section 1.

Property owners of the district served by the Association are eligible for membership, subject to the conditions in the following section.

Section 2.

The Board of Trustees shall establish the number of new members admitted to the corporation in a given twelve (12) month period; provided, however, that in the first twelve (12) month period following the adoption of these amended by-laws the number of new members admitted will not exceed eight percent (8%) of the total membership at the time of the adoption of these amended by-laws. In subsequent twelve
(12) month periods the number of new members shall not exceed four percent (4%) of the total membership at the beginning of the period. If within a given period the limit of new members is not reached, then that number may be admitted during the subsequent periods without applying to that period's quota. The Board of Trustees shall not approve any new members of the corporation for the first sixty (60) days of any twelve (12) month period, and in no event shall the Board of Trustees approve any new members if there are no water rights available after present members have exercised their option to purchase additional water rights as described in Article VI.

ARTICLE VI PURCHASE OF WATER RIGHTS

Section 1.

Each member shall have the right to purchase one water right for one residence located on the member's property.

Section 2.

In the first sixty (60) days after the adoption of these amended by-laws, and during the first sixty (60) days of each succeeding twelve (12) month period,

existing members of the corporation may purchase one additional water right from the Corporation so long as such additional number of water rights sold does not exceed the number of new members allowed in Article V hereof and provided that no person or group may purchase more than one water right within a twenty-four (24) month period.

Section 3.

Water rights will be sold only upon the applicant supplying to the Board of Trustees proof of building plans for a residence on applicant's property. If the residence is not occupied within twelve (12) months from receipt of the water right, the water right will be returned to the corporation, and all money paid by the applicant refunded. Extension of time to complete the residence may be granted at the sole discretion of the Board of Trustees.

Section 4. Industrial and Non-Residential Water Rights.

At the sole discretion of the Board of Trustees water rights may be sold for industrial and non-residential installation. Such water rights costs will be established by the Board, and in no case will the cost be less than the residential water right cost.

Section 5. Cost and Payment.

Cost of a water right shall be determined by the Board of Trustees and shall include the water right and the use of one meter. Payment will either be in full at time of application or, subject to Board approval, by

paying 50% down at time of application with the balance to be paid over twelve (12) months with interest charged at 1% of the monthly outstanding balance. Hook-up costs will be borne by the new member. Any costs to extend present system to serve new water rights will be borne by the new water right holder.

Section 6. Transfer of Certificate and Reissue of Lost Certificate.

The Secretary will issue a new membership certificate to replace a lost one upon payment of $10.00, said new membership certificate to be marked "duplicate". When membership is transferred upon sale of property, a $10.00 transfer fee will be charged to the new owner.

ARTICLE VII OPERATION

Section 1. Rules and Regulations

The object of the corporation is to operate a water system for distribution of water to members. The Board of Trustees shall have the power to make rules and regulations for the taking and use of water from the Association system, which rules and regulations shall be enforced by the Board. Such rules shall be furnished each member upon request.

Section 2. Charges, Assessments and Dues.

Each member shall be liable to pay the Association charges. If any charges are not paid when due, service may be disconnected by the Trustees after thirty (30) days' notice in writing. Such member can be reconnected only upon payment of delinquencies, plus the sum of $25.00 plus expenses of disconnecting and connecting such service. It is further understood that any member leasing or renting his property is responsible for any or all indebtedness to the Association by said Lessee or Renter.

Section 3. Records.

The books and records of the Association are to be open to inspection by any member at all reasonable times. The status of individual member accounts will not be subject to review by the general membership.

The books of the corporation will be reviewed each year by an Audit Committee appointed by the President.

ARTICLE VIII AUTHORITY TO MORTGAGE SYSTEM

The Association shall have the power through its Board of Trustees to borrow funds for the purpose of improving the water system and may use corporation property and income as security for such purpose, so long as the principal balance at any time does not exceed $100,000 (in 2015 dollars) and on such further terms as shall be provided by resolution adopted by the Board of Trustees.

ARTICLE IX REAL PROPERTY

The Board of Trustees will not sell or acquire any real property without the concurrence of a majority of the members of the water Association voting at a duly constituted meeting called for the purposes of considering such a sale or acquisition.

ARTICLE TAMPERING

Any member of Westside Water Association found tampering with any of the Association's property or taking water illegally will be fined $100.00 and water services will be disconnected. Such member can be reconnected only after payment of fine and payment of any other expenses.

ARTICLE XI AMENDMENTS

These Bylaws may be amended at any time by a two-thirds (2/3) majority vote of the members present in person, or by a proxy signed by a member, at any special meeting of the members duly called for that purpose.

ARTICLE XII DISSOLUTION

In the event the Association is merged with a municipal or other water system and ceases to exist, any monies left after payment of all obligations of the Association shall he divided equally among all members in good standing.

1.

Appendix 7: WWA Standard Operating Procedures

Westside Water Association
Standard Operating Procedures APPROVED May 02, 2017

1. **Board of Directors**

All members of the Board of Directors shall be members of the Westside Water Association and must own property within the geographical boundary.

1. **Duties of Officers**
    1. **President**
        1. **Carry out duties as specified in Bylaws.**
        2. **The President shall fix the time and place for all Officers' meetings.**
        3. **Provide all board members and committee chairs with copies of a contact list, bylaws, Standard Operating Procedures, and an annual calendar showing meetings and deadlines.**
        4. **Appoint chairs and members of standing and ad hoc committees (with approval of Board of Directors).**
        5. **Provide leadership in effecting the purposes of WWA and in fulfilling directives from the Board of Directors.**
        6. **Provide a president's report to the annual meeting.**
        7. **Oversee newsletter production for the Membership to include with bill mailings.**
        8. **Ensure that WWA activities are carried out per the bylaws, the calendar deadlines, and the commitments made at board meetings.**
        9. **Set up board meeting dates, times, and locations.**
        10. **Put together agenda packet for all board meetings and send to board members (and any other members indicating interest in receiving such materials) in a timely manner.**
    2. **Vice President**
        1. **Carry out duties as specified in Bylaws.**
        2. **Assume duties of president in his/her absence or in case of inability to serve.**
        3. **Serve as member of the Financial Advisory Committee.**
        4. **Prepare agenda for the Annual Membership Meeting.**
    3. **Treasurer**
        1. **Carry out duties as specified in Bylaws.**
        2. **Chair the Financial Advisory Committee.**
        3. **Ensure all authorizing signatures are kept current at all affected banking institutions.**
        4. **Oversee the timely review, authorization, and mailing, of all payments to suppliers, contractors, and regulatory agencies.**

5. Review monthly bank statements for appropriate activity and balances.
6. Request and review monthly financial reports. Provides the same reports to all board members monthly and for board meetings.
7. Secure any special financial reports as needed, for the board.

1. Reconcile monthly cash flow net to difference between last two monthly total asset balances. Reconciliation is provided with financial reports to all board members.
2. Track all deposit accounts (savings, checking, CD's, etc.) and recommend reinvestment, as needed, to the board.

1. Communicate monthly with the Bookkeeper to retrieve expenditure data for reconciling between accounts, and for any notable or unusual transactions, trends, etc. that should be reported to the board.
2. Execute monthly transfers to reconcile expenditure classes to their designated accounts, per WWA fiscal policy.
3. Review and provide any external financial reporting to the board (State quarterly returns, etc.).
4. Revise the Financial Reports document to ensure ongoing financial reports are consistent in content and format and fulfill the needs of the Board.

1. Secretary
    1. Prepare and preserve minutes of membership and officers' meetings within 30 days.
    2. Maintain accurate membership roll and contact information.
    3. Oversee integrity of the voting process for both board and membership votes.
    4. Work with the webmaster to ensure the webpage is updated with relevant important information– meeting minutes, updates to bylaws and SOP. Post the Directory of leadership.
    5. Serve as custodian of all association records, past and present. Ensure their completion, accuracy, and availability for review by the membership.
    6. Provide incoming Board members with copies of the Bylaws and Standard Operating Procedures documents. (9/29/2016)
2. At Large
    1. Serve as member of the Financial Advisory Committee.
    2. Serve on ad hoc committees as directed by the President.

1. Board Committees

1. **Fiscal Planning Committee**
    1. **The charter of the Fiscal Planning committee is to update the expected life and current replacement value of each long-term asset listed in the Asset Replacement Schedule (also known as the "CIP" or Capital Improvement Plan) on an annual basis (11/12/2015). This document is a principal input to the development of an annual budget.**
    2. **The Fiscal Planning Committee shall be composed of the President, Treasurer, and other board members as the President sees fit to include.**
    3. **The Fiscal Planning Committee shall solicit and accept expert input from the System Manager in developing the Schedule.**

1. **Rate Committee**

1. **The charter of the ad hoc Rate Committee shall be to articulate new rate structures annually, or as the Board determines the need.**
2. **The Rate Committee members shall be selected by the President.**

1. **Recruiting Board members**
    1. **Board members shall be nominated and selected by and from the existing membership of WWA.**
2. **New Board orientation**
    1. **Incoming Board members shall be provided copies of the Association Bylaws and Standard Operating Procedure which govern the activities of the Board, and shall read and abide by all directives therein.**
    2. **They shall be introduced to the System Manager and Bookkeeper and receive a facility tour from the System Manager to become familiar with the basics of the system infrastructure.**
    3. **Each new Board Member shall be provided with access to any document storage area, whether tangible or electronic, wherein historic and current documents pertinent to Board business are stored. New Board Members are responsible for reviewing all pertinent documentation, including but not limited to the current Sanitary Survey and board meeting minutes from the previous year. (last sentence added 5/22/2019)**

4. **Any outgoing Board members shall pass to their successor(s) any access passwords, keys, or critical documents required to conduct the business of the Board.**
5. **The first meeting of a newly elected Board shall take place immediately following the Annual Meeting at which they were elected. The purpose of this Meeting is to determine officer roles of President, Vice President, Treasurer, and Secretary, with the fifth member occupying the non-officer role of At Large. Each Board Member shall execute the duties of the role they agree to occupy, as detailed in the Bylaws and this SOP document.**
    1. **As the first order of business, a new Board Treasurer shall present themselves to the financial institution at which the Association does its banking, in order to assume fiduciary responsibility and control of the Association accounts.**
    2. **The outgoing Secretary shall relinquish to the new Secretary all kept records of the Association. (whole of section 5.4.5 added 5/22/2019)**

3. **Board Meetings**
    1. **Rules of Order**
        1. **The rules contained in Roberts' Rules of Order shall determine the parliamentary practice of WWA in all cases to which they apply and when they are not inconsistent with the Association Bylaws.**

5.5.1.2. A Parliamentarian may be appointed by the President to determine and interpret the Rules of Order that govern the deliberations of WWA.

1. **Reports to the Board**
    1. **Any Report to the Board, including but not limited to the Treasury Report and the System Manager Report, must include a printed Report for Board review, to be included with the Minutes.**
    2. **Any regular Board meeting shall include the following agenda items:**

1. **Review and approval of previous meeting minutes**
2. **President’s Report**
3. **Treasury Report**
4. **System Manager’s Report**
5. **Any special committee reports**
6. **New business**

1. **Staff positions and duties**

1. System Manager
    1. Perform management duties as specified in service contract.
    2. Advise the Board on matters pertaining to the System.
    3. Serve as a member of the Financial Advisory Committee.
    4. Assist with administrative tasks as available and as requested by the Board, such as securing a meeting venue and helping to prepare mailings.
    5. The System Manager shall attend regular board meetings in accordance with the duties specified above.
    6. The Manager shall not participate in Board voting, nor assume any duties falling within the specific purview of the elected Board.
2. Bookkeeper
    1. The primary duties of the Bookkeeper shall be to:
        1. Pay all accounts due.
        2. Be responsible for billing all customers.
        3. Keep an accurate and legible record of accounts receivable and payable.

1. Detailed duties include:
    1. DAILY during a billing cycle
    2. Deposit payments at US Bank.
    3. Pick up mail at WWA PO Box.
1. WEEKLY
    1. Pay bills
    2. File receipts.
    3. Write checks, secure signatures, mail checks and other items as needed.
    4. Pick up mail at WWA PO Box (outside of a billing cycle).
1. MONTHLY
    1. Balance WWA bank accounts. Identify and correct any bank errors.
    2. Notify Treasurer to perform any account transfers as required by WWA fiscal policy.
    3. Execute payroll for contract services, including bookkeeper and manager.
    4. Ensure that contractors provide a breakdown of services provided, as specified in contract.

1. BIMONTHLY

1. Prepare bills:
    1. Ensure customer accounts are up to date before processing billing: include changes in ownership, billing adjustments.
    2. Print billing register and bills.
    3. Print duplicate bills for renters and stamp them as duplicates. 6.2.2.4.1.4. Work with treasurer and manager to determine which accounts should

receive shutoff letters, and print.

6.2.2.4.1.5. Stuff, stamp and mail.

1. Provide current data and/or financial reports for Board meetings as directed (1/11/2001):
    1. Balance Sheet
    2. Repair/Replace Actuals 6.2.2.4.2.3. New Capital Actuals 6.2.2.4.2.4. Operating Actuals

6.2.2.4.2.5. Water Usage

1. QUARTERLY

    1. Prepare quarterly reports as required by the federal government for FICA, State Unemployment, Excise Tax, and Labor and Industries.
    2. Send reports and payments as required by specified deadlines.
2. ANNUALLY
    1. Prepare year-end reports.
    2. Prepare and file tax returns, nonprofit status paperwork, and other documentation as required.
3. AS NEEDED

1. Maintain adequate office supplies necessary to perform duties.
2. Field customer questions, complaints, inquiries about billing.
3. Maintain customer database with current membership and contact information.
4. Generate occasional special reports, mailing labels, and other projects as directed by the Board.
5. Maintain expertise in the systems used for Association bookkeeping, including but not limited to accounting, billing, and metering software.

1. Annual Meetings
    1. In accordance with the Association Bylaws, the Annual Meeting takes place in May.

2. Each Annual Meeting shall serve as the venue to elect Board Members.
3. Any other matters subject to a membership vote may be moved and voted upon at the Annual Meeting, provided a quorum is present in person or by proxy, except for Bylaw amendments, as specified in the Bylaws.

2. Voting
    1. Board Elections: Per the Bylaws of the Association, each Board Member serves a 2-year term, and may stand for re-election at the end of each term for a total of 3 consecutive terms. In alternating years, either 2 or 3 Board member positions will be up for election.
    2. Each member is entitled to one vote per water share owned.
    3. Off-cycle Member Voting: Proposals requiring a membership vote that occur outside of the regular annual meeting cycle shall be conducted as follows.
        1. The President shall send notice to the membership by mail that the Board plans to hold a special vote on an issue. The mailing shall include sufficient information about the issue such that each member may form an opinion.
        2. The Board shall hold a public forum informational meeting about the issue, so that interested members can ask questions and share their views and concerns with the Board and each other.
        3. The Board shall conduct the vote by mail-in ballot, with one ballot per water share account. Ballots shall be preprinted with account numbers, one ballot per water share account, with both printed name and signature lines. Ballots shall be sent to the Westside Water PO Box, to which only the Secretary and Bookkeeper hold keys.
        4. Secretary shall retrieve and count the ballots, with the assistance of Bookkeeper as needed, and announce the vote result at the next Board meeting. Vote result may be shared with the members in the next newsletter.
        5. Secretary shall archive the individual ballots in the event of a recount request, until the vote is recorded into the minutes of the next Annual Meeting.
    4. Electronic Board Voting
        1. Routine and uncontroversial Board matters may be resolved by the Board via e-mail voting, as follows (9/10/2015).

1. Any Board member wishing to advance a motion for the Board to vote upon may send an e-mail to the Board, stating clearly the proposal and intent to conduct a binding vote by e-mail. The question shall be stated in such fashion as to be clearly answered with either Yea or Nay.
2. Another Board member shall second the motion.
3. All Board members must respond with an email to clearly indicate their voting intent.

1. The Secretary will verify that all Board members have cast a vote, will print the e-mail along with the motion and second, and gather them into a package for signature confirmation at the next Board meeting.
2. If the vote is unanimous, it does pass by e-mail. If not unanimous, it does not pass by e-mail. In the latter case, the proposal may be reintroduced at a regular Board Meeting for further consideration.

1. Service Contracts
    1. WWA contracts with several service professionals to execute the business of running a rural water utility. Each of these contractors shall operate under a service contract with WWA detailing the terms of their service, duties, and/or deliverables. All service contracts shall be reviewed annually by the Board for assessment of performance and renewal of contract terms. Current contracts include:
        1. Water system manager: Doug Dolstad, Island Water Management (IWM)
        2. Bookkeeper: Sheila Blakely
        3. Billing software support: Jayhawk Software (discontinued as of January 2017)

1. Standalone Policy Statements

Certain policies have been drafted as standalone documents. These are included in this section.

1. Westside Water Cross Connection Control Policy (11/6/1997)

It has always been the practice of Westside Water to prohibit and prevent cross connections. To this end, WWA has adopted and will pursue the following cross-connection control program.

1. **Cross Connection Declared Unlawful. Pursuant to WAC 248-54-490, the installation or maintenance of a cross- connection, unless protected by an approved backflow prevention device pursuant to WAC 248-54-285 is prohibited.**
2. **Backflow Prevention Devices to be Installed. Backflow prevention devices shall be installed at the service connection, and/or within any premises, and/or at any other location determined by the water purveyor when the nature and extent of activities on the premises or the material stored on the premises would present an immediate and dangerous hazard to health should a cross-connection occur, even though such cross- connection does not exist at the time the backflow prevention device is required to be installed. The determination of when and where the backflow prevention device or devices shall be required, shall be made by WWA upon it inspection of the premises. Said determination shall be made by WWA pursuant to WAC 248-54-85, and the**

American Water Works Association, Pacific Northwest Section's Second Edition of "Accepted Procedure and Practice in Cross-Connections Control". Backflow prevention devices required by this section shall be installed under the supervision and with the approval of WWA or its agents. The device shall be in an area approved the WWA which is readily accessible for maintenance and testing and where no part of the device will be submerged.

1. **Annual Testing of Backflow Prevention Devices. Backflow prevention devices shall be inspected and tested by a certified tester annually, or more often where inspections indicate the necessity. The devices shall be repaired, overhauled or replaced whenever they are found defective by a certified tester. Inspection, scheduling of tests, record keeping and all costs incurred shall be the responsibility of the owner of the device. When any backflow prevention device is tested by a certified tester, and approved, it shall be tagged by the certified tester and in a form sufficient to allow WWA to determine when said test was performed and approved.**
2. **Regulation of Water Supplies. Use and operation of any water supply system when said system is connected in any way to the public water supply system is hereby prohibited, unless approved in writing by WWA.**
3. **Adoption of Rules, Regulations and Procedures. Rules and regulations of the**

Department of Health regarding public water supplies entitled, "Cross-Connection Control Regulation in Washington State", (WAC 248-54-285, and the 'American Water Works Association, Pacific Northwest Section's Second

Edition of "Accepted Procedure and Practice in Cross-Connection Control" are hereby adopted and made a part of this policy.

1. **Inspection for Cross-Connections. WWA will inspect premises periodically where potential hazards may exist. WWA will notify, in writing prior to inspection, the person whose name the water service was established. Failure to allow such an inspection within 10 days of the mailing of a notice of said inspection shall be grounds for the discontinuance of water service to the premises without further notice.**
2. **Abatement of Unlawful Cross-Connections and Installation of Backflow Prevention Devices.**
    1. **If WWA or its agents determine that a cross connection does exist, written notice shall be sent to the person in whose name the water service is established in the records of WWA, or, alternatively, a copy of such written notice shall be posted on the premises served.**
    2. **The notice shall fully describe the cross connections to be corrected and shall demand that the owner contact WWA in person, within 10 days from the date of said notice, to acknowledge receipt of the notice and to present to WWA a plan to correct the problem. The notice shall state that water service to the premises may be discontinued if the owner does not present a plan for the correction of the problem. The problems shall be corrected within 10 days of the presentation of the plan.**
    3. **The plan shall include a statement of what the owner is going to do to correct the violations, the materials and parts to be used for the corrections, the name of the person or firm that will make the corrections and a time table for the completion of the corrections. WWA then shall either approve or disapprove the plan, in writing as follows:**
        1. **If approved, corrections shall be carried out by the owner in accordance with his, "plan of correction". If the corrections are not made in accordance with**

the "plan of correction", WWA shall discontinue water service to the premises.

1. **If disapproved, WWA will notify the owner, in writing, that the plan is disapproved and the reasons for the disapproval. The owner will then be required to make the required corrections and resubmit the plan within 10 days. Failure to comply will be cause for discontinuance of water service to the premises.**

2. **WWA may require such interim measures be taken by the customer as it deems necessary to protect the public water supply until the violations are fully corrected.**
3. **In addition, if the problems present an immediate danger of contamination to the public water supply, WWA may terminate water service without further notice, provided, however, notice will be posted on the premises at the time service is discontinued.**

1. **Miscellaneous Control Devices. WWA reserves the right to require any premise to have installed, as a condition of water service, a pressure reducing valve, backflow prevention device, pressure relief valve, check valve or similar devices at such locations as WWA deems necessary to protect WWA's facilities.**
2. **Responsible Charge. Island Water Management is responsible for implementing the cross-connection control program for WWA. The contact person is: Doug Dolstad, WDM 2, CCS.**

1. **Westside Water Association Arsenic Statement January 12, 2017**
    1. **Background Information about Arsenic**

Per the EPA's publication "Drinking Water Standard for Arsenic" [1]:

1. **Arsenic occurs naturally in rocks, soil, water, air, plants, and animals. It can be further released into the environment through natural activities (…) or through human actions. Levels are generally higher in the western States due to geologic conditions (...) Because of their contact with naturally occurring underground rock formations,**

ground waters tend to have higher levels of arsenic than surface waters (…) [Arsenic ingestion has been linked to a number of cancerous and non-cancerous health conditions].

    1. **Westside Water Association (WWA) sources are classified as ground water. WWA regularly tests all water sources for contaminants.**
2. **The EPA Water Quality Standard**
    1. **EPA set the arsenic health standard for drinking water at 10 ppb (10 parts per billion). This health standard is intended to protect consumers from the effects of long-term,**

[1] **https://nepis.epa.gov/Exe/ZyPdf.cgi?Dockey=20001XXC.txt**

chronic exposure to arsenic. All public water systems (though not necessarily private wells) have had to comply with this standard since 2006.

10.2.2.2. The EPA health standard was a compromise. The EPA initially requested a stricter standard, which was judged to be too costly to implement for too many water systems. Nevertheless, the EPA arsenic goal is 0 ppb. This "non-enforceable public health goal is the level of a contaminant in drinking water below which there is no known or expected risk to health."

1. **Water System Compliance with EPA Arsenic Health Standards**

    1. **Enforcement and monitoring of public water systems' compliance with the EPA health standard is tricky. The EPA realized that entire public water systems cannot be shut down when the arsenic standard is exceeded on a single day. Hence the EPA established compliance rules. The EPA arsenic compliance rule states that arsenic in "the annual average of 4 quarterly water samples may not exceed 10 ppb."**

2. **Arsenic and Westside Water**

    1. **WWA has never violated the EPA compliance rule, as there has never been a 4- quarter average that exceeded 10ppb. Demand for WWA water in the summers is high, which in the past required WWA temporary use of a high arsenic water source during that time of year. Individual WWA water samples in past summers have thus exceeded the EPA health standard. Notifications were always provided in the newsletter and immediately on the WWA web site. Past and present WWA boards explored a variety of measures to mitigate the arsenic load during the summers. These efforts included conservation alerts, filtration, and water source development.**
    2. **With the development of the Anderson I well in 2015 and the Anderson II well in 2016, the WWA board anticipates that our water supply from now on will meet demand, even during summer months, without any water samples exceeding the health standard.**

2. **Westside Water Association Board Policy on Arsenic**

The 2016 WWA Board seeks to provide water that does not exceed EPA health standards nor violate EPA compliance standards. The Board seeks to deliver to its members the cleanest drinking water possible, given the financial and source quality constraints of the organization.

1. **Conflict of Interest policy**
    1. **The standard of behavior at the Westside Water Association is that all staff, volunteers and board members scrupulously avoid any conflict of interest between the interests of WWA on one hand, and**

personal, professional, and business interests on the other. This includes avoiding actual conflicts of interest as well as perceptions of conflicts of interest.

1. **The purposes of this policy are to protect the integrity of WWA's decision-making process, to enable our constituencies to have confidence in our integrity and to protect the integrity and reputation of volunteers, staff and board members.**
2. **Upon or before election, hiring, or appointment, potential staff, volunteers and board members shall disclose any interests, relationships and holdings that could potentially result in a conflict of interest.**
3. **During meetings or activities, staff, volunteers and board members shall disclose any interest in a transaction or decision where they (including business or other nonprofit affiliation), family members, employers, or other close associates would receive benefit or gain. After disclosure, any attendees with a conflict may decline to participate in the discussion, and shall not vote on any question in which they have disclosed fundamental personal interest.**

1. **Association Memberships**
    1. **Evergreen Rural Water of Washington (ERWOW) system membership (7/9/2015)**
2. **Website**
    1. **The website of the Westside Water Association is maintained at westsidewater.org.**
    2. **The westsidewater.org domain is owned by the Association and administered through the Hostica hosting service.**
    3. **The website is developed on the Wordpress platform, which makes it easy for board members and the System Manager to maintain.**
    4. **The purpose of the website is to provide helpful information for WWA members through general information pages and blog posts by the System Manager and Board.**
    5. **Minutes of Annual Board Meetings shall be posted.**
    6. **Minutes of Regular Board Meetings shall not be posted, due to privacy considerations. (9/9/2010)**
    7. **No personally identifiable information about board or association members shall be posted.**
    8. **Contents and structure of the website shall be backed up weekly using a cloud backup service.**
3. **Emergency Response Plan**

1. Water System ID number: 949500
2. Location: West side of Vashon Island, Cove Road – Cedarhurst & McCormick Pl
3. Sources:
    1. Canyon Pump Station. East of 115th Ave SW & SW 156th ~ 2000' down steep service

road. Parcel 1923039023

1. Anderson Well I 15245 115th Ave SW, Parcel 2423029053
2. Anderson Well II (details)

2. Storage Facilities:
    1. 11605 SW 156th, 156,000 gallon standpipe, bolted steel tank, Parcel 2423029095

13.4.2. West of: 12233 SW Cove Road, 100,000-gallon concrete tank + Booster pump station, Parcel 2523029161

1. There are three types of disasters that may affect the consumers of Westside Water Association: Bacteriological, Chemical, and Physical.
    1. Bacteriological Emergency: Many public water systems will occasionally detect positive coliform samples, mainly because of minor contamination in distribution mains or sample taps, or improper bacteriological sampling techniques. Persistent detection of coliform in the water supply, particularly E. coli or fecal bacteria, may require issuing a public boil water notice to ensure the health and safety of the water customers.
    2. Chemical Emergency: Chemical emergencies are those related to the introduction of toxic levels of chemical contaminants into the drinking water supply. These contaminants may be detected by routine testing but more likely will originate from some catastrophic accident such as a spill or vandalism or a naturally occurring act e.g. earthquake, volcanic eruption.
    3. Physical Emergency: Physical emergencies are those related to failure of the infrastructure. Broken mains, damage to a storage facility, pump failures, and leaks all fall into this category. If you notice or suspect an infrastructure problem, please contact the System Manager immediately at 206-715-3805.
2. Communication protocol: In the event of any problem that may adversely affect water quality such that member safety is at risk, WWA will notify the membership as follows.
    1. System Manager will contact:

1. Board President. If Board President is unavailable, Manager will contact any Board member.
2. Regional Engineer of the State Department of Health, Northwest Regional Office.
3. Any directly affected parties.

2. "Water Alert" or "Water Emergency" signs will be posted at:
    1. 115th Ave SW & SW Cove Road
    2. McCormick Pl & Cedarhurst Road

1. Voice message will be posted on WWA answering machine.
2. Write-up of incident will be posted on "Westside Water News" on westsidewater.org.
3. Follow-up messages to users will be posted as needed.

Appendix 8: WWA Rate Card

		2012/13	2016/18	2017/18	2018/19	2019/20	2020/21
	Base Rate	$57	$61.56	$63.04	$69.05*	$70.15*	$70.21*
Cost ($/cubic foot	> 600 cf	$0.017	$0.0184	$0.0188	$0.0193	$0.0196	$0.0200
	> 1000 cf	$0.019	$0.0205	$0.0209	$0.0214	$0.0218	$0.0221
	> 2000 cf	$0.029	$0.0313	$0.0321	$0.0329	$0.0335	$0.0340
	> 5000 cf	$0.056	$0.0605	$0.0619	$0.0634	$0.0645	$0.0656
	> 10000 cf	$0.11	$0.1188	$0.1216	$0.1245	$0.1266	$0.1288
	> 19000 cf	$0.12	$0.1296	$0.1327	$0.1359	$0.1382	$0.1406

* includes $4.50 King County Right of Way Fee

Appendix 9: WWA 2020/21 Budget

	2019/20 Actual	2020/21 Proposed Budget
INFLOWS		
Sales		
Fees, Late Charges etc	$747	$1,200
Interest earned	$772	$750
Other		
Water Sales	$126,887	$130,000
TOTAL Sales	**$128,406**	**$131,950**
Pass Through		
Global Water Donations	$2,688	$2,500
Excise Tax	$1,553	$4,100
King County ROW	$8,578	$6,252
Other		
TOTAL Pass Through	**$12,819**	**$12,852**
TOTAL INFLOWS	**$141,225**	**$144,802**
OUTFLOWS		
Administration		
Global Water Donations	$2,636	**$2,500**
Office		
Box Rent	$146	$150
Forms		$120
Office Contract	$9,507	$9,507
Other		$100
Postage	$730	$800
Printing	$57	$100
Service Charge	$28	$30
Software maintanence	$787	$1,500
Supplies	$123	$125
TOTAL Office	**$11,377**	**$12,432**
Professional Services		
Legal		$500
Engineering	$370	$1,000
Other	$252	$300
Total Professional Services	**$622**	**$1,800**
Taxes		
Tax–Excise	$6,054	$4,100
Tax-Real-Prop	$659	$1,500
King Co ROW	$8,578	$6,252
TOTAL Taxes	**$15,291**	**$11,852**
TOTAL Administration	**$29,926**	**$28,584**

Operations		
Electric	$8,432	$9,000
Propane	$1,939	$0
Insurance	$3,744	$3,800
Management Contract	$43,981	$43,981
Phone	$1,238	$1,300
Water Monitoring	$2,396	$2,500
Water Treatment	$990	$1,000
Other		
TOTAL Operations	**$62,719**	**$61,581**
Repairs & Maintenance		
Contractors	$4,560	$4,500
Materials & Supplies	$1,348	$1,500
Permits & Inspections	$1,361	$1,500
Other	$2,036	$2,000
Total Repairs & Maintenance	**$9,305**	**$9,500**
TOTAL OUTFLOWS	**$101,950**	**$99,665**
OPERATING NET (Inflow-Outflow)	$39,275	$45,137
TRANSFERS TO CAPITAL ACCOUNTS		
Transfer to CAR Reserve	$45,000	$45,000
Total Transfer to Capital Accounts	**$45,000**	**$45,000**
Net after Capital Account Transf	-$5,725	$137

Appendix 10:Capital Asset Replacement Schedule

Item Ref #	Capital Asset Replacement (CAR)	Distance	Distance KCROW	Service Connects	Material (old)	Pipe diameter old (in)	Material (new)	Pipe diameter new (in)	Road Bores	Road Cuts	Install Date Year	Est. Life Years	Replace date Fiscal Year	Est Cost $ 2015	Actual Cost $FY	Status	Cum Est Spend	Cum Act Spend	Cum Act + Est	Cum Collection
1	Pressure Reduction Valve: Cedarhurst										2015	1	2015	$1,300	$4,301	complete	$1,300	$4,301	$4,301	
2	35 Metered Services										2000	15	2016	$10,500	$2,514	complete (meters in hand)	$11,800	$6,815	$6,815	
3	Booster Pump, SW 156th Station										2014	5	2016	$1,500	$2,192	completed in 2016	$13,300	$9,007	$9,007	$49,587
4	Service Line replacement												2017	$0	$5,258	Unscheduled repairs to fix leaks east end of 148th St	$13,300	$14,265	$14,265	
5	Main replacement under Cedarhurst												2017	$0	$8,515	Main replacement under Cedarhurst road repair (S of Shinglemill Creek crossing) unplanned (required by King County)	$13,300	$22,780	$22,780	
6	10 Metered Services	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		2001	15	2017	$3,000	$2,234	reduced from $10.5K to $3K to allow for more steel distribution line replacement earlier; done	$16,300	$25,014	$25,014	$95,308
7	Distribution: 115th SW south of Cove Rd, 400'	400	400	4	?	?	PE	3	3		1960	80	2018	$20,000	$28,643	increase to $20K and move to 2017 to be done in September; line under Cove Rd complete; project will be completed in 2018	$36,300	$53,657	$53,657	
8	Well Points refurbishment/expansion										1988	30	2018	$20,000	$554	defer indefinitely; increase to $20K to accommodate engineering and DOH costs; goal 70 gpm; evaluation done with engineer; postponed for broader study	$56,300	$54,211	$54,211	
9	Service Line replacements												2018	$0	$11,708	major leak discovered and repaired (unscheduled)	$56,300	$65,919	$65,919	$143,592
11	6-10 Metered Services annually	N/A	N/A	N/A	N/A	N/A		N/A			annual	20	2020	$4,500	$3,300	actual purchase 26 meters. lower actual cost then est	$170,800	$65,919	$120,519	$189,000
42a	[see NOTE for update] Originally thought to be 240' OA. 30' asphalt driveway; ~20' road bore. Extend 6" line and cap on west side of WSH with 1.25 or 1.5" bore to serve 3 services on east side of WSH Modified after discovery of existing 6" PVC to point of road crossing.	40	20	3	PVC	2	HDPE	1.25	0	1	1972	80	2021	$11,900		Jan 2021 update: Discovery of previously installed 6" PVC. White. Probably Sch 40				
10	Replace steel line from 119th to WS Hwy (Hile/Candy), 1200'	1200	0	2	steel	3	C900 (PVC)	8	1		1950	80	2019	$50,100		under discussion road cut hydrant on east side of WSH? 4" line replacement under WSH (optional) 1 or 2 8" valves add leak detection	$106,400	$65,919	$116,019	
12	Distribution 4" wrapped Steel, Cove Rd - 121st, 800'	800	800	6	steel	4	C900 (PVC)	6	2		1950	80	2020	$60,000		two road bores eight service connections	$169,900	$65,919	$179,519	$235,000
14	Distribution: 4" wrapped Steel, Cedarhurst, from 14432 Westside to 11611 SW Cedarhurst, 880' of 2640' total	880	880	4	steel	4	HDPE	4	1		1960	80	2022	$60,300		moved up from 2040; break into pieces	$201,600	$65,919	$211,219	$281,000
	Cove Station Electrical										2015	5	2022	$3,000			$204,600	$65,919	$214,219	
	15 Metered Services										2001	15	2022	$4,500			$209,100	$65,919	$218,719	
	Distribution: 4" wrapped Steel, Cedarhurst, from 14432 Westside to 11611 SW Cedarhurst, 880' of 2640' total	880	880	4	steel	4	HDPE	4	1		1960	80	2022	$60,300			$239,900	$65,919	$249,519	$327,000
	Distribution: 4" wrapped Steel, Cedarhurst, from 14432 Westside to 11611 SW Cedarhurst, 880' of 2640' total	880	880	5	steel	4	HDPE	4	1		1960	80	2023	$61,300		moved up from 2040; break into pieces	$270,700	$65,919	$280,319	$374,000
	Distribution: 4" AC, SW 156th from Reservoir to 115th SW, 580'	580	500	0	AC	4	HDPE	4	0	1	1960	80	2025	$39,800		do these together; saves $20,400	$270,700	$65,919	$280,319	
	Transmission line: 4" AC Asbestos Concrete 115th to Reservoir/Office, 1056' of 3116' total length	580	500	0	AC	4	HDPE	6	0	0	1960	70	2025	$33,800			$317,700	$65,919	$327,319	
	Transmission Line: 4" AC Asbestos Concrete Canyon Pump Station to 115th, 1760'	1560	0	0	AC	4	HDPE	6	0	0	1960	70	2025	$55,600		moved from 2030	$372,700	$65,919	$382,319	$465,000
	Office, Electrical										1993	35	2028	$1,500			$374,200	$65,919	$383,819	$585,000
	Cove										2014	15	2029	$150			$374,350	$65,919	$383,969	
	Canyon										2014	15	2029	$150			$374,500	$65,919	$384,119	$630,000
	Booster Pump, Cove Station										2018	30	2030	$1,500		just replaced		$65,919	$385,619	
	Pump House, Cove										1970	60	2030	$6,000				$65,919	$391,619	
	Anderson										2015	15	2030	$500				$65,919	$392,119	
	Hydrant, 115th SW & 155th										1960	60	2030	$3,500				$65,919	$395,619	
	Hydrant, 115th SW & 150th										1960	60	2030	$3,500				$65,919	$399,119	
	Hydrant, 121st SW & Cove Road										1970	60	2030	$3,500				$65,919	$402,619	
	Hydrant, 121st SW & Cove Road										1970	60	2030	$3,500			$ -	$13		$675,000
	ANDERSON Electrical										1993	40	2033	$7,500			$ -	$13		
	Canyon Station Electrical										1993	40	2033	$15,000			$ -	$13		$540,000
	Canyon Well pump										2008	30	2038	$3,500			$ -	$13		$690,000
	Canyon + well point Pump D transfer pump										2009	30	2039	$1,800			$ -	$13		
	Canyon Pump + well point C transfer pump										2009	30	2039	$1,800			$ -	$13		
	Air Relief Valve (Cedarhurst)										2009	30	2039	$850			$ -	$13		$720,000
	Hydrant: 15509 Westside Hwy										1960	60	2040	$3,500			$ -	$13		
	Hydrant: 158th & Westside Hwy										1960	60	2040	$3,500			$ -	$13		
	Hydrant: Westside & SW 148th										1960	60	2040	$3,500			$ -	$13		
	Distribution 4" AC main, 115th, 3,750'	3750	375	26	AC	4	HDPE	4	6		1960	80	2040	$267,000			$ -	$13		
	Distribution: 4" AC, Westside Hwy, 4510'	4510	451	66	AC	4	HDPE	4	13	2	1960	80	2040	$382,100			$ -	$13		
	Distribution: Bethel Park lines, 330' est, various sizes	330	0	17	steel		HDPE	4	0		1960	80	2040	$29,550			$ -	$13		
	Distribution: Columbia Loop, (serves 1 customer) 1200'	1200	120	2	steel?	1	HDPE	4	1		1960	80	2040	$77,500			$ -	$13		$750,000
	Anderson Pump										2014	30	2044	$3,000			$ -	$13		$870,000
	PRV: SW 148th										1996	50	2046	$1,300			$ -	$13		
	PRV Vault: SW 148th										1996	50	2046	$3,500			$ -	$13		$930,000
	Hydrant, 119th SW & SW 151st										1988	60	2048	$3,500			$ -	$13		
	Hydrant, 119th SW & SW 148th										1988	60	2048	$3,500			$ -	$13		$990,000

	Reservoir, Cove Station, 100k g									1970	80	2050	$75,000			$ -	$13	$1,050,000
	Pump House, SW 156th									1992	60	2052	$500			$ -	$13	$1,100,000
	PRV: SW 148th west of Westside Hwy									2008	50	2058	$300			$ -	$13	$1,280,000
	Distribution: 6" PVC, 121st to Cove Tank, 1060'	1060	106	7	PVC	6	HDPE	6	2	1970	90	2060	$76,600			$ -	$13	
	Distribution: 8" Sch 40 PVC, Cove to west end Cove Rd, 1200'	1200	120	13	PVC	8	HDPE	4	5	1970	90	2060	$98,500			$ -	$13	
	Distribution: Beardsley SW 158th (6" line)	1200	0	7	PVC	6	HDPE	6	0	1970	90	2060	$50,000			$ -	$13	$1,340,000
	Canyon Pump Station									1988	75	2063	$25,000			$ -	$13	$1,430,000
	Canyon Well (source)									2006	60	2066	$18,500			$ -	$13	
	Hydrant, 115th SW & Cove Rd									2006	60	2066	$3,500			$ -	$13	
	Hydrant, 11716 SW Cove Road									2006	60	2066	$3,500			$ -	$13	
	Hydrant, 118-- Cove Road									2006	60	2066	$3,500			$ -	$13	$1,520,000
	Reservoir, SW 156th, 156k gallons									1988	80	2068	$125,000			$ -	$13	$1,580,000
	Transmission: Anderson Well to 156th & 115th ???'	1670		0	HDPE	4				1994	80	2074	$59,450			$ -	$13	$1,760,000
	Distribution: 8" PVC, 119th SW to SW 156th, 2640'									1988	90	2078	$1,000			$ -	$13	
	Distribution:8" PVC, SW 156th from 119th SW to Reservoir, 580'									1988	90	2078	$1,000			$ -	$13	
	Transmission: Lines from sources to Canyon Pump station ???'									1988	90	2078	$1,000			$ -	$13	
	Distribution: 1 1/4" PVC, SW 144th,									1996	90	2086	$1,000			$ -	$13	
	Distribution: 6" C-900, SW 148th to Bethel Park,									1996	90	2086	$1,000			$ -	$13	
	Distribution: 6" C-900, Cove Road - 121st, 1260'									2002	85	2087	$1,000			$ -	$13	
	Distribution: 2" 115th, north of SW 156th, 500'									2002	90	2092	$1,000			$ -	$13	
	Distribution: 2" HDPE, Olympic View Drive, 1350'									2012	85	2097	$1,000			$ -	$13	
	Distribution: 2" HDPE,SW 148th from Westside Hwy to western terminus, 970'									2008	90	2098	$1,000			$ -	$13	
	Distribution ?", material ?, 3 services south on WSH s of 158th									1960			$1,000					
	PRV: 15432 Westside Hwy									discussion to abandon								
	Main line valves 6 inch									tba			$2,400					
	Main line valves 8 inch									tba			$5,000					
	Main line valves 4 inch									tba			$1,600					
	Arsenic Filtration system: Phase 1									na	na	na	na					
	Arsenic Filtration: Phase 2									na	na	na	na					
	Arsenic Blending equipment									2012	50	2062	$7,000			$ -	$13	$1,400,000
	Anderson Well 1 Replacement									1994	40	2034	$50,000			$ -	$13	$570,000
	Well Points refurbishment/expansion									1988	30	2019	$20,000	$554	defer indefinitely; increase to $20K to accommodate engineering and DOH costs; goal 70 gpm; evaluation done with engineer; postponed for broader study	$1,774,7	$66,473	

Appendix 11: WWA Cross Connection Control Policy

It has always been the practice of Westside Water to prohibit and prevent cross connections. To this end WWA has adopted and will pursue the following cross-connection control program.

1. Cross Connection Declared Unlawful. Pursuant to WAC 248-54-490, the installation or maintenance of a cross- connection, unless protected by an approved backflow prevention device pursuant to WAC 248-54-285 is prohibited.

2. Backflow Prevention Devices to be Installed. Backflow prevention devices shall be installed at the service connection, and/or within any premises, and/or at any other location determined by the water purveyor when the nature and extent of activities on the premises or the material stored on the premises would present an immediate and dangerous hazard to health should a cross-connection occur,

even though such cross-connection does not exist at the time the backflow prevention device is required to be installed. The determination of when and where the backflow prevention device or devices shall be required, shall be made by WWA upon it inspection of the premises. Said determination shall be made by WWA pursuant to WAC 248-54-85, and the American Water Works Association, Pacific Northwest Section's Second Edition of "Accepted Procedure and Practice in Cross-Connections Control". Backflow prevention devices required by this section shall be installed under the supervision and with the approval of WWA or its agents. The device shall be located in an area approved the WWA which is readily accessible for maintenance and testing and where no part of the device will be submerged.

3. Annual Testing of Backflow Prevention Devices. Backflow prevention devices shall be inspected and tested by a certified tester annually, or more often where inspections indicate the necessity. The devices shall be repaired, overhauled or replaced whenever they are found defective by a certified tester. Inspection, scheduling of tests, record keeping and any and all costs incurred shall be the responsibility of the owner of the device. When any backflow prevention device is tested by a certified tester, and approved, it shall be tagged by the certified tester and in a form sufficient to allow WWA to determine when said test was performed and approved.

4. Regulation of Water Supplies. Use and operation of any water supply system when said system is connected in any way to the public water supply system is hereby prohibited, unless approved in writing by WWA.

5. Adoption of Rules, Regulations and Procedures. Rules and regulations of the Department of Health regarding public water supplies entitled, "Cross-Connection Control Regulation in Washington State", (WAC 248-54-285, and the 'American Water Works Association, Pacific Northwest Section's Second Edition of "Accepted Procedure and Practice in Cross-Connection Control" are hereby adopted and made a part of this policy.

6. Inspection for Cross-Connections. WWA will inspect premises periodically where potential hazards may exist. WWA will notify, in writing prior to inspection, the person whose name the water service was established. Failure to allow such an inspection with in 10 days of the mailing of a notice of said

inspection shall be grounds for the discontinuance of water service to the premises without further notice.

7. Abatement of Unlawful Cross-Connections and Installation of Backflow Prevention Devices.

a. In the event that WWA or its agents determine that a cross connection does exist, written notice shall be sent to the person in whose name the water service

is established in the records of WWA, or, alternatively, a copy of such written notice shall be posted on the premises served.

b. The notice shall fully describe the cross connections to be corrected and shall demand that the owner contact WWA in person, within 10 days from the date of said notice, to acknowledge receipt of the notice and to present to WWA a plan to correct the problem. The notice shall state that water service to the premises may be discontinued if the owner does not present a plan for the correction of the problem. The problems shall be corrected within 10 days of the presentation of the plan.

c. The plan shall include a statement of what the owner is going to do to correct the violations, the materials and parts to be used for the corrections, the name of the person or firm that will make the corrections and a time table for the completion of the corrections. WWA then shall either approve or disapprove the plan, in writing as follows:

i) If approved, corrections shall be carried out by the owner in accordance with his, "plan of correction". In the event that the corrections are not made in accordance with the "plan of correction", WWA shall discontinue water service to the premises.

ii) If disapproved, WWA will notify the owner, in writing, that the plan is disapproved and the reasons for the disapproval. The owner will then be required to make the required corrections and resubmit the plan within 10 days. Failure to comply will be cause for discontinuance of water service to the premises.

d. WWA may require such interim measures be taken by the customer as it deems necessary to protect the public water supply until the violations are fully corrected.

e. In addition, in the event that the problems present an immediate danger of contamination to the public water supply, WWA may terminate water service with out further notice, provided, however, notice will be posted on the premises at the time service is discontinued.

8. Miscellaneous Control Devices.. WWA reserves the right to require any premise to have installed, as a condition of water service, a pressure reducing valve, backflow prevention device, pressure relief valve, check valve or similar devices at such locations as WWA deems necessary to protect WWA's facilities.

9. Responsible Charge. Island Water Management is responsible for implementing the cross-connection control program for WWA. The contact person is: Doug Dolstad, WDM 2, CCS

Backflow Incident Report Form

Reporting Agency: _____ Report Date: _____

Reported By: _____ Title: _____

Mail Address: _____ City: _____

State: _____ Zip Code: _____ Telephone: _____

Date of Incident: _____ Time of Occurrence: _____

General Location (Street, etc.): _____

Backflow Originated From:

Name of Premises: _____

Street Address: _____ City: _____

Contact Person: _____ Telephone: _____

Type of Business: _____

Description of Contaminants:
(Attach Chemical Analysis or MSDS if available)

_____

_____

Distribution of Contaminants:

Contained within customer's premises: Yes: _____ No: _____

Number of persons affected: _____

Effect of Contamination:

Illness Reported: _____

Physical irritation reported: _____

Appendix 12: Protective Covenants

Back 40 Well

Instrument Number: 20200518000024 Document:COV Rec: $104.50 Page-1 of 2
Record Date:5/18/2020 8:09 AM
Electronically Recorded King County, WA

Return Address:

Back Forty Farm, LLC
16050 Crescent DR SW
Vashon, WA 98070

DECLARATION OF COVENANT
INDIVIDUAL WATER SUPPLY

Reference numbers of related documents:
On page ___ of document

Grantors(s) (Last, First, Middle Initial):
1. Back Forty Farm, LLC
2.
3.
Additional names on page ____ of document

Grantee(s) (Last, First Middle Initial):
1. Back Forty Farm, LLC
2.
3.
Additional names on page ____ of document

Legal Description:
1. Abbreviated form (lot, block, plat name, section-township-range)

NW 1/4 OF SE 1/4 OF SE 1/4 LESS CO ROAD

Assessor's Property Tax Parcel Account Numbers:

242302-9038

Know all men by these presents that I (we) the undersigned, owner ____ in fee simple of the land described herein, hereby declare this covenant and place same on record.

I (we), am (are) the owner in fee simple of (an interest in) the following described real estate situated in **King** County, State of Washington, to wit: **(INCLUDE LEGAL, PARCEL NUMBER & ADDRESS)**

NW 1/4 OF SE 1/4 OF SE 1/4 LESS CO ROAD

Parcel Number 242302-9038

on which I (we) own and operate a well and waterworks supplying water for private domestic use located on said real estate, to wit:

100' SOUTH OF THE NORTH PROPERTY LINE AND 254' WEST OF THE EAST PROPERTY LINE

and am (are) required to keep the water supplied from said well potable.

It is the purpose of these grants and covenants to prevent certain practices herein-after enumerated in the use of said land, which might contaminate said water supply.

Instrument Number: 20200518000024 Document:COV Rec: $104.50 Page-2 of 2
Record Date:5/18/2020 8:09 AM King County, WA

1. I (We) covenant for myself (selves), and for any future purchasers, successors or assignees that this well is to be utilized solely for irrigation purposes and is not to be connected to any potable water supplies.
2. All original minimum setback distances will apply to this well, including 100 feet from septic drainfields and other potential sources of contamination per WAC 173.160.171 or its successor.
3. This well will be utilized to irrigate not more than one-half acre in area of lawn or non-commercial garden as per RCW 90.44.050.

This covenant shall run with the land and shall be binding on all parties having or acquiring any right, title, or interest in the land described herein or any part thereof, as long as said well or waterworks is used for the purpose of furnishing irrigation water to the above real property described earlier in this document.

DATED May 12, 2020

Grantor

Eric Seidenberger
Print Name (AS MANAGER OF BACK FORTY FARM, LLC)

Grantor

Print Name

State of Washington
County of King)

I, the undersigned, a Notary Public in and for the above named County and State, do hereby certify that on this 12 day of May, 2020, personally appeared before me Eric Seidenberger to me known to be the individual(s) described in and who executed the within instrument, and acknowledge that he (they) signed and sealed the same as his free and voluntary act and deed, for the uses and purposes therein mentioned.

GIVEN under my hand and official seal the day and year last above written.

Notary Public residing at Seattle, WA

Printed Name: Jean-Pierre Newsome

My Commission Expires: 9/9/2023

JEAN-PIERRE NEWSOME
Notary Public
State of Washington
License Number 115566
My Commission Expires
September 09, 2023

Anderson Well Field

RECORDED AT REQUEST OF:

WHEN RECORDED RETURN TO:
Westside Water Association
PO Box 267
Vashon WA 98070

DOCUMENT TITLE:	**RESTRICTIVE COVENANT FOR PUBLIC WATER SUPPLY – DRILLED WELL**
GRANTOR:	ANDERSON, CHRISTOPHER
GRANTEE:	WESTSIDE WATER ASSOCIATION
LEGAL DESCRIPTION:	N 1/2 of NE l/4 of NE 1/4 of SE 1/4 of Sec 24, Twp 23N, R 02 E, W.M., except the E 30 ft as deeded to King County for 115th Avenue SW under King County Recording #5247612
TAX PARCEL NO.	242302-9053

THIS RESTRICTIVE COVENANT is made and entered into as of this 23rd day of June 2016, by and between CHRISTOPHER ANDERSON, an unmarried individual ("Grantor"); and WESTSIDE WATER ASSOCIATION, a Washington nonprofit corporation ("Association").

Grantor owns real estate situate in King County, Washington, to wit:

> N 1/2 of NE l/4 of NE 1/4 of SE 1/4 of Sec 24, Twp 23N, R 02 E, W.M., except the E 30 ft as deeded to King County for 115th Avenue SW under King County Recording #5247612.

A well, and waterworks are located 100 feet east and 110 feet north of the SW corner of said parcel, more or less. The drilled well and waterworks are on the land of the Grantor and Grantee is required to keep the water supplied from said drilled well free from impurities which might be injurious to the public health.

It is the purpose of these grants and covenants to prevent certain practices hereinafter enumerated in the use of said Grantor's land which might contaminate said water supply.

NOW, THEREFORE, Grantor agrees and covenants that Grantor, his heirs, successors and assigns, will not construct, maintain, or suffer to be constructed or maintained upon Grantor's land within 100 (one hundred) feet of the drilled well herein described, so long as the same is operated to furnish water for public consumption, any potential source of contamination, such as,

cesspools, privies, drainfields, manure piles, garbage of any kind or description, any enclosures or structures for the keeping or maintenance of fowl or animals such as barns, chicken houses, rabbit hutches, pigpens, live stock sheds, and further agree not to use, apply, dispose or suffer to be used, applied or disposed, fertilizers, any liquid or dry chemicals, herbicides, or insecticides within the described protective radius.

These covenants shall run with the land and shall be binding on all parties having or acquiring any right, title, or interest in the land described herein or any part thereof, and shall insure to the benefit of each owner thereof.

Date: June 23, 2016

Christopher Anderson
15245 115th Ave SW
Vashon, WA 98070

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

I certify that I know or have satisfactory evidence that Christopher Anderson is the person who appeared before me, and said person acknowledged that he signed this instrument and acknowledged it to be his free and voluntary act for the uses and purposes mentioned in the instrument.

Date: 6/23/16

JILL J HERYFORD
Notary Public
State of Washington
My Appointment Expires May 23, 2020

Signature of NOTARY

Jill J Heryford
Printed name of NOTARY

NOTARY PUBLIC in and for the State of Washington, residing at Vashon
My commission expires: May 23, 2020

WESTSIDE WATER ASSOCIATION

Bob Jones Date: 6-27-16

By: Bob Jones, its President

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

I certify that I know or have satisfactory evidence that Bob Jones is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the President of Westside Water Association to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Date: 6/27/16

Lisa M. Amouroux

Signature of NOTARY

Lisa M. Amouroux

Printed name of NOTARY

NOTARY PUBLIC in and for the State of Washington, residing at Vashon

My commission expires: May 20, 2017

Notary Public
State of Washington
LISA M AMOUROUX
My Appointment Expires May 20, 2017

State of Washington
DEPARTMENT OF HEALTH
NORTHWEST DRINKING WATER REGIONAL OPERATIONS
20425 72nd Avenue South, Suite 310 • Kent Washington 98032-2388

September 27, 2021

DOUGLAS DOLSTAD
WESTSIDE WATER ASSOCIATION
PO BOX 267
VASHON WA 98070

RE: Westside Water Association, ID 94950
Small Water System Management Program – 2021 APPROVAL
Submittal #20-1013

Dear Mr. Dolstad:

The Westside Water Association small water system management program (SWSMP), received in this office on October 22, 2020 with the additional submittal received May 2, 2021, has been reviewed and in accordance with the provisions of WAC 246-290-100, is hereby **APPROVED**.

APPROVED NUMBER OF CONNECTIONS

This system is approved for a total of 259 connections (252 residential + 7 non-residential) based on average day demand of 208 gallons per connection, maximum day demand of 500 gallons per connection, and peak hour demand of 226gpm. Source production is the limiting factor. Distribution system leakage rate around 17% is included in demand.

Approval of this WSP is valid as it relates to current standards outlined in Washington Administrative Code (WAC) 246-290 revised January 14, 2017, WAC 246-293 revised September 1997, RCW 70.116, 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. An approved update of this WSP is required on or before **September 27, 2031**, 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 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.

Westside Water 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 are not approved as a part of this planning document.

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 capacity for the intended use of this water system 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.

Due to a clerical error it was noticed that the invoice set to go out with the February 9, 2021 letter was missed and is included with this letter. Regulations establishing a schedule of fees for review of planning, engineering, and construction documents have been adopted (WAC 246-290-990). The total cost is **$1206.00**. An itemized invoice for the review of this project has been sent to the DOH primary contact on file for your water system. Please remit complete payment in the form of a check or money order within thirty days of the date of this letter in the enclosed envelope or mail payment to: WSDOH, Revenue Section, PO Box 1099, Olympia WA 98507-1099.

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

Sincerely,

Richard Rodriguez
WSDOH Regional Planner
253 395-6771

Brietta Carter, P.E.
WSDOH Regional Engineer
253 395-6761

cc: Ria Birns, DOE-NWRO
Jae Hill, King County UTRC
Jim Gross, P.E., BHC Consultants
Krista Chavez, DOH