Appendix A

Water Facilities Inventory (WFI) Form

WATER FACILITIES INVENTORY (WFI) FORM

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

ONE FORM PER SYSTEM

Quarter: 1
Updated: 04/03/2024
Printed: 5/8/2024
WFI Printed For: On-Demand
Submission Reason: Contact Update

RETURN TO: Central Services - WFI, PO Box 47822, Olympia, WA, 98504-7822 or email wfi@doh.wa.gov

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
95150 1	WESTERN STATE HOSPITAL	PIERCE	A	Comm

6. PRIMARY CONTACT NAME & MAILING ADDRESS

KEVIN R. ODEGARD [OPERATIONS SUPERVISO]
MAINT DEPT WESTERN STATE HOSP
9601 STEILACOOM BLVD
TACOMA, WA 98498-7213

STREET ADDRESS IF DIFFERENT FROM ABOVE

ATTN
ADDRESS 7245 BETHEL-BURLEY RD SE
CITY PORT ORCHARD STATE WA ZIP 98367

7. OWNER NAME & MAILING ADDRESS

WA STATE SOCIAL & HEALTH SERVICES
BARTEK TARNOWSKI
MAINT SUPV 3
MAINT DEPT WESTERN STATE HOSP
9601 STEILACOOM BLVD
TACOMA, WA 98498-7213

STREET ADDRESS IF DIFFERENT FROM ABOVE

ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION

Primary Contact Daytime Phone: (360) 876-0958 x113
Primary Contact Mobile/Cell Phone: (253) 377-1865
Primary Contact Evening Phone: (xxx)-xxx-xxxx
Fax: (360) 876-4196 E-mail: Kxxxn@nwwatersystems.com

10. OWNER CONTACT INFORMATION

Owner Daytime Phone: (253) 756-2519
Owner Mobile/Cell Phone: (253) 579-6678
Owner Evening Phone: (xxx)-xxx-xxxx
Fax: (253) 761-3320 E-mail: txxxxxa@dshs.wa.gov

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

- ☐ Not applicable (Skip to #12)
- ☐ Owned and Managed
- ☒ Managed Only
- ☐ Owned Only

SMA NAME: Northwest Water Systems, Inc. SMA Number: 119

12. WATER SYSTEM CHARACTERISTICS (mark all that apply)

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

13. WATER SYSTEM OWNERSHIP (mark only one)

- ☐ Association
- ☐ City / Town
- ☐ County
- ☐ Federal
- ☐ Investor
- ☐ Private
- ☐ Special District
- ☒ State

14. STORAGE CAPACITY (gallons)

730,830

15	16	17	18 SOURCE CATEGORY										19 USE			20	21 TREATMENT						22	23	24 SOURCE LOCATION			
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN TERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	InAct 03/16/2000 WELL #1		X										X			Y	X						900	825	NE NE	04	19N	02E
S02	WELL #2 East Campus Well ACM787		X												X	Y		X					314	500	NW NE	33	20N	02E
S03	InAct 10/17/2017 SPRING					X									X		X							0	NE NW	33	20N	02E
S04	45550C/LAKEWOOD WD	45550 C													X		X							0			00N	00E
S05	WELL #3 Farm Well AEC930		X										X			Y		X					491	1000	NE NE	04	19N	02E

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
95150 1	WESTERN STATE HOSPITAL	PIERCE	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?)		500	538
A. Full Time Single Family Residences (Occupied 180 days or more per year)	0		
B. Part Time Single Family Residences (Occupied less than 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	1		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	500		
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)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	72	72	72
28. TOTAL SERVICE CONNECTIONS		572	610

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or more days per year? 1000

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?	24000	24000	24000	24000	24000	24000	24000	24000	24000	24000	24000	24000
B. How many days per month is water accessible to the public?	31	28	31	30	31	30	31	31	30	31	31	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 that are NOT already included in the residential population?	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
B. How many days per month are they present?	31	28	31	30	31	30	31	31	30	31	30	31

33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	3	3	3	3	3	3	3	3	3	3	3	3

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:** _____

WS ID	WS Name
95150	WESTERN STATE HOSPITAL

Total WFI Printed: 1

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

Water Facilities Inventory (WFI)

Report Create Date:	5/8/2024		
Water System Id(s):	951501		
Print Data on Distribution Page:	ALL		
Print Copies For:	DOH Copy		
Water System Name:	ALL		
County:	-- Any --		
Region:	ALL		
Group:	ALL		
Type:	ALL		
Permit Renewal Quarter:	ALL		
Water System Is New:	ALL		
Water System Status:	ALL		
Water Status Date From:	ALL	**To**	ALL
Water System Update Date	ALL	**To**	ALL
Owner Number:	ALL		
SMA Number:	ALL		
SMA Name:	ALL		
Active Connection Count From:	ALL	**To:**	ALL
Approved Connection Count	ALL	**To:**	ALL
Full-Time Population From:	ALL	**To:**	ALL
Water System Expanding	ALL		
Source Type:	ALL		
Source Use:	ALL		
WFI Printed For:	On-Demand		

Appendix B

Water Systems Facilities Data

DSHS Western State Hospital	9/26/2024	Number of Units (Connections, ERUs etc.):	572					Monthly Cost Per Unit to Reserves:	$0.00
								Annual $$ to Reserves:	$0
					Reserve Cash Applied:			Payments over 0 years:	

2024	Calculated Replacement Life									Calculated Equity		No Calculation	Replacement Cost		
Asset and Description *RCAC V14*	Install Date	Est. Effective Life	Condition Rating	Critical Number	Calc Remain Life	Original Cost	Book Value Original $$	Replacment Cost	Infl. Rate				Cash Replace?	Saving Acc't Interest	Future Cost
	Year	Years	1 to 10 Tab A	1 to 5 Tab A	Years	Cost $	Value $	Cost $	%				X	%	Value $
East Campus Well (S02)	1968	40	8	2	000		$0	$7,000,000							$7,000,000
Farm Well (S05)	2003	40	2	2	18.1		$0	$4,000,000							$4,000,000
Lakewood Water District Intertie	2017	50	2	2	40.9		$0	$620,000							$620,000
Lower Reservoir	1903	70	5	2	000		$0	$1,000,000							$1,000,000
Upper Reservoir	1940	70	5	2	000		$0	$1,000,000							$1,000,000
8,743 lf of 4-Inch or Smaller Water Main	1970	75	5	4	10.5		$0	$1,311,450							$1,311,450
8,211 lf of 6-Inch Water Main	1970	75	5	4	10.5		$0	$1,231,650							$1,231,650
13,073 lf of 8-Inch Water Main	1970	75	5	4	10.5		$0	$2,353,140							$2,353,140
7,567 lf of 10-Inch Water Main	1970	75	5	4	10.5		$0	$1,362,060							$1,362,060
4,492 lf of 12-Inch Water Main	1970	75	5	4	10.5		$0	$943,320							$943,320

Appendix C

Consistency Statement Checklists

Local Government Consistency Determination Form

331-568 • 8/10/2023

Water System Name: Western State Hospital PWS ID: 951501

Planning/Engineering Document Title: Water System Plan Plan Date: September 2024

Local Government with Jurisdiction Conducting Review: Washington Department of Social and Health Services

Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

By signing this form, the local government reviewer confirms the document under review is consistent with applicable local plans and regulations. If the local government reviewer identifies an inconsistency, the reviewer should include the citation from the applicable comprehensive plan or development regulation and explain how to resolve the inconsistency, or confirm that the inconsistency is not applicable by marking N/A. See more instructions on page 2.

Local Government Consistency Statement	For Use by Water System Identify page(s) in submittal	For Use by Local Government Yes or Not Applicable
a) The water system service area is consistent with the adopted land use and zoning within the service area.	Figure 3-1	Enter here
b) The growth projection used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	Table 3-3	Enter here
c) For cities and towns that provide water service: All water service area policies of the city or town described in the plan conform to all relevant utility service extension ordinances.	Chapter 5	Enter here
d) Service area policies for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	Pages 3-1 through 3-3	Enter here
e) Other relevant elements related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.	Pages 3-1 through 3-3	Enter here

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

_____ Enter date

Signature Date

Click/tap here to enter text

Printed Name, Title, & Jurisdiction

Consistency Review Guidance
For Use by Local Governments and Municipal Water Suppliers

This checklist may be used to meet the requirements of WAC 246-290-108. When using an alternative format, it must describe all the elements; 1a), b), c), d), and e), when they apply.

For **water system plans (WSP)**, a consistency review is required for the municipal water supplier's service area. Municipal water suppliers may exclude wholesale areas from the consistency review provided the water system receiving the wholesale water complies with the requirements for a consistency review when developing a water system plan for any new connection within their service area.

For **small water system management programs**, a consistency review is only required for areas where a municipal water supplier wants to expand its water right's place-of-use. If no water right place-of-use expansion is requested, a consistency review is not required.

For **engineering documents,** a consistency review is required for areas where a municipal water supplier wants to expand its water right's place-of-use (water system plan amendment is required). For noncommunity water systems, a consistency review is required when requesting a place-of-use expansion. All engineering documents must be submitted with a service area map (WAC 246-290-110(4)(b)(ii)).

A) Documenting Consistency: The planning or engineering document must include the following when applicable.

a) A copy of the adopted land use/zoning map corresponding to the service area. The uses provided in the WSP should be consistent with the adopted land use/zoning map. Include any other portions of comprehensive plans or development regulations that relate to water supply planning.

b) A copy of the growth projections that correspond to the service area. If the local population growth projections are not used, explain in detail why the chosen projections more accurately describe the expected growth rate. Explain how it is consistent with the adopted land use.

c) Include water service area policies and show that they are consistent with the utility service extension ordinances within the city or town boundaries. (This applies to cities and towns only.)

d) All **service area policies** for how you will provide new water service to new customers.

e) **Other relevant elements** the Department of Health determines are related to water supply planning. See Local Government Consistency—Other Relevant Elements, Policy B.07

B) Documenting an Inconsistency: Please document the inconsistency, include the citation from the comprehensive plan or development regulation, and explain how to resolve the inconsistency.

C) Documenting a Lack of Local Review for Consistency: Where the local government with jurisdiction did ***not*** provide a consistency review, document efforts made, and the amount of time provided to the local government for review. Please include name of contact, date, and efforts made (letters, phone calls, and emails). To self-certify, please contact the DOH Planner.

Local Government Consistency Determination Form

331-568 • 8/10/2023

Water System Name: Western State Hospital PWS ID: 951501

Planning/Engineering Document Title: Water System Plan Plan Date: September 2024

Local Government with Jurisdiction Conducting Review: City of Lakewood

Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

By signing this form, the local government reviewer confirms the document under review is consistent with applicable local plans and regulations. If the local government reviewer identifies an inconsistency, the reviewer should include the citation from the applicable comprehensive plan or development regulation and explain how to resolve the inconsistency, or confirm that the inconsistency is not applicable by marking N/A. See more instructions on page 2.

Local Government Consistency Statement	For Use by Water System Identify page(s) in submittal	For Use by Local Government Yes or Not Applicable
a) The water system service area is consistent with the adopted land use and zoning within the service area.	Figure 3-1	Enter here
b) The growth projection used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	Table 3-3	Enter here
c) For cities and towns that provide water service: All water service area policies of the city or town described in the plan conform to all relevant utility service extension ordinances.	Chapter 5	Enter here
d) Service area policies for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	Pages 3-1 through 3-3	Enter here
e) Other relevant elements related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.	Pages 3-1 through 3-3	Enter here

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

_____ Enter date

Signature Date

Click/tap here to enter text

Printed Name, Title, & Jurisdiction

Consistency Review Guidance
For Use by Local Governments and Municipal Water Suppliers

This checklist may be used to meet the requirements of WAC 246-290-108. When using an alternative format, it must describe all the elements; 1a), b), c), d), and e), when they apply.

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b) A copy of the growth projections that correspond to the service area. If the local population growth projections are not used, explain in detail why the chosen projections more accurately describe the expected growth rate. Explain how it is consistent with the adopted land use.

c) Include water service area policies and show that they are consistent with the utility service extension ordinances within the city or town boundaries. (This applies to cities and towns only.)

d) All **service area policies** for how you will provide new water service to new customers.

e) **Other relevant elements** the Department of Health determines are related to water supply planning. See Local Government Consistency—Other Relevant Elements, Policy B.07

B) Documenting an Inconsistency: Please document the inconsistency, include the citation from the comprehensive plan or development regulation, and explain how to resolve the inconsistency.

C) Documenting a Lack of Local Review for Consistency: Where the local government with jurisdiction did ***not*** provide a consistency review, document efforts made, and the amount of time provided to the local government for review. Please include name of contact, date, and efforts made (letters, phone calls, and emails). To self-certify, please contact the DOH Planner.

Appendix D
SEPA Checklist

APPENDIX D | SEPA

The completed SEPA Environmental Checklist will be provided by the Western State Hospital at a later date.

Appendix E

WUE Program

APPENDIX E | WATER USE EFFICIENCY PROGRAM

INTRODUCTION

Western State Hospital (WSH) recognizes that water is a valuable and essential natural resource that needs to be used wisely. This Water Use Efficiency (WUE) Program provides an approach to increase water use efficiency within WSH's retail service area.

BACKGROUND

The Water Use Efficiency Rule

The Washington State Department of Health (DOH) implemented the WUE rule, effective January 22, 2007, as required by the Municipal Water Supply – Efficiency Requirements Act, also known as the Municipal Water Law (MWL), passed by the Washington State Legislature in September 2003. The MWL requires the state to implement the WUE Rule. The intent of the rule is to help reduce the demand that growing communities, agriculture, and industry have placed on the state's water resources, and to better manage these resources for fish and other wildlife. Municipal water suppliers are obligated under the WUE Rule to enhance the efficient use of water by the system and/or its consumers. The requirements of the WUE Rule are set forth in Chapter 246-290, Part 8, Washington Administrative Code (WAC).

The WUE Rule applies to all municipal water suppliers and requires suppliers to:

- Develop WUE goals through a public process and report annually on their performance;
- Maintain distribution system leakage (DSL) at or below 10 percent of production;
- Meter all existing and new service connections;
- Collect production and consumption data, calculate DSL, and forecast demands;
- Evaluate WUE measures; and
- Implement a WUE program.

Water Use Efficiency Program Requirements

DOH has provided guidance for municipal water suppliers on how to prepare and implement a WUE program that complies with the WUE Rule. The *Water Use Efficiency Guidebook*, published by DOH, was most recently revised and updated in 2017. The guidebook identifies the water use reporting, forecasting, and efficiency program requirements for public water systems. A WUE program meeting these requirements is a necessary element of a water system plan as required by DOH and is necessary to obtain water rights permits from the Washington State Department of Ecology. The *Water Use Efficiency Guidebook* defines the necessary components of a WUE program as the following four fundamental elements:

1. Planning requirements, which include collecting data, forecasting demand, evaluating WUE measures, calculating DSL, and implementing a WUE program to meet goals.

2. A DSL standard of 10 percent of less based on a 3-year rolling average.
3. Goal setting to provide a benchmark for achievement and to help define the success of the WUE program.
4. Annual performance reporting on progress towards meeting WUE goals.

WATER SUPPLY CHARACTERISTICS

A detailed description of each source of supply is provided in **Chapter 2** of WSH's Water System Plan (WSP). Water rights information for each source may be found in **Chapter 6** of the WSP and on the certificates, permits, and water rights self-assessment form, which are included in **Appendix I**.

WATER USE EFFICIENCY PROGRAM

As previously described, the fundamental elements of a WUE Program include planning requirements and DSL standards, as well as goal setting and performance reporting. WSH's water use data, demand forecasts, and other planning requirements are contained in **Chapter 4** of the WSP. WSH is committed to continue collecting water use data beyond that presented in **Chapter 4** for evaluation of its WUE program and water use patterns, and for forecasting demands for future facilities. The following WUE program includes a statement of its goals and objectives, the evaluation and selection of alternative efficiency measures, the schedule and budget, and the method of program monitoring.

In the event the WSH water system is consolidated into the Lakewood Water District (LWD), all WUE measures will be in accordance with and under the management of LWD.

Water Use Efficiency Goals and the Public Process

Per WAC 246-290-830, WUE goals must be set through a public process and shall be evaluated and reestablished as part of a WSP update. WSH plans to adopt the following WUE Program goals and objectives as part of this WSP update:

- Reduce leakage by 1 percent per year.
- Reduce leakage at individual services.

In compliance with the WUE Rule, a public hearing will be held to present and discuss these goals. Background on WSH's WUE Program, water supply characteristics, water demand forecasts, and other elements will be made available 2 weeks prior to the public forum date. All comments received at the forum will be reviewed and considered by WSH.

As discussed in **Chapter 4** of WSH's WSP, the existing leakage cannot be determined. WSH will achieve its goals first through the installation and maintenance of meters at each connection (CIP F7) and by implementation of the WUE Program that follows. Reducing DSL is a goal that can be achieved through measures that mainly will be carried out by WSH's Maintenance and Operations Division or in coordination with other WSH departments.

Evaluation and Selection of Water Use Efficiency Measures

WSH's evaluation of WUE measures and selected levels of implementation are presented within this section. The measures fall within three categories of implementation:

1. Mandatory measures that must be implemented;
2. Measures that must be evaluated; and
3. Additional measures selected by WSH that must be either evaluated or implemented.

The City served 572 customer connections in 2023. Based on the number of connections, at least four WUE measures must be evaluated or implemented. Measures that are mandatory cannot be credited towards the system's WUE measures. Since WSH will be implementing the minimum number of required measures with the execution of this WUE program, a cost-effective evaluation is not required.

Mandatory Measures

Source Meters

The volume of water produced by the system's sources must be measured using a source meter or other meter installed upstream of the distribution system. Source meters currently are installed and operating at all of WSH's sources. If any new sources are installed in the future, they will be equipped with a source meter.

Service Meters

All public water systems that supply water for municipal purposes must install individual service meters for all water users. Service meters currently are installed and operating at less than half of the connections throughout the distribution system. All future connections that are installed or activated will be equipped with a service meter. CIP F7 in **Chapter 9** further discusses the installation of new service meters for all connections throughout the distribution system.

Meter Calibration

WSH must calibrate and maintain meters based on generally accepted industry standards and manufacturer information. Compliance will be maintained by WSH by performing maintenance on the source and service meters every 5 to 10 years at a minimum.

Water Loss Control Action Plan

To control DSL, systems that do not meet the DSL standard of 10 percent must implement a Water Loss Control Action Plan (WLCAP). As discussed in **Chapter 4**, DSL is not able to be calculated. For the purposes of this WSP, the DSL standard of 10 percent was assumed for WSH. WSH should install new distribution system meters and maintain existing distribution system meters and monitor the water usage for a minimum of 4 years to determine an accurate measure of DSL.

Customer Education

Annual customer education regarding the importance of using water efficiently is a required element of all WUE programs. Customer education is provided in the annual Consumer Confidence Report (CCR), provided in **Appendix K**, and includes information on the system's DSL, progress towards meeting WUE goals, and tips for WSH staff on using water more efficiently.

Measures that Must be Evaluated

Rate Structure

A rate structure that encourages WUE and provides economic incentives to conserve water must be evaluated but is not required to be implemented. WSH is not a traditional water supply with a rate structure, as their customers are patients and employees of the hospital. Metering records are not available for the areas outside the hospital that receive WSH water, as discussed in **Chapter 4** and as such, water usage outside the hospital campus is not paid for through a rate structure.

Future water rate studies will evaluate an inclining block rate structure that imposes an increased unit charge with higher water use above the base amount allowed to customers using WSH water off the campus. Rate studies also will evaluate seasonal rates to reduce peak summer water use.

Reclamation Opportunities

Water systems with 1,000 or more connections must evaluate reclamation opportunities (WAC 246-290-100(4)(f)(vii)). WSH does not serve more than 1,000 connections; therefore, this WUE measure does not apply.

Selected Measures

WSH has chosen to implement five different WUE measures in addition to those that are mandatory or required to be evaluated, which meets the requirement of four WUE measures based on the number of service connections.

Water Bill Showing Consumption History

WSH currently does not bill off-campus customers for the use of their water. These customers include the City of Lakewood for irrigation in Fort Steilacoom Park and the Oakridge Group Home water supply. When a rate structure has been adopted to begin billing for the water use, bills will show consumption history charts and information on water bills. After the completion of CIP F7, WSH will have the ability to collect and analyze the consumption history for each building on campus and will monitor their historical water use.

Notifying Customers about Leaks on their Property

Notifying customers of unusually high water bills potentially caused by a leak on the customer's property counts as a WUE measure per WAC 246-290-810(4)(f). After water meters are

installed (CIP F7), WSH's will have the capacity to determine if meter reads show an unusually high meter reading. In this event, WSH will coordinate with the staff contact and advise the building maintenance team or other customers to search for leaks.

Indoor Retrofit Kits and Toilet Leak Protection

WSH will install indoor retrofit kits and provide dye tablets for building maintenance staff to test toilets for leaks as part of a regular dye-testing program.

Campus Outreach

WSH will continue to participate in campus outreach such as providing water conservation brochures and distributing water conservation materials in public areas for campus employees' education.

Water Use Efficiency Program Schedule and Budget

The WUE measures described previously and selected for implementation by WSH are summarized in **Table 1** with their corresponding schedule and budget. Water use efficiency activities are funded by the capital budget approved by the Washington State Legislator and Governor. WSH plans to allocate a portion of these funds for water use efficiency activities, such as leak detection, as needed to meet the established goals. WSH also has a budget item in its water system improvements schedule in **Chapter 9** of the WSP for water use efficiency efforts. The successful implementation of this program is expected to reduce DSL by 1 percent each year.

Table 1

WUE Program Schedule and Budget

Water Use Efficiency Measure	Schedule	Budget
Mandatory Measures		
Source Meters	Ongoing	WSLG
Service Meters	Ongoing	WSLG
Meter Calibration	Ongoing	WSLG
Customer Education	Ongoing	WSLG
Measures That Must be Evaluated		
Rate Structure	Ongoing	WSLG
Reclamation Opportunities	Ongoing	WSLG
Selected Measures		
Water Bill Showing Consumption History	Ongoing	WSLG
Notifying Customers About Leaks on their Property	Ongoing	WSLG
Indoor Retrofit Kits and Toilet Leak Protection	Ongoing	WSLG
Campus Outreach	Ongoing	WSLG
Leak Detection Surveys	Ongoing	WSLG

WSLG = Washington State Legislature and Governor approved budget

Water Use Efficiency Program Evaluation and Reporting

WSH will continue to evaluate overall consumption, per capita and per connection water use, and the amount of DSL on an annual basis. WSH will evaluate the performance of its WUE Program and implemented measures by analyzing consumption data and determining the long-term trend towards reducing water usage per connection and meeting WUE goals. If the program monitoring shows that progress towards meeting the WUE goals is not being accomplished, more rigorous program implementation or additional program items will be considered, along with a cost-effective evaluation of measures.

WSH will continue to provide annual WUE performance reports to its consumers in the CCR and will detail the results of water use monitoring and progress towards achieving the system's WUE goals.

Appendix F
CCC Program

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CROSS-CONNECTION CONTROL POLICY

Western State Hospital Water System
ID#951501

Finding of Fact

Whereas it is the responsibility of a water purveyor to provide water to the customer at the meter that meets Washington state water quality standards.

Whereas it is the water purveyor's responsibility to prevent the contamination of the public water system from the source of supply (i.e., to the customer's connection to the service pipe or meter).

Whereas it is a requirement of the Washington State Department of Health (DOH) for the Purveyor to establish a cross-connection control program satisfactory to DOH.

Whereas cross-connections within the customer's plumbing system may pose a potential source for the contamination of the public water supply system.

Now be it resolved that **Western State Hospital Water System**, hereinafter referred to as the Purveyor, establishes the following cross-connection control policy to protect this purveyor-owned water system from the risk of contamination. For public health and safety, this policy shall apply equally to all new and existing customers.

Definitions

Unless otherwise defined, all terms used in this policy resolution pertaining to cross-connection control shall have the same definitions as those contained in WAC 246-290-010 (Definitions, abbreviations, and acronyms) of the Group A Drinking Water Regulations.

Implementation of the Cross-Connection Control Policy

The Purveyor will implement a cross-connection control program that relies on premises isolation and in-premises protection as defined in WAC 246-290-010.

The Purveyor has employed the services of **Northwest Water System's DOH-certified Cross-connection Control Specialist (CCS)** to develop, implement, and be in responsible charge of the **Western State Hospital Water System** cross-connection control program.

The Purveyor will ensure the written cross-connection control program is consistent with this policy and complies with the requirements contained in WAC 246-290-490 (Cross-connection control) of the Group A Drinking Water Regulations.

The Purveyor will ensure the most recent editions of the following publications are used as references and technical aids for cross-connection control program development and implementation:

1. *Cross-Connection Control Manual, Accepted Procedures and Practice*, published by the Pacific Northwest Section, American Water Works Association, or latest edition thereof.
2. *Manual of Cross-Connection Control*, published by the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California, or latest edition thereof.
3. *Cross-Connection Control Guidance Manual for Small Water Systems*, published by the DOH Office of Drinking Water.

The Purveyor will ensure coordination with the authority having jurisdiction (*a.k.a., Local Administrative Authority*) in all matters concerning cross-connection control. Documentation and description of the coordination, including delineation of responsibilities, shall be provided in the written cross-connection control program.

The Purveyor will incorporate the written cross-connection control program into the Water System Plan required under WAC 246-290-100 or the Small Water System Management Program required under WAC 246-290-105.

The Purveyor retains the authority to make reasonable decisions related to cross-connections in cases and situations not provided for in this policy or the written program.

Prevention of Contamination

The Purveyor will ensure that periodic hazard surveys, conducted in the field and/or through a customer completed hazard survey questionnaire, of the customer's plumbing system(s) and water usage are managed and evaluated by the CCS.

Survey of a customer's premises is for the sole purpose of establishing the minimum requirements for the protection of the public water supply system.

The Purveyor, in conjunction with the CCS's assessment, will ensure that cross-connections between the public water system and a customer's water system or water usage are eliminated or controlled by the appropriate method of backflow protection as follows:

1. The Purveyor will comply with the premises isolation requirements specified in WAC 246-290-490 § (4)(b); and
2. May reduce premises isolation requirements and rely on in-premises protection for premises other than the type addressed in WAC 246-290-490 § (4)(b), only when the following conditions are met:
    (a) The in-premises backflow preventer provides a level of protection commensurate with the assessed degree of hazard;
    (b) Backflow preventers which provide the in-premises backflow protection meet the definition of approved backflow preventers as described in WAC 246-290-010;
    (c) The approved backflow preventers are installed, inspected, tested (if applicable), maintained, and repaired in accordance with WAC 246-290-490 § (6) & (7);
    (d) Records of the backflow preventers are maintained in accordance with WAC 246-290-490 § (3)(j) & (8); and
    (e) The Purveyor, and designated CCS, has reasonable access to the customer's premises to conduct periodic hazard (re)evaluations to determine whether the in-premises protection is adequate to protect the Purveyor's distribution system.

The Purveyor will take, or authorize the CCS to take, appropriate corrective action when:

1. A cross-connection exists that is not controlled commensurate to the degree of hazard assessed; or
2. A customer fails to comply with the Purveyor's requirements regarding the installation, inspection, testing, maintenance or repair of the approved backflow preventer.

The Purveyor's corrective action may include, but is not limited to:

1. Denying or discontinuing water service to a customer's premises until the cross-connection hazard is eliminated or controlled to the satisfaction of the Purveyor;
2. Requiring the customer to install an approved backflow preventer for premises isolation commensurate with the assessed degree of hazard; or
3. The Purveyor installing an approved backflow preventer for premises isolation commensurate with the assessed degree of hazard.

Except in the event of an emergency, the Purveyor or CCS shall notify the authority having jurisdiction prior to denying or discontinuing water service to a customer's premises.

The Purveyor prohibits the intentional return of used water to the Purveyor's distribution system. Used water includes, but is not limited to, water used for heating, cooling, or other purposes within the customer's water system.

The Purveyor's requirements contained within this cross-connection control policy and the written program do not constitute an approval of the customer's plumbing system, compliance of the customer's plumbing system with the Uniform Plumbing Code or an absolute assurance of the absence of cross-connections in the customer's plumbing system.

If any provision in this policy or in the written cross-connection control program is found to be less stringent than or inconsistent with the Group A Drinking Water Regulations (Chapter 246-290 WAC), or other Washington state statutes or rules, the more stringent state statue, rule or regulation shall apply.

Waer System Purveyor

11-28-23

Date

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CROSS-CONNECTION CONTROL PROGRAM
Western State Hospital Water System
ID#951501

A. Requirement for Program

Western State Hospital Water System (State ID#951501) hereinafter referred to as the "Purveyor", has the responsibility to protect the public water system from contamination due to cross-connections. A cross-connection may be defined as *"any actual or potential physical connection between a potable water line and any pipe, vessel, or machine that contains or has a probability of containing a non-potable gas or liquid, such that it is possible for a non-potable gas or liquid to enter the potable water system by backflow."*

All public water systems are required to develop and implement cross-connection control (CCC) programs. The CCC requirements are contained in Washington Administrative Code (WAC) 246-290-490 of the Group A Drinking Water Regulations. The minimum required elements of a CCC program are:

1. Establishment of legal authority and program policies;
2. Evaluation of premises for cross-connection hazards;
3. Elimination and/or control of cross connections;
4. Provision of qualified personnel;
5. Inspection and testing of backflow assemblies;
6. Quality control of testing process;
7. Response to backflow incidents;
8. Public education for consumers;
9. Record keeping for CCC program; and
10. Special requirements for reclaimed water use.

Other CCC program requirements include:

1. Coordination with the Authority Having Jurisdiction (AHJ), i.e., the local building or plumbing official, regarding CCC activities;
2. Prohibition of the return of used water into the public water system (PWS) distribution system; and
3. Inclusion of a written CCC program in a Water System Plan (WSP) or Small Water System Management Program (SWSMP).

B. Program Objectives

The objectives of the CCC program are to:

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

C. Summary of Program Decisions

The following table summarizes the major policy and program decisions adopted for the **Western State Hospital Water System**. The items in the table represent CCC Program areas that have more than one acceptable approach or option.

CCC Program Decision Summary Table for the Western State Hospital Water System

Decision Item	Decision
1. Type of Program [General, WAC 246-290-490(2)(e)]	
a. Premises isolation only	
b. Premises isolation and in-premises protection (combination program)	X
2. Extent of Coordination with AHJ [WAC 246-290-490(2)(d)]	
a. Information exchange	X
b. Interaction	
c. Joint program	
3. Relationship with Customer [Element 1]	
a. Signed service agreement or contract	
b. Ordinance/resolution; implied service agreement	X
4. Enforcement of Corrective Action [Element 1]	
a. Rely upon shut-off of water service	X
b. Rely upon purveyor-installed premises isolation	X
5. Assessment and Re-assessment of Hazard [Element 2]	
a. By purveyor's staff or equivalent	
b. By Northwest Water Systems' cross-connection control specialist (CCS); report reviewed by CCS	X
6. Location and Ownership of Premises Isolation Assembly [Element 3]	
a. On purveyor's service line	X
b. On customer's service line	X
7. CCS Option – Purveyor's Program Management [Element 4]	
a. Purveyor's staff member certified	
b. Inter-agency agreement or use other agency's CCS	
c. Contract with Northwest Water Systems' CCS	X
8. Testing of Assemblies [Element 5]	
a. By purveyor's staff or purveyor-employed backflow assembly tester (BAT)	
b. By customer-employed/contracted BAT	X
9. Cost Recovery [WAC 246-290-100(4)(h) and –105(4)(p)]	
a. Borne by all customers (general water rates)	X
b. Assessed to specific class (commercial meters)	
c. Each customer directly bears cost	X

D. Required Elements of Program

The **Washington State Department of Health (DOH)** drinking water regulations for Group A public water systems, WAC 246-290, require CCC programs to include certain minimum elements. The elements are listed in WAC 246-290-490(3). This section describes how the water system intends to comply with each of the required program elements. Elements are numbered the same as they appear in the WAC.

Element 1: *Adoption of a written legal instrument authorizing the establishment and implementation of a CCC program.*

Western Stat3e Hospital Water System has adopted a cross-connection control policy upon contracting Northwest Water Systems as their management company, which authorizes the Purveyor to implement a CCC program. The policy also authorizes the system to take corrective action when customers do not comply with the CCC program requirements. The primary method for protection of the distribution system will be the installation of a backflow assembly by the customer or Northwest Water Systems will contract with an L&I registered contractor, at the customer's expense.

Legal Instrument Status	*Schedule*
Preparation of proposed legal instrument	*October 2023*
Adoption of legal instrument	*October 2023*
Legal instrument becomes effective	*November 2023*

Element 2: *Development and implementation of procedures and schedules for evaluating new and existing service connections to assess the degree of hazard.*

Initial Cross-Connection Hazard Surveys

The procedures for evaluating the backflow prevention requirements for new and existing customers are as follows:

1. For all ***new services***, the Purveyor will require that the customer either submit an on-site CCC Hazard Field Survey report completed by a customer employed, DOH-certified CCS; or allow access of the Purveyor employed/contracted DOH-certified CCS to complete an on-site CCC Hazard Field Survey of the possible hazard(s) posed by the proposed plumbing system(s). Cost of the survey to be borne by the customer.
2. For all ***existing services***, the Purveyor will require the customer to submit to the Purveyor, within 30 days of notification, either an on-site CCC Hazard Field Survey report completed by a customer employed, DOH-certified CCS; or submit a customer-completed and signed CCC Hazard Survey Questionnaire.
3. For all existing services, should the customer fail to supply the required information for a hazard assessment, the Purveyor may have the assessment made by a CCS employed by the Purveyor, require the installation of an RPBA for premises isolation, or take other such actions consistent with the previously stated policies and bill the customer for the associated costs.

Cross-Connection Hazard Survey Schedule for Initial Hazard Assessments

The schedule for initial hazard assessment is outlined in the following table. The schedule starts from the date the CCC program is established.

Initial Assessment Task	Schedule
Assessment of all new connections	Within 30 days of issue
Identification and assessment of high-hazard premises which are listed on Table 9 of Washington Administrative Code (WAC) 246-290-490	Within 6 months
Identification and assessment of hazardous premises supplemental to Table 9 of WAC 246-290-490	Within 9 months
Identification of residential connections with special plumbing facilities and/or water use on the premises	Within 12 months

Cross-Connection Hazard Survey Schedule for Subsequent Hazard Re-Assessments

For subsequent cross-connection hazard surveys, procedures for evaluating the backflow prevention requirements are:

1. For **Single Family/Duplex Residential & Non-residential Recreational** *(private campsites/RV sites)* **Connections**, the Purveyor will require the customer to submit to the Purveyor, within 30 days of purveyor notification, a completed "CCC Hazard Survey form". The procedure used for evaluating the hazard re-assessment and the potential change in the required backflow prevention will be the same as used for the initial hazard assessment. The frequency of hazard re-assessments will be every 3 years.
2. For all **Other Non-residential Connections** *(commercial, business, schools, daycares, churches, institutional, agricultural, medical, industrial, food service/processing, etc.)*, the Purveyor will require the customer to submit to the Purveyor, within 30 days of purveyor notification, an on-site CCC Hazard Field Survey conducted by a customer employed DOH-certified CCS. The frequency of the hazard re-assessments will be every 2 years.

With an accumulation of data and an aggressive customer education program the time interval for re-surveys may be lengthened or shortened as deemed necessary and acceptable to the Purveyor, CCS, and DOH.

The Purveyor will inform the customer that the Purveyor's survey of a customer's premises (whether by a representative of the Purveyor or through the evaluation of a questionnaire completed by the customer) is for the sole purpose of establishing the Purveyor's minimum requirements for the protection of the public water supply system, and that the required backflow protection will be commensurate with the Purveyor's assessment of the degree of hazard.

The Purveyor will also inform the customer or any regulatory agencies that the Purveyor's survey, requirements for the installation of backflow prevention assemblies, lack of requirements for the installation of backflow prevention assemblies, or other actions by the purveyor's personnel or agent do not constitute an approval of the customer's plumbing system or an assurance to the customer or any regulatory agency of the absence of cross connections.

Element 3: *Development and implementation of procedures and schedules for elimination and/or control of cross-connections.*

Backflow Assembly Requirements

The following service policy shall apply to all new and existing customers:

1. The Purveyor will require that water service to all **non-residential customers** (except non-residential recreational connections) be isolated at the meter, or connection point, by a DOH-approved DCVA or RPBA, commensurate with assessed degree of hazard and acceptable to the Purveyor. All high-hazard connections of the type described in Table 9 of WAC 246-290-490 shall be isolated with an RPBA, RPDA, or Air Gap, commensurate with assessed degree of hazard in accordance with current regulation requirements.

2. The Purveyor will require all **residential and non-residential, recreational customers** with facilities of the type described in Table 9 of WAC 246-290-490 to be isolated with an RPBA, RPDA, or Air Gap, commensurate with assessed degree of hazard in accordance with current regulation requirements. All other residential customers with special plumbing or water use on the premises will be protected with a DCVA or RPBA, commensurate with assessed degree of hazard installed for either premise or fixture isolation. "Special plumbing" includes, but is not limited to, the following:

   a. A lawn irrigation system;
   b. A solar heating system;
   c. An auxiliary source of supply, e.g., a well or creek;
   d. Piping for livestock watering, hobby farming, etc.;
   e. Residential fire sprinkler system, other than flow through; and
   f. Property containing a small boat moorage.

3. For all customers that have a written service contract with the Purveyor, any required backflow preventer shall be:

   - Purchased and installed by the customer (at the customer's expense) downstream of the meter or connection point in accordance with the Purveyor's standards described hereinafter; and
   - Maintained, tested, and inspected in accordance with the Purveyor's standards described hereinafter.

   For new customers, the Purveyor will not turn on water (except for testing purposes) at the connection until the customer complies with the above requirements.

   The failure of the customer to comply with the Purveyor's installation and maintenance requirements shall constitute a breach of contract by the customer. The Purveyor may then proceed with corrective action provisions stipulated in the contract.

4. Customers without written contracts are considered to have an implied contract that requires the customer to bear all reasonable costs of service. The Purveyor will install the required DCVA or RPBA on the service, upstream of the meter or elsewhere within the utility held easement, and charge the customer for the cost of the initial installation and testing, and all future maintenance, testing, and repair, as set forth in the Purveyor's schedule of rates and charges. The failure of the customer to pay these costs shall constitute a breach of contract by the customer, and the Purveyor will proceed with the

established delinquency of payment procedures. As an alternative, the customer may sign a service contract and install the required backflow preventer downstream of the meter in accordance with the Purveyor's installation standards described hereinafter.

5. All backflow prevention assemblies relied upon by the Purveyor to protect the public water system shall meet the definition of "approved backflow prevention assembly" as contained in WAC 246-290-010. The Purveyor's CCS will obtain and maintain a current list of backflow prevention assemblies approved for installation in Washington State from the DOH Office of Drinking Water.

   All backflow assemblies will be installed:

   - In the orientation for which they are approved;
   - In a manner and location that facilitates their proper operation, maintenance, and testing or inspection;
   - In a manner that will protect them from weather-related conditions such as flooding and freezing; and
   - In compliance with applicable safety regulations.

   Installation standards contained in the most recently published edition of the Pacific Northwest Section, American Water Works Association (PNWS-AWWA) *CCC Manual* or the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research (USCFCCCHR) *CCC Manual* shall be followed.

   The Purveyor has no regulatory responsibility or authority over the installation and operation of the customer's plumbing system. The customer is solely responsible for compliance with all applicable regulations and for prevention of contamination of his/her plumbing system from sources within his/her premises. Any action taken by the Purveyor to survey plumbing, inspect or test backflow prevention assemblies, or to require premises isolation (installation of DCVA or RPBA on service) is solely for the purposes of reducing the risk of contamination of the Purveyor's distribution system.

   Except for easements containing the Purveyor's distribution system, the Purveyor will not undertake work on the customer's premises unless the customer has provided written request and signed authorization.

6. The following table shows the schedule that the Purveyor will follow for installation of backflow assemblies when they are required (based on the hazard evaluation).

Type of Service	Schedule
New connections with cross-connection hazards	Before service is initiated
Existing connections with Table 9-type hazards and other high cross-connection hazards	Within 30 days after notification
Existing connections with other than Table 9 of WAC 246-290-490 or high cross-connection hazards	Within 90 days after notification
Existing fire protection systems using chemicals or supplied by unapproved auxiliary water source	Within 30 days after notification
Existing fire protection systems not using chemicals and supplied by purveyor's water	Within 90 days after notification

Element 4: *Provision of qualified personnel, including at least one person certified as a CCS, to develop and implement the CCC program.*

1. **Program Administration:** The responsibility for administration of the CCC Program rests with the Purveyor. General policy direction and risk management decisions are established by **the Purveyor's DOH-certified CCS**.
2. The Purveyor will employ, or otherwise have on staff, at least one DOH-certified CCS to develop and implement the CCC program. As an alternative, or when no staff or employees are properly qualified, the Purveyor may retain a DOH-certified CCS on contract to provide the necessary expertise and services.
3. The following cross-connection related tasks will be performed by or under the direction of the Purveyor's certified CCS (on staff or under contract):
   - Preparation of and recommendations regarding changes to the CCC program;
   - Performance of and/or reviews of CCC hazard evaluations;
   - Recommendations on the type of backflow assembly to be installed;
   - Inspections of backflow assemblies for proper application and installation;
   - Reviews of backflow assembly inspection and test reports;
   - Recommendations and/or the granting of exceptions to mandatory premises isolation;
   - Participation in or cooperation with other water utility staff in the investigation of backflow incidents and other water quality problems;
   - Completion of Backflow Incident Reports; and
   - Completion of CCC Activity and Program Summary Reports.

   The following table identifies the current CCS employed or retained on contract by the Purveyor to manage the Purveyor's CCC program and/or act as the CCC technical resource for the Purveyor:

Name of CCS	Kevin Odegard, Northwest Water Systems, Inc.
Address	PO Box 123
City, State, Zip	Port Orchard, WA 98366
Telephone Number	(360) 876-0958
CCS Certification Number	006962

Name of CCS	Sean Burns, Northwest Water Systems, Inc.
Address	PO Box 123
City, State, Zip	Port Orchard, WA 98366
Telephone Number	(360) 876-0958
CCS Certification Number	012946

Element 5: *Development and implementation of procedures to ensure that approved backflow prevention assemblies are inspected and/or tested (as applicable).*

1. **Inspection and Testing of Backflow Assemblies**

   All backflow prevention assemblies that the Purveyor relies upon for protection of the water system will be subject to inspection and, if applicable, testing. Inspection and testing of backflow prevention assemblies will be as follows:

   - The Purveyor's DOH-certified CCS will inspect backflow prevention assemblies for proper application (i.e., to ensure that backflow prevention assemblies installed are commensurate with the assessed degree of hazard).
   - Either a DOH-certified CCS or backflow assembly tester (BAT) will perform inspections of backflow prevention assemblies for correct installation.
   - A DOH-certified backflow assembly tester (BAT) will test all backflow prevention assemblies the Purveyor relies upon to protect the public water system.

2. **Frequency of Inspection and Testing**

   Inspection and testing of backflow prevention assemblies will be conducted:

   - At the time of installation;
   - Annually after installation;
   - After a backflow incident; and
   - After repair, reinstallation, relocation, or re-plumbing.

   The Purveyor may require a backflow prevention assembly to be inspected and/or tested more frequently than once a year, when it protects against a high-health hazard or when it repeatedly fails tests or inspections.

3. **Responsibility for Inspection and Testing**

   The Purveyor will be responsible for inspection and testing of all purveyor-owned backflow prevention assemblies.

   The Purveyor will require the customer to be responsible for inspection and testing of backflow prevention assemblies owned by the customer. The customer shall employ, at customer expense, a DOH-certified BAT to conduct the inspections and tests within the time period specified in the testing notice sent by the Purveyor. The test report shall be completed and signed by the BAT and returned to the Purveyor's CCS, by the due date specified by the Purveyor. The customer may request an extension of the due date for returning a test report by submitting a written request to the Purveyor.

4. **Approved Test Procedures**

   The Purveyor will require that all backflow prevention assemblies relied upon to protect the public water system be tested in accordance with DOH-approved test procedures as specified in WAC 246-290-490(7)(d). Any proposal to use alternate test procedures must be approved by the Purveyor's CCS.

5. **Notification of Inspection and/or Testing**

   The Purveyor will notify in writing all customers who own backflow prevention assemblies that are relied upon to protect the public water system to have their backflow prevention

assembly (ies) inspected and/or tested. Notices will be sent out not less than 30 days before the due date of the inspection and/or test. The notice will also specify the date by which the inspection/test report must be received by the Purveyor.

6. **Enforcement**

When a customer fails to send in the inspection/test report within 45 days after the notification date, and the Purveyor has not approved an extension to the due date, the Purveyor will take the following action:

- The Purveyor will send a second notice giving the customer an additional 15 days to send in the report. The notice will also inform the customer that failure to satisfactorily respond to the request will result in Enforcement &/or Corrective actions as provided by the CCC Policy and/or Service Agreements.
- The Purveyor will send copies of the second notice to the owner and occupants of the premises (if different).
- If the owner and/or occupants have not responded satisfactorily to the Purveyor within 15 days of the due date specified in the second notice, the Purveyor will implement the Enforcement &/or Corrective actions as provided by the CCC Policy and/or Service Agreements.

Element 6: *Development and implementation of a backflow prevention assembly testing quality assurance/quality control program.*

The Purveyor will maintain a list of local, DOH-certified BATs that are pre-approved by the Purveyor to perform the following activities:

- *Backflow assembly inspection for proper installation; and*
- *Backflow assembly testing.*

The list will be compiled of individual testers who have requested to work in the system's area, who have previously submitted properly completed test reports, or are listed on the DOH list of certified testers.

Quality Assurance

The Purveyor's CCS will review within 30 days of receipt the backflow assembly inspection/test report forms submitted by the customer.

The Purveyor's CCS will provide follow-up on test reports that are deficient in any way.

The Purveyor's CCS will report incidences of fraud or gross incompetence on the part of any BAT or CCS to DOH Operator Certification program staff.

Element 7: *Development and implementation (when appropriate) of procedures for responding to backflow incidents.*

1. **Backflow Incident Response Plan**

The Purveyor's CCS will participate in developing a backflow incident response plan that will be part of the water system's emergency response program as required by WAC 246-290-415(2). The incident response plan will include, but will not be limited to:

- Notification of affected population;
- Notification and coordination with other agencies, such as DOH, the AHJ, and other local health jurisdictions;
- Identification of the source of contamination;
- Isolation of the source of contamination and the affected area(s);
- Cleaning, flushing, and other measures to mitigate and correct the problem; and
- Apply corrective action to prevent future backflow occurrences.

2. **Technical Resources**

The Purveyor will use the most recently published edition of the manual, *Backflow Incident Investigation Procedures*, published by the PNWS-AWWA as a supplement to the Backflow Incident Response Plan for the **Western State Hospital Water System**.

Element 8: *Development and implementation of a cross-connection control public education program.*

1. **Customer Education**

The Purveyor will distribute at regular intervals (at least annually), public education materials to system customers. For residential customers, such materials will describe the cross-connection hazards in homes and the recommended backflow prevention assemblies or devices that should be installed by the homeowner to reduce the hazard to the public water system. The education program will emphasize the responsibility of the customer in preventing the contamination of the public water supply. The Purveyor's staff will produce the public education materials or the Purveyor will obtain brochures from national backflow associations, such as PNWS-AWWA, Spokane Regional Cross-Connection Control Committee (SRC4), Western Washington Cross-Connection Prevention Professionals Group (The Group), USC FCCCHR, the American Backflow Prevention Association (ABPA), and/or Other water utilities.

The information distributed by the Purveyor will include, but not be limited to, the following subjects:

- Cross-connection hazards in general;
- Irrigation system hazards and corrective actions;
- Fire sprinkler cross-connection hazards;
- Importance of annual inspection and/or testing of backflow assemblies; and
- Thermal expansion in hot water systems when backflow assemblies are installed for premises isolation.

Element 9: *Development and maintenance of cross-connection control records.*

1. **Types of Records and Data to be Maintained**

The Purveyor will maintain records of the following types of information required by WAC 246-290-490:

- Service connections/customer premises information including:
  - Assessed degree of hazard; and
  - Required backflow prevention assembly to protect the public water system.

- Backflow prevention assembly inventory and information including:
  - Air gap (AG) location, installation and inspection dates, inspection results and person conducting inspection;
  - Backflow prevention assembly location, assembly description (type, manufacturer, make, model, size, and serial number), installation, inspection and test dates, test results and data, and person performing test; and
  - Information on atmospheric vacuum breakers (AVB) used in limited situations for lawn irrigation system applications, including manufacturer, make, model, size, dates of installation and inspections, and person performing inspections.

The Purveyor will maintain records on all backflow prevention assemblies that protect the public water system from contamination. At a minimum, the Purveyor will maintain records on all premises isolation backflow prevention assemblies required to protect the public water system.

2. **Reports to be Prepared and Submitted to DOH**

The Purveyor or CCS will prepare the following reports required by WAC 246-290-490 including:

- Cross-connection control program activities report for the calendar year, to be sent to DOH when requested;
- Cross-connection control program summary information, when required, or when there are significant policy changes;
- Backflow incident reports to DOH and the AHJ; and
- Documentation when exceptions to mandatory premises isolation are granted.

At a minimum, the Purveyor's CCS will prepare and sign the Exceptions reports.

Element 10: *Additional cross-connection control requirements for reclaimed water.*

Currently the **Western State Hospital Water System** does not receive or distribute reclaimed water. In the event that reclaimed water use is proposed within the PWS's service area, the Purveyor will make all cross-connection control requirements mandated by the Permitting Authority in accordance with Chapter 90.46 RCW part of the written CCC program plan and comply with such additional requirements.

E. Other Provisions

Coordination With the Authority Having Jurisdiction: Both WAC 246-290-490 and the Uniform Plumbing Code (as amended for Washington) require coordination between purveyors and the Authority Having Jurisdiction in all matters concerning cross-connection control.

a. Identification of the Authority Having Jurisdiction (AHJ) - the AHJ that enforces the plumbing code for the premises served by the Purveyor is **Pierce County, Planning and Land Services, Attn: Steve Widener, Supervisor Building Inspector, 2401 S. 35th Street, Tacoma, WA 98409, (253) 798-7396**.

b. Coordination with the Authority Having Jurisdiction - A letter indicating that this cross-connection control program has been implemented has been provided on **October 26, 2023**.

c. Description of Coordination with the AHJ - The Purveyor coordinates with the AHJ as follows: **Coordination consists of information sharing only**. However, the Purveyor requests the opportunity to review any plumbing plans for new or existing connections to the water system when permits are applied for. The Purveyor further agrees to inform the AHJ whenever a backflow incident or a shut-off occurs.

d. Delineation of Responsibilities - The Purveyor and the AHJ are responsible for the following CCC activities in the **Western State Hospital Water System**. AHJ reviews new construction drawings; the Purveyor is responsible for all other Cross-Connection Control evaluations, tests, inspections, and record keeping.

e. Notification of the Authority Having Jurisdiction - The Purveyor will inform the AHJ when there is a:

- Change in plumbing that requires a plumbing permit;
- Change in the use of any part of the premises that alters the cross-connection hazard level; or
- Backflow incident.

F. Relationship to Other Planning and Operations Program Requirements

The Purveyor will consider the requirements and consequences of the CCC program on the utility's planning and operations requirements. Such considerations include, but are not limited to ensuring:

- And promoting adequate communication between CCC program personnel and other water utility staff;
- That adequate training is provided to all staff to recognize potential cross-connection control problems;
- That cross-connection issues be considered in water quality investigations;
- That the design of the water distribution system makes adequate provisions for expected head losses incurred through the installation of experienced by backflow assemblies;
- That CCC program personnel be consulted in the design of water and wastewater treatment facilities and when proposals are made to receive or distribute reclaimed water;
- That operations under normal and abnormal conditions do not result in excessive pressure losses; and
- That adequate financial and administrative resources are available to carry out the CCC program.

Water System Purveyor

11-28-23
Date

Planning • Management • Engineering
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Backflow Incidence Response Plan
Western State Hospital Water System
ID#951501

A. General

This Backflow Incident Response Plan should be considered a supplement to the water system's Emergency Plan.

Purveyors should immediately begin a backflow incident investigation whenever the initial evaluation of a water quality complaint indicates that:

1. A backflow incident has occurred (i.e., drinking water supply has been contaminated) or may have occurred; or
2. The complaint can't be explained as a "normal" aesthetic problem.

Also, whenever a water main break (or power outage for pumped systems) causes a widespread loss of water pressure in the system (creating back siphonage conditions), purveyors should initiate a check of distribution system water quality as a precursor to the need for a backflow incident investigation.

WAC 246-290-490 requires purveyors to notify DOH, the Local Administrative Authority and local health jurisdiction as soon as possible, but no later than the end of the next business day when a backflow incident contaminates the potable water supply (in the distribution system and/or in the customer's plumbing system). Purveyors should include a list of emergency contact telephone numbers at the beginning of the water system's O & M Manual, so that the information is readily available when an incident occurs.

Purveyors can get more detailed guidance on how to respond to a backflow incident from the manual, *Backflow Incident Investigation Procedures*, published by the Pacific Northwest Section, American Water Works Association (PNWS-AWWA).

B. Short List of Tasks

Small water system purveyors can use the following short list of tasks as initial guidance for dealing with backflow incidents. Purveyors should consult the most recently published edition of the PNWS-AWWA *Backflow Incident Investigation Procedures Manual* referenced above for greater detail as soon as possible after learning of a possible or confirmed backflow incident. Note: the water system is referred to as the Purveyor in the short task list.

1. Customer Notification

a. As soon as possible, the Purveyor will notify customers not to consume or use water.
b. The Purveyor will start the notification with the customers nearest in location to the assumed source of contamination (usually the customer(s) making the water quality complaint).

c. The Purveyor will inform the customer about the reason for the backflow incident investigation and the Purveyor's efforts to restore water quality as soon as possible. The Purveyor will let the customer know that customers will be informed when they may use water, the need to boil water used for consumption until a satisfactory bacteriological test result is obtained from the lab, etc.
d. Where a customer cannot be contacted immediately, the Purveyor will place a written notice on the front door handle, and a follow-up visit will be made to confirm that the customer received notice about the possible contamination of the water supply.
e. When dealing with a backflow incident, the Purveyor will let customers know that it could take several days to identify the source and type of contaminant(s) and to clean and disinfect the distribution system.

2. **Identification of Source of Contamination**

a. The Purveyor will give consideration to the distribution system as a potential source of the contaminant (e.g., air valve inlet below ground).
b. The Purveyor will not start flushing the distribution system until the source of contamination is identified (flushing may aggravate the backflow situation and will likely remove the contaminant before a water sample can be collected to fully identify the contaminant).
c. The Purveyor will conduct a house-to-house survey to search for the source of contamination and the extent that the contaminant has spread through the distribution system. Note: a check of water meters may show a return of water (meter running backward) to the distribution system.
d. When the cross connection responsible for the system contamination is located, the Purveyor should discontinue water service to that customer, until the customer completes the corrective action ordered by the Purveyor.

3. **Isolation of Contaminated Portion of System**

a. The Purveyor will isolate the portions of the system that are suspected of being contaminated by closing isolating valves; leave one valve open to ensure that positive water pressure is maintained throughout the isolated system.
b. The Purveyor will be sure to notify all affected customers in the isolated area first and then notify other customers served by the system.

4. **Public Health Impacts**

a. The Purveyor will seek immediate input from and work with state and local health agencies to accurately communicate and properly mitigate potential health effects.
b. If appropriate, the Purveyor will refer customers that may have consumed the contaminant or had their household (or commercial) plumbing systems contaminated to public health personnel and Local Administrative Authorities (plumbing inspectors).

5. **Cleaning/Disinfecting the Distribution System**

a. The Purveyor will develop and implement a program for cleaning the contaminated distribution system consistent with the contaminant(s) identified.
b. Where both chemical and bacteriological contamination has occurred, the Purveyor will disinfect the system after the removal of the chemical contaminant.
c. Where any bacteriological contamination is suspected, the Purveyor will provide field disinfection.

C. Additional Information on Cleaning/Disinfecting the Distribution System

Most chemical or physical contaminants can be flushed from the water distribution system or customer's plumbing system with adequate flushing velocity. However, this may not be the case in systems where scale and corrosion deposits (e.g., tuberculation on old cast iron mains) provide a restriction to obtaining adequate flushing velocity, or where chemical deposits or bacteriological slimes (biofilm) are present (on which the chemical contaminant may adhere).

To remove a chemical or physical contaminant from the distribution system, purveyors may need to:

1. Physically clean the affected area using foam swabs (pigs); and/or
2. Alter the form of the chemical contaminant (e.g., through oxidation using chlorination or addition of detergents).

When adding any chemical (including chlorine) to remove a contaminant from the distribution system, it is essential that the Purveyor fully understand the chemistry of the contaminant. **Adding the wrong chemical could make the contaminant more toxic to customers and/or more difficult to remove from the distribution system.**

Purveyors should contact the appropriate DOH regional office to discuss proposed approaches to contaminant removal and disinfection prior to taking corrective action.

Water System Purveyor

1-28-25
Date

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Cross-Connection Control Hazard Field Survey Report

Survey date: _____ Water System Name: Western State Hospital

Customer Information

Premises Owner: Washington State DSHS Telephone: _____

Service Address: 9601 Steilacoom Blvd SW

Contact person: Bartek Tarnowski Title: MOD Supervisor

Business Name & Type of Business: _____

Description of water use: _____

Cross-Connection Control Specialist (CCS) Information

Name: Sean Burns Telephone: (360) 876-0958

Company Name & Address: Northwest Water Systems, Inc.; PO Box 123, Port Orchard, WA 98366

DOH CCS Certification #: 012946 Year certified: 2013

Water Service and Backflow Prevention Assembly (BPA) Size/Type

Service Type	Service Size	Meter Size	BPA Size	BPA Type
Commercial				
Fire				
Irrigation				
Other				

Note: The CCS's survey shall include an inspection of the premises isolation assembly to verify that it is installed correctly and is a currently listed DOH-approved assembly.

Survey Results

Item	Location & Description of Cross Connection	Backflow Prevention Provided/Required

Attach additional sheets if needed.

Surveyor's Comments

Surveyor's Recommendations

I certify that this cross-connection hazard survey accurately reflects the overall risk posed by the customer's plumbing system to the Purveyor's distribution system. Based on the above survey, I certify that:

1. I found the following type(s) of premises isolation backflow preventer(s):

   Air Gap _____ RPBA/RPDA _____ DCVA/DCDA _____ None _____.

   Reason(s): _____

2. The existing backflow preventer(s) is/are properly installed.

   Yes _____ No _____ N/A _____.

3. The existing backflow preventer(s) is/are commensurate with the degree of hazard:

   Yes _____ No _____ N/A _____.

4. The premises owner should replace the existing premises isolation backflow preventer(s) with the following:

   Air Gap _____ RPBA/RPDA _____ DCVA/DCDA _____ None _____.

   Reason: _____

5. No backflow preventer was found installed for premises isolation, however the premises owner should install a premises isolation backflow preventer of the following type:

   Air Gap _____ RPBA/RPDA _____ DCVA/DCDA _____ None _____.

   Reason: _____

The completed survey report shall be first signed by the CCS conducting the survey, and then counter-signed by the owner of the premises or the owner's authorized agent.

CCS Signature: _____ **Date:** _____

As the Owner of the Premises (or Owner's authorized agent), I certify that I have received a copy of this completed Cross-Connection Control Hazard Field Survey Report.

Signature: _____ **Date**: _____

Note: Customers and regulatory agencies should be aware that the Purveyor's requirement for this cross-connection hazard survey and/or for the installation of a specific backflow prevention assembly on a service pipe *do not* constitute an approval of the customer's plumbing system, compliance of the customer's plumbing system with the Uniform Plumbing Code or an assurance of the absence of cross connections in the customer's plumbing system.

Westen State Hospital
Indoor Backflow Assemblies

WSH Backflow Assembly ID #	Building #	Make / Model / Size	Assembly Type	Serial Number	Hazard
1	27	FEBCO / 825YD / 3.00	RPBA	11248	DOMESTIC
2	27	AMES / COLT / 4.00	DCVA	VD1338	FIRE SPRINKLER
3	27	FEBCO / 825Y / 0.75	RPBA	P6793	HVAC
4	27	FEBCO / 825Y / 0.76	RPBA	P6788	HVAC
7	35	FEBCO / 805Y / 1.50	DCVA	BA6723	DOMESTIC
8	1	FEBCO / 825Y / 2.00	RPBA	AA6397	DOMESTIC
13	36	FEBCO / 825YD / 3.00	RPBA	15933	HVAC
14	4	FEBCO / 825Y / 1.00	RPBA	BH6211	CHEMICAL TREATMENT
15	4	FEBCO / 825YD / 3.00	RPBA	N902260804	BOILER
16	4	FEBCO / 825YD / 3.00	RPBA	N0911300537	BOILER
17	5	WILKINS / 975 / 3.00	RPBA	B09279	LAUNDRY
18	5	WATTS / 009M2 / 0.75	RPBA	215344	CHEMICAL MIXER
20	6	FEBCO / 825Y / 2.00	RPBA	AB9811	DOMESTIC
22-D	22	WATTS / 957 / 2.50	RPBA	TB-1802	DOMESTIC
22-E	22	WATTS / LF009M3QT / 0.75	RPBA	240887	TRAP PRIMER
22-F	22	WATTS / LF009M3QT / 0.75	RPBA	246872	STEAM GENERATOR
22-G	22	WATTS / LF009QT / 0.50	RPBA	234785	FUTURE USE
22-H	22	WATTS / LF009QT / 0.50	RPBA	235205	ULTRASONIC CLEAN MACHINE
22-I	22	WATTS / LF009M2QT / 1.50	RPBA	O67256	DISINFECTOR MACHINE
22-J	22	WATTS / LF009M2QT / 1.50	RPBA	O65843	STERILIZER
22-K	22	WATTS / LF009M3QT / 0.75	RPBA	234183	R/O MACHINE
22-L	22	WATTS / LF009M3QT / 0.75	RPBA	260052	COMBITHERM OVEN
22-M	22	WATTS / LF009QT / 0.50	RPBA	261734	COMBITHERM OVEN
22-N	22	WATTS / LF009QT / 0.50	RPBA	234664	KETTLES ON BOILER
22-O	22	WILKINS / 375XL / 1.00	RPBA	B33661	DISHWASHER
22-P	22	WATTS / LF009QT / 0.50	RPBA	234660	FINISHING COOLER
23	UKNOWN	WILKINS / 975XL / 1.00	RPBA	786981	HVAC
27	13	WILKINS / 975XL / 2.00	RPBA	2943546	DOMESTIC
28	16	HERSEY / DDC-2 / 6.00	DCVA	9211752	FIRE SPRINKLER
28-A	UKNOWN	AMES DERINGER / 30X / 6.00	DCVA	111121	FIRE SPRINKLER
28-B	UKNOWN	WILKINS / 375AST / 4.00	RPBA	25308	DOMESTIC
28-C	UKNOWN	WILKINS / 375XL / 0.75	RPBA	AJB6730	HEATING
28-D	UKNOWN	WILKINS / 375XL / 0.50	RPBA	AJA2478	HEATING
28-E	UKNOWN	WILKINS / 975XL2 / 0.50	RPBA	10441711	ICE MACHINE
28-F	UKNOWN	WILKINS / 975XL2 / 0.50	RPBA	10441713	ICE MACHINE
29	20	FEBCO / 806YD / 6.00	DCVA	7339	FIRE SPRINKLER
30	20	FEBCO / 805Y / 0.75	DCVA	Y1262	BYPASS
31	20	WATTS / 909 / 4.00	RPBA	174629	DOMESTIC
32	20	WILKINS / 975 / 1.00	RPBA	O21635	HEATING
33	16	FEBCO / 805Y / 0.75	DCVA	AE2723	HEATING
34	18	WILKINS / 975 / 4.00	RPBA	O3239	DOMESTIC
35	18	WILKINS / 975 / 1.00	RPBA	132437	HEATING
36	18	AMES / SS2000 / 6.00	DCVA	2K10856	FIRE SPRINKLER
37	17	WILKINS / 975 / 4.00	RPBA	13466	DOMESTIC
38	17	AMES / SS2000 / 6.00	DCVA	2HL0687	FIRE SPRINKLER
39	17	WILKINS / 975XL / 0.75	RPBA	378484	HEATING
40	17	FEBCO / 825Y / 0.75	RPBA	O6962	ELEVATOR
41	28	WATTS / 909QT / 0.75	RPBA	513064	HEATING
42	28	WATTS / 909 / 2.00	RPBA	363848	IRRIGATION
43	28	WATTS / 909QT / 1.00	RPBA	505033	HEATING
44	??	FEBCO / 825YD / 6.00	RPBA	OOO6291329	DOMESTIC
45	28	AMES / 3000SS / 4.00	DCVA	O6588	FIRE SPRINKLER
45-A	28	AMES / 200B / 0.75	DCVA	13075	BYPASS
46	29	FEBCO / 825Y / 2.00	RPBA	AB9839	HEATING
47	UKNOWN	FEBCO / 805YD / 4.00	DCVA	13772	FIRE SPRINKLER
48	29	FEBCO / 825Y / 2.00	RPBA	AA6293	HEATING
49	29	WATTS / 007 / 0.50	DCVA	10210	WATER FOUNTAIN
51	29	KENNEDY / B2 / 4.00	DCVA	F11181	FIRE SPRINKLER
52	29	FEBCO / 825Y / 2.00	RPBA	AB9785	HEATING
53	51	FEBCO / 805YD / 3.00	DCVA	18893	FIRE SPRINKLER

Westen State Hospital
Indoor Backflow Assemblies

WSH Backflow Assembly ID #	Building #	Make / Model / Size	Assembly Type	Serial Number	Hazard
54	54	WILKINS / 975 / 0.75	RPBA	137050	HEATING
55	50	WILKINS / 975 / 3.00	DCVA	10372	DOMESTIC
55-A	55	AMES / DERINGER 30 / 4.00	DCVA	H41081	FIRE SPRINKLER
55-B	55	WILKINS / 975XL / 2.00	RPBA	4323842	DOMESTIC
55-C	55	WILKINS / 975XL / 2.00	RPBA	4497384	DOMESTIC
55-D	55	WILKINS / 975XL2 / 0.50	RPBA	W438876	SANITIZER
55-E	55	WILKINS / 975XL2 / 0.50	RPBA	W438877	ICE MACHINE
56	50	AMES / SS2000 / 3.00	DCVA	2JJ519	FIRE SPRINKLER
57	50	WATTS / 009 / 0.75	RPBA	41860	HEATING
57-A	56	COLT / 200 / 4.00	DCVA	FD1366	FIRE SPRINKLER
58	56	FEBCO / 825YD / 2.50	RPBA	7920	DOMESTIC
59	56	FEBCO / 825Y / 1.50	RPBA	A00169	HEATING
60	52	WILKINS / 350AST / 6.00	DCVA	30757	FIRE SPRINKLER
61	52	WILKINS / 975XL / 0.75	RPBA	WQ60737	HEATING
62	53	HERSEY / 2 / 6.00	DCVA	107041	FIRE SPRINKLER
63	53	WATTS / 009 / 0.75	RPBA	205450	HEATING
64	54	FEBCO / 805YD / 6.00	DCVA	9407190610	FIRE SPRINKLER
64-A	54	WILKINS / 950XLD / 0.75	DCVA	HC68799	BYPASS
65	54	WILKINS / 975XL2 / 2.00	RPBA	4067950	DOMESTIC
67	54	WILKINS / 975 / 1.00	RPBA	14714279	HEATING
68	10	WATTS / LF009MSQT / 2.00	RPBA	O66955	BACKFLUSH
69	10	WATTS / LF009MSQT / 1.00	RPBA	O92359	HVAC

Westen State Hospital
Outdoor Backflow Assemblies

WSH Backflow Assembly ID #	Zone #	Make / Model / Size	Assembly Type	Serial Number	Hazard
2	1	WILKINS / 950 / 6.00	DCVA	AO119	FIRE SPRINKLER
7	1	WILKINS / 950 / 4.00	DCVA	AO4673	IRRIGATION
8	1	FEBCO / 805Y / 1.50	DCVA	138076	DOMESTIC
16	2	FEBCO / 805YD / 6.00	DCVA	18031	FIRE SPRINKLER
18	2	FEBCO / 805YD / 2.00	DCVA	AM6034	IRRIGATION
21	2	WILKINS / XLT2 / 1.00	DCVA	4289378	IRRIGATION
22-A	2	WILKINS / 350DA / 8.00	DCVA	12815	FIRE SPRINKLER
22-B	2	WILKINS / 950XLD / 0.75	DCVA	4640178	FIRE SPRINKLER BYPASS
22-C	2	WILKINS / 350DC / 1.50	DCVA	B243268	IRRIGATION
23	2	WILKINS / 950 / 4.00	DCVA	A04374	IRRIGATION
24	2	FEBCO / 805YD / 2.00	DCVA	AM4964	IRRIGATION
25	3	WILKINS / 950 / 4.00	DCVA	A04883	IRRIGATION
26	3	WILKINS / 950 / 4.00	DCVA	A00862	IRRIGATION
27	3	WILKINS / 950 / 4.00	DCVA	A03985	IRRIGATION
28	3	WILKINS / 950 / 4.00	DCVA	A02665	IRRIGATION
29	3	WILKINS / 950 / 4.00	DCVA	A04475	IRRIGATION
30	3	FEBCO / 805YD / 2.00	DCVA	AM5859	IRRIGATION
31	3	FEBCO / 805YD / 2.00	DCVA	AM5886	IRRIGATION
32	3	WILKINS / 950 / 4.00	DCVA	A04472	IRRIGATION
34	4	FEBCO / 805YD / 2.00	DCVA	AM7845	IRRIGATION
36	4	WILKINS / 950XLT2 / 2.00	DCVA	3850740	IRRIGATION
22-D	4	WILKINS / 950XLT / 1.50	DCVA	4942274	IRRIGATION
37	5	FEBCO / 805Y / 1.50	DCVA	460416	IRRIGATION
38	5	FEBCO / 805Y / 2.00	DCVA	AM4942	IRRIGATION
39	5	FEBCO / 805Y / 1.50	DCVA	AE2476	IRRIGATION
41	5	WILKINS / 950XLT2 / 2.00	DCVA	4542487	IRRIGATION
42	5	FEBCO / 805Y / 2.00	DCVA	495762	IRRIGATION
46	5	FEBCO / 850 / 1.50	DCVA	41747	UKNOWN
43	6	WILKINS / 950DA / 3.00	DCVA	D05019	FIRE DEPARTMENT CONNECTION
44	6	WILKINS / 950XL / 0.75	DCVA	732305	BYPASS
45	6	WILKINS / 375 / 10.00	ASTDA	2673	INTERTIE

Appendix G

KPFF Forensic Hospital Fire Flow Calcs

Western State Hospital - New Forensic Hospital

West Campus fire flow based on 2018 IFC

11/7/2023

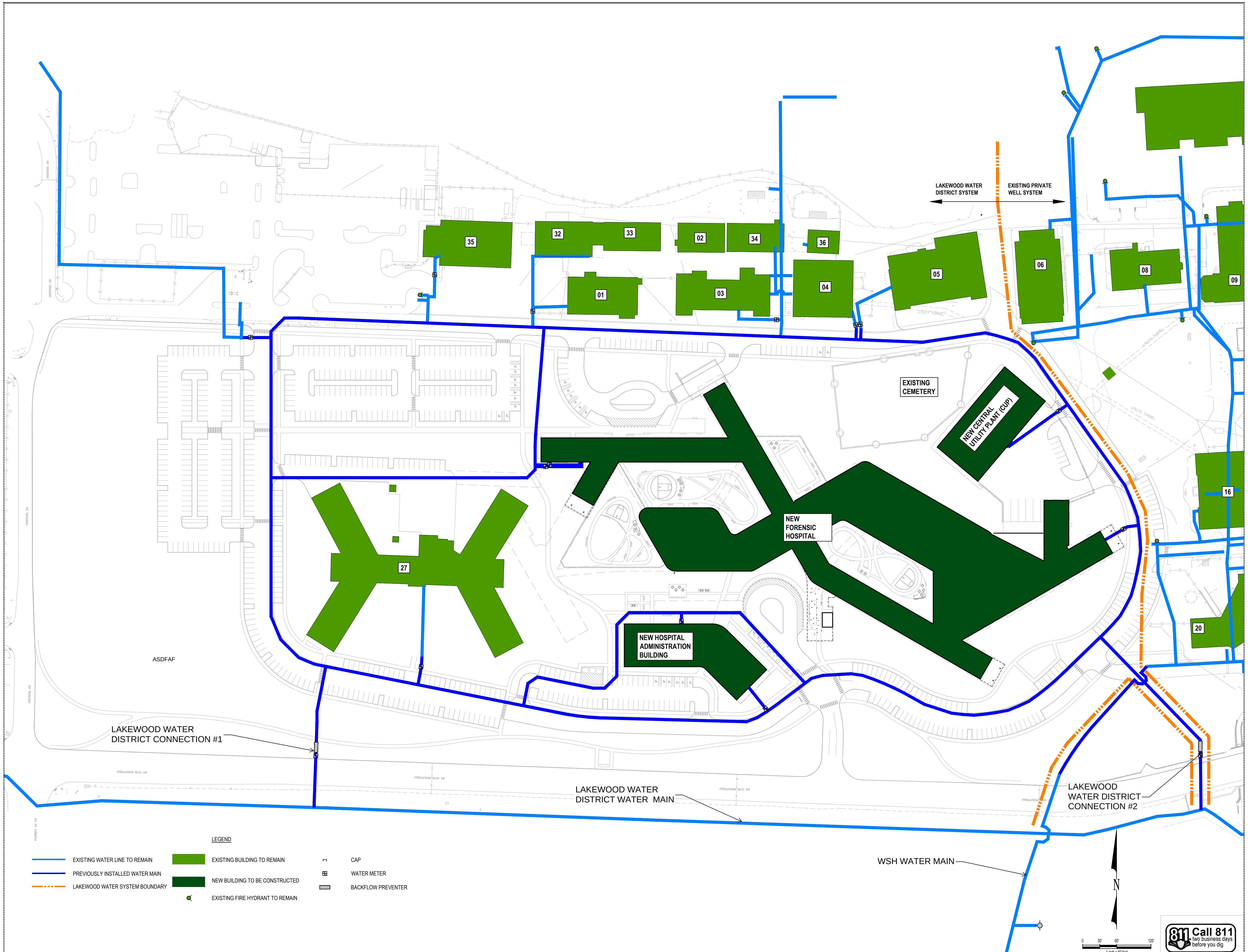
Building	Footprint (sf)	floors	Basement	1st floor	2nd floor	3rd floor	4th floor	Attic	**Total (sf)**	Const. type	Auto Sprinkler Reduction (Y/N)	Residential occupancy (Y/N)	Fire flow per Table B105.1(2) w/ reduction if applicable (gpm)	Fire Flow min per B105.2	Max for bldg type per IFC?	Notes **(red text is input from Clark Construction)**
New Forensic Hospital	117491	4		117491	117491	117491			**352,473**	1A/B	Y	Y	**1,500**		**Y**	For Type IA/B it is the largest successive 3 floors
New Admin Bldg	17453	4		17453	17453	17453			**52,359**	IIIB	Y	N	**1,188**			For Type IA/B it is the largest successive 3 floors
Fut. Hospital Add	22405	4		22405	22405	22405			**67,215**	1A/B	Y	Y	688	**1,500**		For Type IA/B it is the largest successive 3 floors
1	7710	1		7710					**7,710**	VB	N	N	**2,500**			
2	4089	1	1022.25	4089					**5,111**	VB	N	N	**2,000**			Basement? **BH - No basement. Partial tunnel only.**
3	9025	1	2256.25	9025					**11,281**	IIIB	N	N	**2,250**			Basement? **BH - No basement. Partial tunnel only.**
4	9793	1		9793					**9,793**	IIIB	N	N	**2,000**			2nd story? Basement? **BH - No 2nd flr. Or basement. Only access to tunnel via stair.**
5	11270	1		11270	1560				**12,830**	IIIB	N	N	**2,500**			Looks like at least part of this is 2nd story, layout? Basement? **BH - Crawlspace, no basement. No 2nd flr., but there are (2) 780sq.ft. Mezzanines.**
6	11324	2		10995	3300				**14,295**	IIIB	N	N	**2,500**			**BH - Bldg.6 is not a 3-story. It is a 2-story with a partial mezzanine.**
8	7066	3		7066	7066	7066		5200	**26,398**	IIIB	N	N	**3,500**			**BH - Bldg. 8 has an attic that is most likely sprinklered.**
10	35756	1		35756					**35,756**	IIIB	Y	N	**1,000**	**1,000**		
16 East (Ground)	21137	1	5284.25	21137					**26,421**	IIIB	N		**3,500**			2750 gpm
16 West	10368	3	2592	10368	10368	10368			**33,696**	IIIB	N		**4,000**			Basement? **BH - No basement. Partial tunnel & valve room only.**
9	*24250*	*5*	*24250*	*23750*	*23750*	*23750*	*17810*	*23750*	*137,060*	VB	Y	Y				Confirm all 4 story, some places look like more. Does the floorplan change? Basement?, firewalls? **BH - These buildings are joined together to make 1 large buildg. Indiv. Bldg's. were constructed in different eras, so there is a physical & clear deliniation between them. Bldg's. 17-20 have 4 occupancy levels, as well as a combined attic that is sprinklered. Bldg. 9 steps up and has partial occupancy on what is called the "Ground Floor" and then has 4 occupany levels above that and an attic that is sprinklered.**
17&18	*9215*			*9215*	*9215*	*9215*		*9215*	*36,860*	VB	Y	Y				
19	*12176*	*4*	*11917*	*11917*	*11917*	*9143*		*11917*	*56,811*	VB	Y	Y				
20	*22390*	*4*		*22390*	*22390*	*22390*	*22390*	*22390*	*111,950*	VB	Y	Y				
9, 17&18, 19, and 20	68031		36167	67272	67272	64498	40200	67272	**342,681**	VB	Y	Y	**2,000**		**Y**	
27	40978	1	10244.5	40978				40978	**92,201**	IIB	Y	Y	**1,625**			1 story? basement? **BH - Partial basement (Mech. & Elec. Rms.) No 2nd story. Just an attic.**
32	6070	1		6070					**6,070**	VB	N	N	**2,000**			
33	4013	1		4013					**4,013**	VB	N	N	**1,750**			
34	4087	1		4087					**4,087**	VB	N	N	**1,750**			Looks like at least part of this is 2nd story, layout? **BH - No 2nd level.**
35	10102	1		10102					**10,102**	VB	N	N	**2,750**			2nd story offices above lobby **BH - No 2nd level.**
36	2103	1		2103					**2,103**	VB	N	N	**1,500**			1 story? Basement? **BH - No basement.**

Attic is assumed to be the entire building footprint to be conservative.

Tunnel/basement assumed to be 25% of overall footprint when not verified by records.

Construction type not verified. Assume worst case scenario for this analysis to be conservative. Further confirmation can potentially reduce fire flows.

Assumed IIIB to be conservative, but could be IIIA or IIA



Washington State Department of Social & Health Services

Project
WESTERN STATE HOSPITAL - NEW FORENSIC HOSPITAL
9601 STEILACOOM BLVD SW
LAKEWOOD, WA 98498

Prepared For
WA DEPT OF SOCIAL & HEALTH SERVICES
OLYMPIA, WA

Hellmuth, Obata & Kassabaum, Inc.
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AEI Affiliated Engineers
MECHANICAL, ELECTRICAL & PLUMBING ENGINEERS
1601 Fifth Avenue, Suite 1400
Seattle, WA 98101

Key Plan

Professional Seals

NOT FOR CONSTRUCTION

No.	Description	Date
	SCHEMATIC DESIGN (AMENDED)	21 OCT 2022

Project No.

Sheet Title
PROPOSED WATER CONVERSION DIAGRAM - PHASE 6

Do not scale contents of this drawing.

Sheet Number
EXHIBIT

LEGEND

EXISTING WATER LINE TO REMAIN	EXISTING BUILDING TO REMAIN
EXISTING WATER LINE TO BE DEMOLISHED OR ABANDONED	EXISTING BUILDING TO BE DEMOLISHED
	EXISTING FIRE HYDRANT TO REMAIN
	EXISTING FIRE HYDRANT TO BE REMOVED
CAP	

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Key Plan

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No.	Description	Date
	SCHEMATIC DESIGN (AMENDED)	21 OCT 2022

Project No.

Sheet Title
PROPOSED WATER CONVERSION DIAGRAM - PHASE 1

Do not scale contents of this drawing.

Sheet Number
EXHIBIT

LEGEND

EXISTING WATER LINE TO REMAIN	EXISTING BUILDING TO REMAIN
EXISTING WATER LINE TO BE DEMOLISHED OR ABANDONED	EXISTING BUILDING TO BE DEMOLISHED
INACTIVE WATER LINE	EXISTING BUILDING PREVIOUSLY DEMOLISHED
	EXISTING FIRE HYDRANT TO REMAIN
	EXISTING FIRE HYDRANT TO BE REMOVED
	FIRE HYDRANT PREVIOUSLY REMOVED
	CAP

Washington State Department of Social & Health Services

Project
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No.	Description	Date
	SCHEMATIC DESIGN (AMENDED)	21 OCT 2022

Project No.

Sheet Title
PROPOSED WATER CONVERSION DIAGRAM - PHASE 2

Do not scale contents of this drawing

Sheet Number
EXHIBIT

BryanG

Apr 03, 2023 - 4:26pm

Washington State Department of Social & Health Services

Project
WESTERN STATE HOSPITAL - NEW FORENSIC HOSPITAL
9601 STEILACOOM BLVD SW
LAKEWOOD, WA 98498

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Seattle, WA 98101

Key Plan

Professional Seals

NOT FOR CONSTRUCTION

No.	Description	Date
	SCHEMATIC DESIGN (AMENDED)	21 OCT 2022

Project No.

Sheet Title
PROPOSED WATER CONVERSION DIAGRAM - PHASE 3

Do not scale contents of this drawing.

Sheet Number
EXHIBIT

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Washington State Department of Social & Health Services

Project
WESTERN STATE HOSPITAL - NEW FORENSIC HOSPITAL
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Key Plan

Professional Seals

NOT FOR CONSTRUCTION

No.	Description	Date
	SCHEMATIC DESIGN (AMENDED)	21 OCT 2022

Project No.

Sheet Title
PROPOSED WATER CONVERSION DIAGRAM - PHASE 4

Do not scale contents of this drawing.

Sheet Number
EXHIBIT

LEGEND

EXISTING WATER LINE TO REMAIN	EXISTING BUILDING TO REMAIN
EXISTING WATER LINE TO BE DEMOLISHED OR ABANDONED	EXISTING BUILDING TO BE DEMOLISHED
INACTIVE WATER LINE	NEW BUILDING TO BE CONSTRUCTED
WATER MAIN TO BE INSTALLED	EXISTING FIRE HYDRANT TO REMAIN
PREVIOUSLY INSTALLED WATER MAIN	EXISTING FIRE HYDRANT TO BE REMOVED
PROPOSED LAKEWOOD WATER CONNECTION	FIRE HYDRANT PREVIOUSLY REMOVED

CAP
WATER METER
BACKFLOW PREVENTER

Call 811 two business days before you dig

Washington State Department of Social & Health Services

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Professional Seals

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No.	Description	Date
	SCHEMATIC DESIGN (AMENDED)	21 OCT 2022

Project No.

Sheet Title
PROPOSED WATER CONVERSION DIAGRAM - PHASE 5

Do not scale contents of this drawing.

Sheet Number
EXHIBIT

Appendix H
Water System Standards

APPENDIX H | WATER SYSTEM CONSTRUCTION STANDARDS

The Western State Hospital (WSH) does not currently have their own set of water system construction standards. The development of these standards has been included in **Chapter 9** as a capital improvement project (CIP M4). Until this set of standards has been finalized, WSH will utilize Lakewood Water District's (LWD's) *General Requirements for Water Main Installation*, *2024 Developer Extension Agreement*, and *2024 DEA Construction Standards* to guide the design and implementation of new water system infrastructure. Doing so will conform any new construction for consistency with LWD standards in the event that the WSH water system is consolidated into the LWD water system.

Appendix I
Water Rights Info

Water Right Self-Assessment Form for Water System Plan

Mouse-over any link for more information. Click on any link for more detailed instructions.

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 G2-014863CL	S05 - Farm Well	750 gpm	0 gpm	726 afy	0 afy	1,000 gpm	250 gpm	169 afy	962.7 afy	1,000 gpm	250 gpm	140 afy	991.7 afy	1,000 gpm	250 gpm	140 afy	991.7 afy
2 G2-014864CL	S05 - Farm Well	500 gpm	0 gpm	405.7 afy	0 afy												
3 GWC 7025-A	S02 - East Campus Well	900 gpm	0 gpm	24.3 afy	701.7 afy	900 gpm	500 gpm	37 afy	(12.7 afy)	1,400 gpm	0 gpm	140 afy	(115.7 afy)	1,400 gpm	0 gpm	140 afy	(115.7 afy)
4 GWC 7602-A	S02 - East Campus Well	500 gpm	0 gpm	0 afy	430 afy												
	TOTALS =	2,650 gpm		1,156 afy		1,900 gpm	750 gpm	206 afy	950 afy	2,400 gpm	250 gpm	280 afy	876 afy	2,400 gpm	250 gpm	280 afy	876 afy
Column Identifiers for Calculations:		A		B		C	=A-C	D	=B-D	E	= A-E	F	=B-F	G	=A-G	H	=B-H

PENDING WATER RIGHT APPLICATIONS: Identify any water right applications that have been submitted to Ecology.

Application Number	New or Change Application?	Date Submitted	Quantities Requested			
			Primary Qi	Non-Additive Qi	Primary Qa	Non-Additive Qa
None						

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 None															
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 None		
2		
3		

ADDITIONAL COMMENTS:

Existing use is from 2023. 10-year is 2034. 20-year is 2044. Future use is shown without considering water use efficiency.
Annual volume breakdown between water rights as depicted in August 2024 final water right change reports of examination for G2-014863CL and G2-014864CL.
While the Current Excess or (Deficiency) shows up at a negative for the groundwater certificates. That is because the volume withdrawn is larger than the additive annual volume under those water rights, but is still authorized due to the non-additive volume.

Claim G2-014863CL

Farm Well

DEPARTMENT OF ECOLOGY
State of Washington

STATE OF WASHINGTON
FINAL
REPORT OF EXAMINATION
FOR WATER RIGHT CHANGE

WR Doc ID
6805961

Changed Point of Withdrawal

APPLICATION DATE	WATER RIGHT CHANGE APPLICATION NUMBER
February 27, 2024	CG2-014863CL

PRIORITY DATE OF CLAIM PROPOSED FOR CHANGE	CLAIM NUMBER PROPOSED FOR CHANGE
1938	G2-014863CL

NAME AND MAILING ADDRESS	SITE ADDRESS (IF DIFFERENT)
Washington State Dept. of Social and Health Services PO Box 45848 Olympia, WA 98504	Western State Hospital 9601 Steilacoom Blvd SW. Lakewood, WA 98498

Total Rate and Quantity Authorized for Withdrawal	
WITHDRAWAL RATE (gpm)	ANNUAL QUANTITY (ac-ft/yr)
750	726

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

PURPOSE	WITHDRAWAL RATE (gpm)	ANNUAL QUANTITY (ac-ft/yr)	PERIOD OF USE
Municipal	750	726	Continuous (01/01 – 12/31)

PUBLIC WATER SYSTEM INFORMATION	
WATER SYSTEM NAME and ID	CONNECTIONS
951501	610

Source Location			
COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
Pierce	Groundwater	N/A	12

SOURCE NAME	PARCEL	WELL TAG	T.	R.	S.	QQ Q	LATITUDE	LONGITUDE
Farm Well	0219041000	AEC930	19 N	02 E	04	NW NE	47.169785	-122.556634

QQ Q = Quarter Quarter
Datum: NAD83/WGS84

Place of Use

LEGAL DESCRIPTION OF THE AUTHORIZED PLACE OF USE
Western State Hospital, comprising the former U.S. Military Reserve in Sections 32 and 33, Township 20 North, Range 2 East. W.M.; and Government Lots 2, 3, and 4 and the North 450 feet of Government Lots 5 (East) and 5 (West) in Section 4, Township 19 North, Range 2 East. W.M. Less Roads.

Attention: If the criteria in RCW 90.03.386(2) are not met and a Water System Plan/Small Water System Management Program was approved after September 9, 2003, the place of use of this water right is the service area described in that document. If the criteria in RCW 90.03.386(2) are not met and no Water System Plan/Small Water System Management Program has been approved after September 9, 2003, the place of use reverts to the last place of use described by the Department of Ecology in a water right authorization.

Proposed Works

All infrastructure to utilize the water under the subject claim is in-place. The proposed well to be added (Farm Well) was drilled in 2003.

The Group A public water system includes a distribution capacity of 730,830 gallons and serves the 572 connections (610 connections are currently approved) via distribution system that consists of 4", 5", 6", 8", and 12" mains.

Development Schedule

BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	PUT WATER TO FULL USE BY THIS DATE
Started	Completed	In Use

Measurement of Water Use

HOW OFTEN MUST WATER USE BE MEASURED AND RECORDED?	Weekly
HOW OFTEN MUST WATER USE DATA BE REPORTED TO ECOLOGY?	Annually by January 31
WHAT VOLUME SHOULD BE REPORTED?	Total annual quantity in acre-feet
WHAT RATE SHOULD BE REPORTED?	Annual peak rate of withdrawal in gpm

Provisions

Water Right Limitations

Water right claims G2-014863CL and G2-014864CL, and Water Right Certificates GWC 7602-A and GWC 7025-A are utilized by the Western State Hospital water system. These rights allow for cumulative withdrawals of 1,156 ac-ft/year and 2,650 gpm.

Measurements, Monitoring, Metering, and Reporting

An approved measuring device must be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", chapter 173-173 WAC, which describes the requirements for data accuracy, device installation and

operation, and information reporting. It also allows a water user to petition the Department of Ecology (Ecology) for modifications to some of the requirements.

Recorded water use data shall be submitted electronically by January 31 each year. To set up an Internet reporting account, contact the Southwest Regional Office. If you do not have Internet access, you can still submit hard copies by contacting the Southwest Regional Office for forms to submit your water use data.

Schedule and Inspections
Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the project location, and to inspect at reasonable times, records of water use, wells, diversions, measuring devices and associated distribution systems for compliance with water law.

Health Department Approval Required
Prior to any new construction or alterations of a public water supply system, the State Board of Health rules require public water supply owners to obtain written approval from the Office of Drinking Water of the Washington State Department of Health. Please contact the Office of Drinking Water at Northwest Drinking Water Operations, 20435 72nd Avenue S, Suite 200, K17-12, Kent, WA 98032-2358, (253) 396-6750, prior to beginning (or modifying) your project.

Conservation Requirement
The water right holder is required to maintain efficient water delivery systems and use of up-to-date water conservation practices consistent with RCW 90.03.005.

Well Identification
All wells shall be tagged with a Department of Ecology unique well identification number. If you have an existing well and it does not have a tag, please contact the well-drilling coordinator at the regional Department of Ecology office issuing this decision. This tag shall remain attached to the well. If you are required to submit water measuring reports, reference this tag number.

Easement Right-of-Way
The water source and/or water transmission facilities are not wholly located upon land owned by the applicant. Issuance of a water right change authorization by this Department does not convey a right of access to, or other right to use, land which the applicant does not legally possess. Obtaining such a right is a private matter between applicant and owner of that land.

Findings of Fact and Order

Upon reviewing the investigator's report, I find all facts, relevant and material to the subject application, have been thoroughly investigated.

Therefore, I ORDER **APPROVAL** of Change Application No. CG2-014863CL, subject to existing rights and the provisions specified above.

Your Right To Appeal

You have a right to appeal this Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal, you must do the following within 30 days of the date of receipt of the Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order to Ecology in paper form - by mail or in person (see addresses below). E-mail is not accepted.

You must also comply with other applicable requirements in chapter 43.21B RCW and chapter 371-08 WAC.

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503 **Pollution Control Hearings Board** 1111 Israel RD SW, Ste 301 Tumwater, WA 98501	**Department of Ecology** Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608 **Pollution Control Hearings Board** PO Box 40903 Olympia, WA 98504-0903

For additional information, visit the Environmental Hearings Office Website: http://www.eho.wa.gov. To find laws and agency rules, visit the Washington State Legislature Website: http://www1.leg.wa.gov/CodeReviser.

Authorizing Signature

Signed at Olympia, Washington, this 20th day of August 2024

Michael J. Gallagher

Mike Gallagher, Section Manager
Water Resources Program/Southwest Regional Office
Department of Ecology

INVESTIGATOR'S REPORT

Water Right Change Application No.: CG2-014863CL Washington State Department of Social and Health Services (DSHS)
Investigator: Jill Van Hulle, Aspect Consulting
Reviewed by: Jeff Marti, Department of Ecology

BACKGROUND

This report serves as the written findings of fact concerning Water Right Change Application Number CG2-014863CL.

The intent of this project proposal is to change the point of withdrawal (POW) to designate the Farm Well (also referred to as Well 3) as an additional POW authorized by G2-014863CL and G2-014864CL. The Farm Well is located less than 100 feet from Well 1 (authorized by G2-014863CL) and Well 2 (authorized by G2-014864CL) but has not been officially added to the subject water right claims through the water right change application process. For this reason, the Farm Well is considered to be a "de-facto" source having been used to exercise the claims since its construction in 2003.

Additionally, during the change process, the Washington State Department of Social and Health Services (DSHS) requests the purpose of use be clarified as being for municipal water supply purposes, since the past and current water use meets the definition provided in RCW 90.03.015(4).

Table 1. Existing Water Right Attributes

Name on Water Right Document	Western State Hospital
Claim Number	G2-014863CL
Priority Date	1938
County	Pierce
WRIA	12
Water Source	Well 1
Place of Use	Western State Hospital, comprising the former U.S. Military Reserve in Sections 32 and 33, Township 20 North, Range 2 East. W.M.; and Government Lots 2, 3, and 4 and the North 450 feet of Government Lots 5 (East) and 5 (West) in Section 4, Township 19 North, Range 2 East. W.M. Less Roads.

Purpose	Instantaneous Rate (gpm)	Annual Quantity (ac-ft/yr)	Begin Season	End Season
Community Domestic Supply	900	726	01/01	12/31

Source Name	Parcel	Well Tag	Township	Range	Section	QQ Q	Latitude	Longitude
Well 1	0219041000	AEC931	19 N.	02 E. W.M.	04	NW NE	47.169785	-122.556634

WRIA = Water Resource Inventory Area; gpm = Gallons per Minute; ac-ft/yr = Acre-feet per Year; QQ Q = Quarter Quarter Datum: WGS84

Table 2. Requested Water Right Attributes

Applicant Name	Washington State Department of Social and Health Services (DSHS)
Application Date	February 27, 2024
County	Pierce
WRIA	12
Water Source	Farm Well (Well 3)
Place of Use	Area served by the DSHS's Western State Hospital.

Purpose	Instantaneous Rate (gpm)	Annual Quantity (ac-ft/yr)	Begin Season	End Season
Municipal	900	726	01/01	12/31

Source Name	Parcel	Well Tag	Township	Range	Section	QQ Q	Latitude	Longitude
Well 3 (Farm Well)	0219041000	AEC930	19 N.	2 E. W.M.	04	NW NE	47.169737	-122.556865

Datum: WGS84

Cost Reimbursement

This application is being processed under a cost reimbursement agreement between the applicant and the Department of Ecology. This report has been prepared by Aspect Consulting and reviewed by [Ecology staff name] with the Department of Ecology's Water Resources Program.

INVESTIGATION

The intent of this filing is to formally change the point of withdrawal associated with the subject water right claim. While claims can be amended via RCW 90.14.065 which provides that amendments are allowed in the case of a *change in circumstances not foreseeable at the time the original claim was filed,* Ecology has taken the position that only the filing of an Application for Change can be utilized to reflect the change in point of withdrawal associated with replacement wells that are authorized by claims.

A site visit by Jill Van Hulle of Aspect Consulting was conducted on May 9, 2024. Ms. Van Hulle visited the locations of the relevant wells, and distribution system with a focus on evidence of historical structures including some of the original animal barns, orchard areas and location of significant water supply infrastructure.

History of Water Use

Site Description

Western State Hospital is located in Lakewood, within the boundaries of Water Resource Inventory Area 12, the Clover-Chambers Creek Watershed. WRIA's define surface water drainages and is defined as the area that drains from higher elevations in the eastern part of the watershed to Puget Sound via Spanaway, Clover, and Chambers creeks. This watershed is one of the most intensely populated basins in Western Washington.

Water System Description

Western State Hospital is a Group A Community public water system (PWS ID 951501) that has been approved by the Washington State Department of Health to supply the equivalent of 610 residential

connections. The system currently utilizes two wells (Source 02 the East Campus Well, and Source 05 the Farm Well) and an intertie with Lakewood Water District (Source 04) for its source of water and has a distribution system storage capacity of 730,830 gallons. The Western State Hospital complex includes a number of buildings. The water system also supplies water to the Child Study and Treatment Center. The water system also continues to be used for the irrigation needs of the complex and adjoining Fort Steilacoom Park, which includes play areas (baseball and soccer fields) lawns, other landscaping and robust horticulture program raising flowers and trees.

Water Use Under Water right claims G2-014863CL and G2-014864CL

Water right claims G2-014863CL and G2-014864CL were filed to document a water use that originated over 85 years ago in 1938. While documenting historical water use patterns from that long ago can be challenging, Western State Hospital is a historically significant facility, and there is an extensive body of supporting information detailing daily life – and with that water use – at this facility.

The hospital's unique history includes the fact it once had its own baseball stadium and its own team. The stadium and grandstand have been replaced with roads and a small set of bleachers, but the baseball field remains on the southwest corner of the campus.

It was also once the site of a significant farming operation, which once produced one-third the cost of subsistence at the hospital and included everything from beets and radishes to rhubarb, kale and squash. The hospital's agricultural pursuits also included building new barns and adding a dairy herd to supply milk as well as patient activity. Meat came from hogs and chickens, the latter also providing eggs. Patients also assisted in the carpenter, tin, and blacksmith shops, and in the laundry and the kitchen. Work became therapeutic occupation for patients. The farm progressed as a set of interconnected activities until farming operations ended in 1965[1].

Western State Hospital is located on the site of historic Fort Steilacoom, which served as a military post from 1849 to 1868 until the federal government abandoned it. The Washington territory purchased the fort with the intent of turning it into a hospital for people who suffered from mental illness. The Washington Territory began acquiring land for the hospital in 1868, although land acquisitions continued for many years until the final parcel was purchased in 1947. The hospital, then called the Insane Asylum of Washington Territory, opened in 1871 with 15 male and six female patients.

Water use estimates for the extent of development under water right claims G2-014863CL and G2-014864CL, from the 1940s, are summarized in **Table 3** and discussed in detail in the Tentative Determination section of this Report of Examination.

Table 3. Historic Water Use Under Water right claims G2-014863CL and G2-014864CL

Type of Use	Peak Annual Use (Ac-ft/Yr)	Comment/Evidence
Potable/Domestic	459.2	Dodds & Milligan Report, and DOH Design Manual
Potable/Stockwater	26.2	DOH Design Manual
Agricultural/Irrigation	646.3	Washington Irrigation Guide, aerial photo review, 1941, 1945, and 1957
Total	1,131.7	

[1] https://dshswa.medium.com/western-state-hospital-celebrates-its-150-year-anniversary-this-month-daf5cb213eb3

According to the claim filings Well Nos. 1 and 2 produced 900 and 500 gpm respectively for a combined total of 1,400 gpm. A 1961 engineering report prepared for Western State Hospital (Dodds & Milligan, 1961) indicated that both wells were equipped to produce 750 gpm, for a combined total of 1,500 gpm. Given the wells were in close proximity to each other and operated as a wellfield it is likely that the pumping rate fluctuated between them to maximize supply, with Well 1 being the better, more productive and reliable source. We note that while it is likely that 1,400 gpm of instantaneous capacity was developed at the site that the new point of withdrawal (the Farm Well) is currently operated at a rate of 1,000 gpm.

Proposed Changes

The intent of this Application for Change is to modify the point of withdrawal that is authorized by water right claims G2-014863CL and G2-014864CL. The originally designated withdrawal points (Wells 1 and 2) were constructed in 1938 and after 65 years of continuous use were replaced in 2003.

The applicant has additionally requested that Ecology modify the purpose of use to reflect the municipal nature of the purpose of use.

RCW 90.03.015 defines municipal water supply as a beneficial use of water meeting one of several criteria, including for fifteen or more residential connections, or providing residential use of water for a non-residential population that is on average, at least 25 people for at least 60 days a year. Since Western State Hospital supplies a residential population that equates to 572 equivalent residential units (ERU's) it qualifies as a municipal water supplier.

Other Rights Associated with Project or Place of Use

DSHS currently holds 6 ground water rights: 2 certificates (Ground Water Certificate (GWC) 7602-A and GWC 7025-A) and 4 water right claims (G2-014863CL, G2-014864CL, G2-014865CL, and G2-014866CL[2]) as inventories on Table 4A. Combined these documents amount to 3,600 gallons per minute (gpm) and 2,957 acre-feet per year (afy) The certificates authorize withdrawal of 1,400 gpm and 1,156 afy from Well No. 3 (East Campus Well). The claims authorize withdrawal of 2,200 gpm and 1,801 afy from Well Nos. 1 and 2 and Canyon Spring.

The subject claims G2-014863CL and G2-014864CL appear to represent the documentation of the earliest water use associated with the hospital facility, however there are additional authorizations that need to be accounted for in order to determine the full extent of the water right portfolio. Ecology's guidance document (Publication 20-11-065) regarding Uses and Terms that Clarify Relationships between Water Rights indicates that in the course of water right change decisions the relationship of multiple related rights should be understood and clarified. Accordingly, in addition to determining the extent of historical use under claims G2-014863CL and G2-014864CL, the full water right portfolio will be evaluated with the intent of establishing how much water can be withdrawn under all water rights in Western State Hospital's portfolio. Table 4B describes the likely extent of the water rights based on how the various documents relate to each other.

[2] On this claim form, the legal doctrines upon which the right of claim is based is identified as, "Certificate of Record No. 15, Page No. 7025-A State of Washington, County of Pierce, Ground Water Permit No. 9115." For this evaluation, it is believed that this claim is likely intended to document the existing GWC 7025-A and not an additional water right. It will be depicted as being non-additive for both instantaneous rate and annual volume for these reasons.

The key factors necessary for correctly interpreting water rights are:

a) Overlapping characteristics among water rights (e.g. source, place of use, purpose of use, period of use, ownership).

b) The amount of water, both instantaneous and annual, embodied in each right.

c) The amount of water that can be reasonably put to beneficial use for each right (subject to other applicable statutes including the 2003 Municipal Water Law).

Additionally, while not specifically addressed in Ecology's guidance document, another factor is the sequencing of the various authorizations and an interpretation of how Ecology would have viewed the rights at the time permit and allocation decisions were made.

Water Right Claim Filing G2-014865CL

G2-014865CL was filed to capture the use of water from a source referred to as the "Canyon Artesian Well", the long form claim filing includes a location placing the source within the Garrison Creek Canyon. Garrison Springs are the name given to the springs and creek which flow from Western State Hospital into Puget Sound by Chambers Creek. The springs provided water for the United States Military garrison at Fort Steilacoom, and we presume that this same – or a related source – was the subject of the 1974 claim filing. A Department of Fish and Wildlife hatchery was built in 1974 near the site referenced as the point of withdrawal in the claim filing. Based on early (pre-1970) descriptions of the Western State Water system, a spring source was being used to augment the capacity of Wells 1 and 2 and used interchangeably with the wells.

For the purposes of quantifying the DSHS portfolio we suggest that G2-014865CL not be included in the inventory for the following reasons:

1. Any use of the springs would have been captured by the evaluation of beneficial use from Well 1 and 2 under claims G2-014863CL and G2-014864CL.
2. The springs have not been used for the facility for decades, and may have been redeveloped by WDFW to supply the hatchery in the early-1970s. There is no reference to the use of the springs in Ecology's 1968 review of the pending applications for the East Campus well which makes it likely they were not in use at that time.
3. Unlike the pre-code water right authorizations associated with Well 1 and 2 where DSHS recognized the existence of the claims and took action to continue to exercise the water right via the drilling and use of the Farm Well, we see no parallel that would serve to preserve a legal right to the springs for continued domestic supply for the DSHS.

The WDFW has secured its own water right certificates that are specific to the operation of the hatchery, making the resolution of the standing of this claim a low priority; however, given that the basin has yet to be adjudicated and the claim proports a date of first use that dates to 1915 it might be prudent to not take a formal action at this time. **Table 4B** does not include this claim filing.

Water Right Claim Filing G2-014866CL

G2-014866CL was filed to capture the use of the East Campus Well however we suggest that this filing is redundant in nature since at the time the claim was filed a groundwater certificate (Certificate GWC 7602-A) had been previously issued. Further, since the East Campus Well was not installed until 1968 its date of first use does not predate the 1945 groundwater code rendering the claim unlikely to be found valid as a pre-code water right. We suggest that it might be less confusing if the applicant voluntarily agreed to relinquish this potential right and **Table 4B** does not include the attributes of this right in the quantification.

Certificate GWC 7602-A

Certificate GWC 7602-A authorized withdrawal from the East Campus well. With its March 7, 1968 priority date this filing predates the opening of the claim registration period and thus represents Ecology's first opportunity to assess water demand for the facility. The application and background investigative information reflects the ongoing use of Wells 1 and 2 but indicates no other water rights are appurtenant to the project. In its May 15, 1968 Report of Examination the permit writer estimated that the facility would need 430 acre-feet to meet the hospital's demands. For purposes of understanding the relationship between water rights we presume that if the state had recognized the pre-code use of water under the development of Wells 1 and 2 and because the amount of water that had been previously developed exceeded 430 acre-feet, that Certificate GWC 7602-A would have been issued with a non-additive/supplemental annual allocation and an additive/primary instantaneous withdrawal capacity to reflect the need for an additional source.

Certificate GWC 7025-A

GWC 7025-A also authorizes withdrawals from the East Campus well and has a priority date of October 21, 1968. In the body of its decision approving this water right, the state recognizes that Wells 1 and 2 were actively being used, that 1,051 acre-feet had been withdrawn by the hospital in the previous year, and that DSHS had a projected demand for 1,156 acre-feet. Since the earlier filing for the East Campus Well (Certificate GWC 7602-A) authorized only 430 acre-feet per year, the junior filing allowed for the withdrawal of an additional 726 acre-feet per year to meet the intended total of 1,156 acre-feet. Since the recommended annual quantity associated with the pre-code water use from Wells 1 and 2 amounts to 1,131.7 acre-feet, we presume that the annual quantity associated with GWC 7025-A should be administratively adjusted to reflect a primary allocation of 24.3 acre-feet per year with the balance of 701.7 being classified as non-additive to Claims G2-014863Cl and G2-014864CL.

Table 4A - Water Right Summary (Based on Water Right Documents)

Water Right Number	Source	Instantaneous Rate (gpm)		Annual Volume (afy)	
		Additive	**Non-Additive**	**Additive**	**Non-Additive**
G2-014863CL	Farm Well (*de facto change*)	900	0	726	0
G2-014864CL	Farm Well (*de facto change*)	500	0	430	0
G2-014865CL	Canyon Spring	800	0	645	0
G2-014866CL	East Campus Well	0	900	0	726
GWC 7602-A	East Campus Well	500	0	430	0
GWC 7025-A	East Campus Well	900	0	726	0
Subtotal Farm Well (de facto change)		*1,400*	-	*1,156*	-
Subtotal Canyon Spring		*800*		*645*	-
Subtotal East Campus Well		*1,400*	-	*1,156*	-

Table 4B – Revised Water Right Summary (Based on Clarification of Relationship Between Rights)

Water Right Number	Source	Instantaneous Rate (gpm)		Annual Volume (afy)	
		Additive	**Non-Additive**	**Additive**	**Non-Additive**
G2-014863CL	Farm Well	750	0	726	0
G2-014864CL	Farm Well	500	0	405.7	0
G2-014866CL	East Campus Well	Recommend Relinquishment for Record Clarity			
GWC 7602-A	East Campus Well	500	0	0	430
GWC 7025-A	East Campus Well	900	0	24.3	701.7
Subtotal Farm Well		*1,250*	*0*	*1,131.7*	*0*
Subtotal East Campus Well		*1,400*	*0*	24.3	1,131.7
Grand Total		**2,650**		**1,156**	**1,131.7**

Hydrogeologic Evaluation

Background information regarding the hydrogeological setting of the project site is contained in the document entitled *Hydrogeologic Evaluation – Source of Water Determination for Washington State Department of Social and Health Services' Western State Hospital Well #3, Aspect Consulting, James Bush and Jonathan Turk, June 5, 2019, (Bush and Turk).*

Bush and Turk (2019) refer to the Farm Well as Well 3. For clarity, this well will be referred to as the Farm Well here. The Farm Well was completed in April 2003 as a replacement for Wells 1 and 2 to provide water to the Western State Hospital campus. The well is located in the northwest quarter of the northeast quarter of Section 4, Township 19 North, Range 2 East in Lakewood, Washington. The wellhead is approximately 5,000 feet southeast of the hospital campus.

The Farm Well draws water from the aquifer through two screened intervals (sections of the well casing partially open to the aquifer):

- From 486 to 491 feet below ground surface (bgs), and
- From 520 and 560 feet bgs.

Table 5. Well Construction Information

Well	Total Depth (feet)	Depth of Screened Interval (feet)	Aquifer Zone Tapped
Well 1	935	500 to 935	Likely Aquifer E through G Undifferentiated Deposits
Well 2	500	Unknown	Likely Aquifer A3 through E
Farm Well	574	486 to 491 520 to 560	Aquifer E Aquifer E

Aspect reviewed recent work by the US Geological Survey (USGS) describing the local hydrogeologic conditions and groundwater flow system to evaluate the extent and characteristics of the body of groundwater associated with the water rights (Savoca et al., 2010; Johnson, Savoca, and Clothier, 2011). Additional information was gathered from water well drilling reports (well logs) accessed through Ecology's well log database.

Regional Geology/Hydrogeology

The subject wells are all situated within the surface water drainage of WRIA 12, and the northeastern and southwestern administrative boundaries of the WRIA 12 are roughly aligned with groundwater divides. Groundwater generally flows from the foothills in the southeast to Puget Sound in the northwest.

WRIA 12's hydrostratigraphy consists of 2,000 feet of sediment of glacial and nonglacial origin, and is typical of the Puget Lowland geologic province. The Farm Well draws water from the relatively deep "E" Aquifer. The aquifer is present throughout and appears to extend beyond the surface water catchment of the watershed. The E Aquifer has not been identified at ground surface within WRIA 12 and is not known to be in direct hydraulic connection to any surface water body except Puget Sound. Regionally, the aquifer is primarily composed of glacial silt, sand, and gravel with discontinuous till and lacustrine deposits. Well logs near the Farm Well identify the E Aquifer as being composed of sand and gravel with minor amounts of silt and clay. The E Aquifer is generally thinnest in the southeast of the basin, and pinches out against bedrock in the Cascade Foothills to the southeast of the basin. The aquifer generally thickens to the northwest, and near the Farm Well the aquifer is identified as being approximately 70 to 100 feet thick.

The E Aquifer is confined above by the low permeability D Confining Unit (composed of interglacial silt and clay deposits with occasional ash), and below by the F Confining Unit (composed of silts and clays with minor lenses of sand and gravel). Both the D Confining Unit and the F Confining Unit are present throughout the watershed. At the Farm Well, the D Confining Unit is approximately 80 feet thick and the F Confining Unit is over 147 feet thick. Both thickness values are typical for WRIA 12.

Recharge enters the E Aquifer by leaking through the D Confining Unit throughout WRIA 12, with more recharge likely occurring in the southeast where the aquifer is closest to ground surface. Groundwater then flows from southeast to northwest, and discharges to Puget Sound. Hydraulic conductivity (the ability of the aquifer to transmit water) varies widely throughout the study area. Throughout much of the study area, hydraulic conductivity of the E Aquifer ranges between 20 and 100 feet per day. Areas of relatively low hydraulic conductivity (1 to 10 feet per day) occur at the far northwest of the WRIA, beneath western Tacoma. Discontinuous areas of high hydraulic conductivity of the E Aquifer (100 to 2,000 feet per day) occur in the central and southwestern portions of the WRIA, including near the Farm Well.

Well Nos. 1 and 2 were converted into monitor wells when the Farm Well was constructed in 2003.

Materials Submitted in Support of Application

Provided with this Application for Change is an extensive collection of historical documents, reports from DSHS regarding resident population, and newspaper articles that chronical the development and extent of agricultural development at Western State Hospital.

ANALYSIS

Under Washington State statutory (RCW 90.03.380 and 90.44.100) and case law, in evaluating a water right change application, Ecology is required to determine whether, and to what extent, a water right is valid and eligible to be changed. Further, the following criteria must be assessed for a change to a groundwater claim.

- The existing right must not be enlarged.
- The proposed change and resulting water use must not cause impairment of existing rights.
- The water source must not change.
- Water must be physically available at the new point of withdrawal.
- Water use must continue to be beneficial.
- The proposed change and resulting water use must not be detrimental to the public interest (public welfare).

Tentative Determination of Validity and Extent

A tentative determination of the validity and extent of a water right must be performed for any proposed water right change. Ecology must evaluate the historical use of the subject right and other factors to determine the rate and quantity of water that may be changed.

Canyon Spring (1915), followed by Wells 1 and 2 (1938) were the original documented sources of water supply for the Western State Hospital complex supplying both the extensive domestic needs of the residents and also providing water to meet the larger industrial demands of the complex which included the hospital's food production. In 1968 applications were filed for the use of the East Campus Well, and

a body of record developed that served to document the use of the original wells while allocating water for the facility's current and future needs. Based on the 1969 Report of Examination prepared for GWC 7025-A in 1968 the hospital used 342,585,000 gallons which equates to 1,051 acre-feet per year.

Instantaneous Rate

The claimed instantaneous rate for Well 1 is 900 gpm and for Well 2 is 500 gpm. This is a combined total of 1,400 gpm from the two wells under the associated water right claims. This section will review the peak historic use and determine what instantaneous rate has been claimed and pumped and is capable of being carried through the water right change application process.

Based on the Dodds & Milligan (1961) report, both wells were equipped with vertical lineshaft turbine pumps with rated capacities of 750 gpm. However, Well 2 ceased to be used since 1959 due to severe pump vibrations that was likely due to poor pump alignment. Canyon Spring was also used during the winter months and could provide another 1,000 gallons per minute; however, the spring had limited capacity and was not used during the summer months, by 1968 when the state Department of Water Resources (Ecology's predecessor agency) was evaluating DSHS's application for the East Campus Well water right permit the spring was no longer in use.

Table 6 breaks down how the instantaneous rate will be allocated to each claim.

Table 6 - Instantaneous Rate Tentative Determination

Well	Claim	Claimed Rate (gpm)	Physical Capacity (gpm)	Tentative Determination (gpm)
Well No. 1	G2-014863CL	900	750	750
Well No. 2	G2-014864CL	500	750	500
	Total	**1,400**	**1,500**	**1,250**

Annual Volume

The annual volume claimed for Well 1 is 726 ac-ft/yr and for Well 2 is 430 ac-ft/yr. This is a combined total of 1,156 ac-ft/yr from the two wells under the associated water right claims. This section will review the peak historic use and determine what annual volume has been claimed and pumped and is capable of being carried through the water right change application process.

Since the water use is for municipal water supply purposes, and is not subject to statutory relinquishment, we have estimated the peak historic use.

Domestic Use

Western State Hospital is one of the largest inpatient psychiatric hospitals in the country, and at one time included more than 800 beds and 2,500 employees. The amount of domestic water used can be extrapolated from the maximum number of inpatient and resident staff. Potable water use at the facility was considerable due to a combination of aging infrastructure, and the hospital-type accommodations with expanded laundry facilities and general sanitation needs.

In addition to potable water, Western State Hospital was developed to be largely self-sufficient both as a cost-savings measure but also as a form of occupational therapy which has long been a treatment staple at Western State Hospital as a way to reduce patient frustration and the need for medications and physical restraints.

While documenting historical water use patterns can be challenging Western State Hospital is a historically significant facility and we benefit from a robust body of supporting information that serves to document how water would have been used. For this project there are two primary sources of information, firstly a 1961 engineering review of the Western State Hospital water system (Dodd & Millegan) that estimated domestic flow rates from a comparison with sewage treatment capacity, and secondly numerous newspaper articles that detailed Western State Hospital's food producing prowess.

Dodd & Millegan projected a daily demand of approximately 400,000 gallons a day based on a composite population (residents, and staff) of 4,000 people using an average of 100 gallons a day. This estimate was substantiated by the sewer treatment plant records which showed a daily flow of 422,400 gallons. The estimate is additionally consistent with the Washington State Department of Health's Design Manual (DOH 331-123, June 2020), which would place domestic water demand at about 459 ac-ft/yr (**Table 7**) compared to the 448 ac-ft/yr Dodd & Millegan snapshot.

Table 7. Domestic Water Use Estimate

Category	**Units**	**Gallons per Day/Unit[3]**	**Acre-Feet/year**
Residents	800 beds	325	291.2
Employees	2,500 (mix of residential and non-residential staff)	60	168.0
Potable Water			**459.2**

During the summer the daily demand increases significantly because of irrigation and other related water demands. The 1961 estimates equate to approximately 724 acre-feet a year (448 ac-ft used over the calendar year for potable supply, and 276 ac-ft used during the irrigation season). Water use however, would have been higher prior to 1961 based on a more detailed inventory of types of water uses, and fact that farming was decreasing at Western State Hospital at that time.

Table 8 breaks out use between types of uses related to the care and processing of animals, and Table 7 details the types of irrigation-based uses associated with the facility's municipal needs.

Table 8 – Stockwater Use Estimate

Category	**Units**	**Gallons per Day/Unit[4]**	**Acre-Feet/year**
Chickens, Turkeys and Ducks	60,000 – 70,000	9 per 100 birds[5]	7.1
Pigs	800	4	3.6
Cattle	200	12	2.7
Dairy Cow (Drinking)	100	35	3.9
Dairy Operation	100 milking cows	35	3.9
General Farm Demand	Cleaning, butchering, etc.		5.0
Total			26.2

[3] Based on Table 3-2: Guide for Maximum Daily Nonresidential Water Demand hospitals use between 250 and 400 gallons per day per bed.
[4] Based on Table 3-2: Guide for Maximum Daily Nonresidential Water Demand hospitals use between 250 and 400 gallons per day per bed.
[5] How to File a Court Claim ECY 070-744 (January 2024)

Irrigation

In order to assess the extent of irrigation Aspect reviewed aerial photos from 1941, 1945, and 1957; the aerial images from 1941 and 1957 were retrieved from USGS EarthExplorer and the image from 1945 was from Pierce County's PublicGIS website. The image from Pierce County was helpful in painting a larger picture of water use but was ultimately not used to estimate water use as it was of lower quality.

Upon review of the historical aerial images, it was estimated that in 1941 as many as 255 acres may have been in some form of irrigated cultivation. Since different types of crops require different water duties, a refinement that adjusts for different crops and associated water duties is provided below. Aspect's suggested crop demand estimates are based on the USDA's Natural Resource Conservation Service Washington Irrigation Guide https://www.nrcs.usda.gov/ for the Tacoma Station.

Application efficiency is a variable in the calculation to convert crop irrigation requirement into total irrigation requirement. It is believed that most irrigation occurring at Western State Hospital in the 1940s and 1950s was likely handline or wheelline with impact sprinklers. The application efficiency range and average are shown in **Table 9** (Ecology, 2024).

Table 9 - Application Efficiency for Irrigation Methods Likely Utilized

Method	Application Efficiency Range (%)	Application Efficiency Average (%)
Sprinkler - Periodic Move (Handline)	60-85	75
Sprinkler – Side Roll (Wheelline)	60-85	75

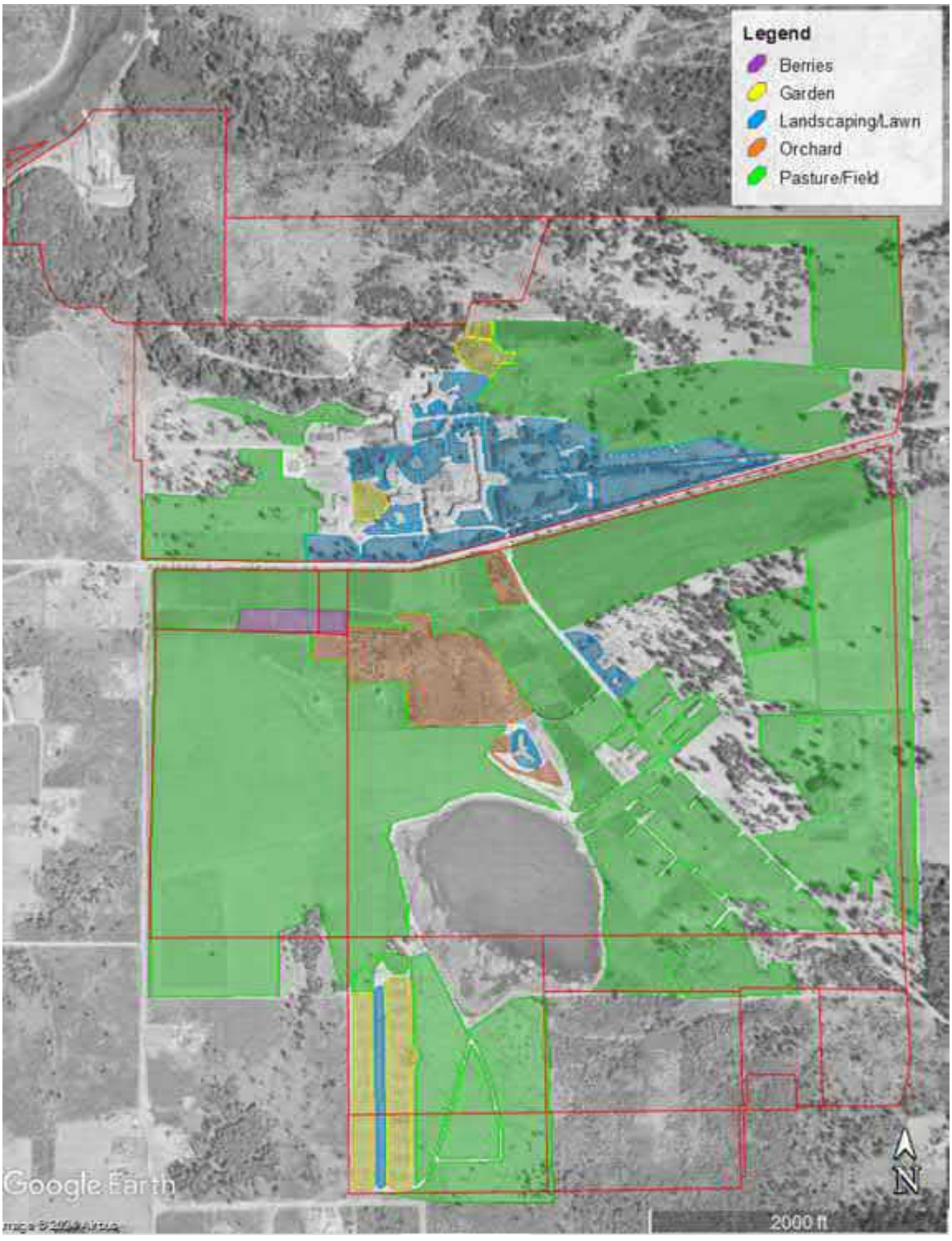
Since the irrigation occurring at Western State Hospital was being performed by staff and patients, as opposed to commercial farmers, and occurred a number of years ago, it is assumed that the application efficiency would have been less than the present-day average. For this reason, we have assumed an application efficiency of 70% for all irrigation that occurred under these water rights.

Irrigation of Western's grounds falls into several categories and have been summarized in **Table 10**.

Table 10 – Number and Type of Irrigated Acres in 1941

Approximate Acreage				Total Acres
Fields/Silage	Landscaping/Lawn	Garden/Berries	Orchard	
331.9	31.6	14.4	17.2	395.2

Figure 1 shows the irrigated acres on a 1941 aerial photo.



Fields/Silage

Fields include the property maintained for the production of cattle feed. The facility maintained numerous livestock including dairy cows and since the animals were not pastured the ability to produce silage for feed was important to making the operation economically viable. Based on

historical references (1959 News Tribune article) 260 tons of mixed grass-legume silage was produced in 1959 which would have required extensive acreage.

A total water duty for the production of grass-legume silage was developed by averaging the water demands of peas (8.86 inches) and grass (17.64 inches), for a crop irrigation requirement of 13.25 inches, as measured at the Tacoma station in the Washington Irrigation Guide (NRCS, 1985). Assuming an application efficiency of 70%, the total irrigation requirement would be 18.93 inches (1.58 feet). Based on the estimated acreage from 1941, 331.9 acres, the total fields/silage irrigation use would equal 524.5 acre-feet/yr.

Landscaping/Lawns

The hospital's grounds included lawns and the facility's extensive flower beds and other landscaping amenities. Landscaping appears to account for approximately 31.6 acres for the year estimated.

Based on a crop requirement of 20.37 inches (pasture/turf at Tacoma Station; NRCS 1992) and assuming the irrigation system has an application efficiency of 70%, the total irrigation requirement would be 29.10 inches (2.43 feet). Based on the acreage estimate for landscaping/lawns of 31.6 acres, the total landscaping/lawns irrigation use would equal 76.8 ac-ft/yr.

Gardens/Berries

Western State Hospital's operations included the cultivation of approximately 14.4 but as high as 20 acres of gardens and based on historical narratives a wide-variety of crop types were grown including berries, root crops, legumes and greens. **Table 11** lists the Washington Irrigation Guide crop irrigation requirements for examples from these categories for the Tacoma station (NRCS, 1985).

Table 11. Crop Irrigation Requirements (Tacoma Station) – NRCS 1985

Crop	Crop Irrigation Requirement (inches)
Grapes	11.26
Raspberries	23.18
Strawberries	5.05
Green Beans	7.42
Carrots	9.11
Crucifer	5.75
Cucumber	7.15
Green Onion	5.32
Peas	8.86
Potato	12.75
Radish	0.83
Spinach	2.97
Tomato	11.17
Squash	7.11
Average	**8.42**

Since the water duty for these crop types varies considerably (with greens needing less than 3 inches during their short growing season and raspberries needing over 23 inches – NRCS, 1985), we used the average crop irrigation requirement in our calculations. The average crop irrigation requirement is 8.42 inches.

Assuming a 70% application efficiency the total irrigation requirement for the gardens/berries is 12.03 inches (1.00 feet). Based on the 1941 estimate for gardens/berries of 14.4 acres, the total gardens/berries irrigation use would equal 14.4 ac-ft/yr.

Orchards

In addition to the garden area Western State Hospital also operated an orchard that produced mostly apples, but also included pears, and plums. The orchard appears to have encompassed around 17.2 acres, interfingered in amongst other plantings, but largely contained in the center of the property, north of Mud Lake.

Based on the crop irrigation requirement for apples without cover of 14.91 inches (NRCS, 1985) and assuming an application efficiency of 70%, the total irrigation requirement for the orchards would have been 21.30 inches (1.78 feet). Based on the 1941 acreage estimate for orchard of 17.2 acres, the total orchard irrigation use would equal 30.6 ac-ft/yr.

Table 12. Summary of all Irrigation Water Use Estimates

Crop	Crop Irrigation Requirement (inches)	Application Efficiency	Total Irrigation Requirement (inches)	Total Irrigation Requirement (feet)	Acres	Annual Volume (ac-ft/yr)
Fields/Silage	13.25	70%	18.93	1.58	331.9	524.5
Landscaping/ Lawns	17.64	70%	29.10	2.43	31.6	76.8
Gardens/Berries	8.42	70%	12.03	1.00	14.4	14.4
Orchards	14.91	70%	21.30	1.78	17.2	30.6
				Total Irrigation	**395.2**	**646.3**

Based on the estimates calculated above, the maximum historic use under the two groundwater claims is shown in **Table 13**.

Table 13. Historic Water Use

Type of Use	Peak Annual Use (Ac-ft/Yr)
Domestic	459.2
Stockwater	26.2
Irrigation	646.3
Total	**1,131.7**

This annual volume is consistent with the annual volume reported as being used at Western State Hospital during preparation of the report of examination in 1969 that ultimately led to ground water certificate 7025-A associated with the East Campus Well. In that report of examination, it states, “In 1968, the hospital withdrew 342,585,000 gallons (1,051 acre-feet) from Well #1 and 2.”

Based on the total use from Wells 1 and 2, and the tentative determination on the instantaneous rate as documented in **Table 13**. **Table 14** shows the breakdown in how this annual volume is split between the two claims.

Table 14. Annual Volume Tentative Determination

Well	Claim	Claimed Volume (ac-ft/yr)	Tentative Determination (ac-ft/yr)
Well No. 1	G2-014863CL	726	726
Well No. 2	G2-014864CL	430	405.7
	Total	**1,156**	**1,131.7**

Enlargement

A water right may not be enlarged through the change process; however, since there is no change proposed for the purpose of use there should be no increase over historical use.

Impairment

In analyzing impairment, Ecology must determine whether existing water rights, including instream flows established by Ecology rules[6], will be impaired by the proposed change. Accordingly, Aspect assessed whether the proposed change in the point of withdrawal had the potential to impact other water users or instream resources[7].

The depth of the E Aquifer and the presence of multiple confining units between the aquifer and surface water bodies indicate that impairment of instream flows is unlikely.

A water right change also may not be allowed to impair groundwater rights, including those in the E Aquifer. We calculated preliminary estimates of drawdown caused by withdrawing the water right using the Theis Equation (Theis, 1935) and image well theory to assess the distance at which a well using the water right might influence another water right (the radius of influence).

Using hydraulic property values for the E Aquifer estimated during post-installation pump testing by Robinson and Noble (2003; hydraulic conductivity = 4,700 feet^2/day, specific storage = 8 x 10^{-4}, aquifer thickness = 40 feet), a well pumping at maximum instantaneous flow allowed under the water right (Qi = 1,400 gallons per minute) for until the Qa is exhausted (187 days of continuous pumping) is expected to cause up to 32.7 feet of drawdown at Lakewood Well S-2 (located 1,400 ft from the new POW) and 1 foot of drawdown up to 8.4 miles from the point of withdrawal. These values likely estimate a wider radius of influence than would actually be observed, because the Theis equation does not account for leakage into the aquifer through the overlying confining unit. These values indicate that impairment due to drawdown interference is unlikely given that potentiometric head levels are approximately 200 feet above the top surface of the E Aquifer.

[6] Instream flow rules (water rights assigned to surface water bodies) for WRIA 12 were adopted in 1979, and codified under WAC 173-512.

[7] It is important to note that drawdown influence does not necessarily mean that the ability of a source to use their water right will be impaired, but instead estimates the distance from a well at which that well's influence may be observed. If two sources are located too near to each other, they may negatively impact each other's operations and ability to exercise their water right due to drawdown interference.

Several major wells have been identified as drawing water from the E Aquifer within WRIA 12 (Johnson, Savoca, and Clothier, 2011); however, given the depth of the aquifer and fact that the requested change will only result in a minor shift in the point of withdrawal, there should be no additional impacts to other water users.

Same Source

A water right may only be transferred to a new point of withdrawal within the same body of Groundwater, which per Ecology's Policy 2010 – Defining and Delineation of Water Sources are defined by the following conditions:

- Are hydraulically connected
- Share a common recharge area
- Are part of a common flow regime
- Are separated from other water sources by effective barriers to hydraulic flow

Further the requested change may not impair the ability of other water rights holders to withdraw their water rights.

Based on Aspect's review, the presence of the E Aquifer throughout WRIA 12, lack of hydraulic barriers within the aquifer, and the presence on hydraulically restrictive layers both above (D Confining Unit) and below (F Confining Unit) the aquifer throughout the WRIA indicate that the water rights should be transferrable anywhere within the areal extent of the basin as long as the new point of withdrawal taps the E Aquifer (i.e., the E Aquifer is the same body of groundwater throughout WRIA 12). Regional aquifer conditions such as the thickness and hydraulic conductivity of the E Aquifer suggest no restrictions on where a new point of withdrawal may be located, subject to local conditions and the potential for pumping interference from other points of withdrawal. The Farm Well is of similar construction to Wells 1 and 2 and is in close proximity such that existing and proposed well share the same body of groundwater.

Water Availability

Water must be physically available at the proposed point(s) of withdrawal. For water to be physically available, it must be present in quantities and quality and on a sufficiently frequent basis to provide a reasonably reliable source for the requested beneficial use or uses.

Wells 1 and 2 supplied the needs of this facility for 65 years before being replaced by a comparable new supply source known as the Farm Well. The Farm Well is currently in use and has not experienced supply limitations.

Beneficial Use

The proposed change must be for a continued beneficial use of water.

Municipal supply is considered a beneficial use of water under RCW 90.54.020(1).

Public Interest

No detriment to the public interest was identified in the investigation of this application for change. The proposed change is largely administrative and does not alter the fundamental use of the water as developed prior to the enactment of the groundwater code.

The project site is situated in Water Resource Inventory Area 12, the Clover-Chambers Creek watershed. While the watershed is largely closed to new appropriations of groundwater that could impact surface water flows there are no new impacts anticipated as a result of the change because the replacement well is located in close proximity to the original sources and the amount of water being used is not increasing.

Other Administrative Requirements

The following must be considered when evaluating a proposed water right change.

Notification to the Washington Department of Fish and Wildlife
Per RCW 90.03.280 and 77.57.020, Ecology must give notice to the Washington Department of Fish and Wildlife (WDFW) of applications to divert, withdraw, use, or store water.

WDFW was provided notice of this water right change application on March 20, 2024.

State Environmental Policy Act (SEPA)
Under chapter 197-11 WAC, a water right application is subject to a SEPA threshold determination (i.e., an evaluation of whether there will be significant adverse environmental impacts) if any of the following conditions are met:

- It is a surface water right application for more than 1 cfs, unless that project is for agricultural irrigation, in which case the threshold is increased to 50 cfs, so long as that irrigation project will not receive public subsidies;
- It is a groundwater right application for more than 2,250 gpm;
- It is an application that, in combination with other water right applications for the same project, collectively exceed the amounts above;
- It is a part of a larger proposal that is subject to SEPA for other reasons (e.g., the need to obtain other permits that are not exempt from SEPA);
- It is part of a series of exempt actions that, together, trigger the need to do a threshold determination, as defined under WAC 197-11-305.

Considering that none of the above conditions are met, the application under review is categorically exempt from a SEPA threshold determination.

Public Notice
RCW 90.03.280 requires that notice of a water right application be published once a week, for two consecutive weeks, in a newspaper of general circulation in the county or counties where the water is to be stored, diverted and used. Notice of this application was published in the Tacoma News Tribune on March 20th and 27th, 2024. No protests were received as a result of this public notice.

Conclusions

I find that in regard to the evaluation of Water Right Claim G2-014863:

- 750 gpm and 726 ac-ft/yr of water is valid and eligible for change.
- The proposed change will not result in an enlargement of the subject water right.
- The proposed change will not impair existing rights.
- The existing and proposed points of withdrawal draw water from the same source.
- Water is physically available at the new point of withdrawal.
- Municipal Use is a beneficial use.
- Approval of this change application will not be detrimental to the public interest.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend this request for a water right change be **APPROVED** in the amounts and within the limitations listed below and subject to the provisions listed above.

Recommended Quantities, Purpose of Use, and Project Location

The rate and quantity of water recommended are maximum limits. The water right holder may only withdraw water at a rate and quantity within the specified limits that are reasonable and beneficial:

Table 15. Recommended Project Limits and Location

Maximum Instantaneous Rate (gpm)	750
Maximum Annual Quantity (ac-ft/yr)	726
Purpose(s) of Use	Municipal Use
Point of Withdrawal	Farm Well - NW¼ NE¼, Section 4, Township 19 North, Range 2 E.W.M.
Place of Use	Western State Hospital, comprising the former U.S. Military Reserve in Sections 32 and 33, Township 20 North, Range 2 East. W.M.; and Government Lots 2, 3, and 4 and the North 450 feet of Government Lots 5 (East) and 5 (West) in Section 4, Township 19 North, Range 2 East. W.M. Less Roads.

Jill E. Van Hulle

August 14, 2024

Report Writer *Date*

James Bush

August 14, 2024

Hydrogeologic Reviewer *Date*

Jeffrey S. Matts

August 14, 2024

Ecology Reviewer *Date*

To request ADA accommodation including materials in a format for the visually impaired, call Ecology Water Resources Program at 360-407-6872. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

References

Dodd & Millegan Consulting Engineers, 1961, Water Supply & Distribution System, Western State Hospital, Fort Steilacoom, Washington.

Johnson, K.H., M.E. Savoca, and B.C. Clothier, 2011, Numerical Simulation of the Groundwater- Flow System in the Chambers-Clover Creek Watershed and Vicinity, Pierce County, Washington: U.S. Geological Survey Scientific Investigations Report 2011-5086.

NRCS, 1985 and 1992, Washington Irrigation Guide.

Robinson & Noble, Inc., 2003, Construction and Testing of Western State Hospital Well 4.

Savoca, M.E., W.B. Welch, K.H. Johnson, R.C. Lane, B.C. Clothier, and E.T. Fasser, (USGS) 2010, Hydrogeologic Framework, Groundwater Movement, and Water Budget in the Chambers-Clover Creek Watershed and Vicinity, Pierce County, Washington: U.S. Geological Survey Scientific Investigations Report 2010-5055.

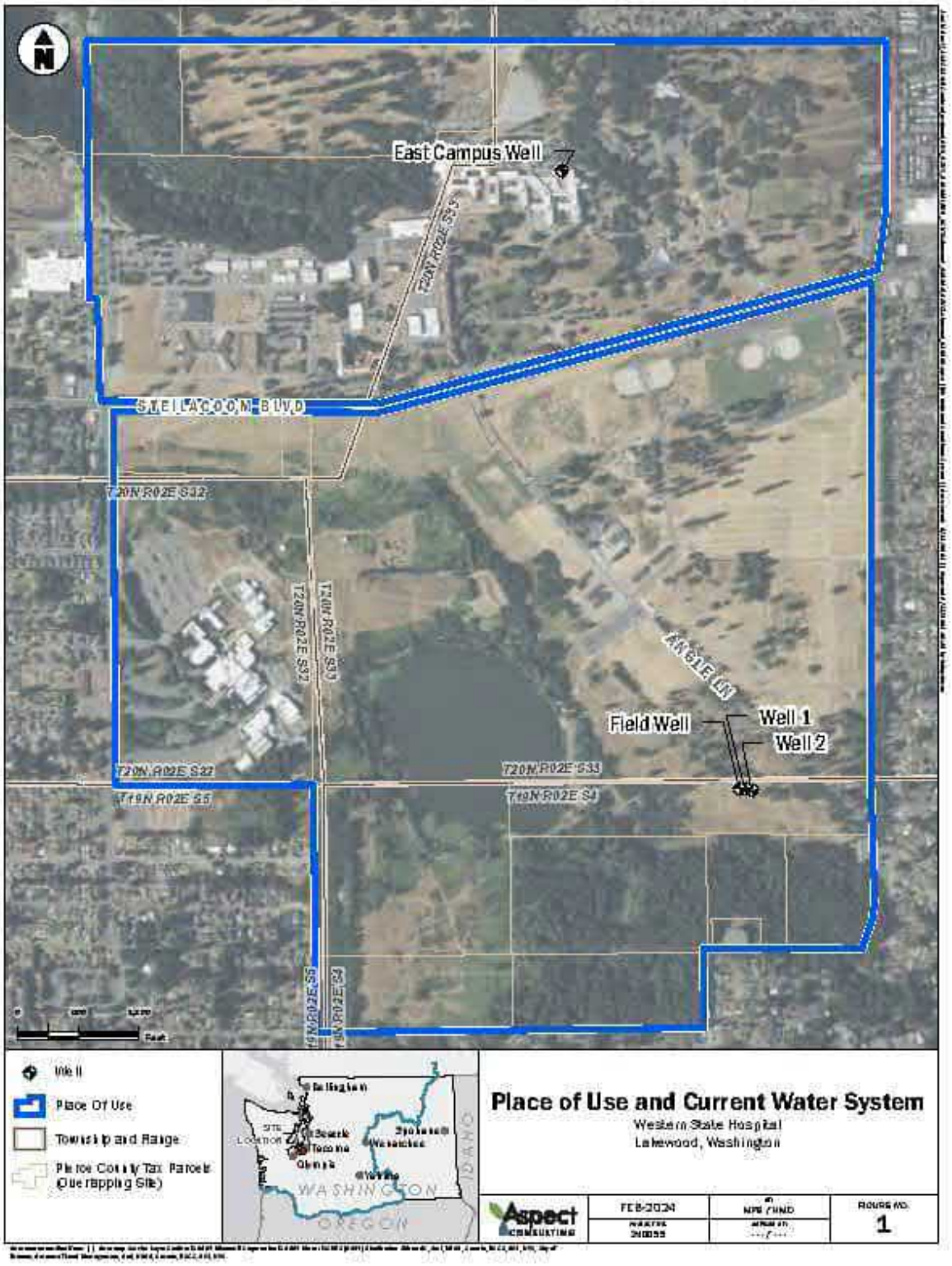
Theis, C.V., 1935, The Lowering of the Piezometric Surface and the Rate and Discharge of a Well Using Ground-Water Storage, Transactions, American Geophysical Union 16:519-24.

Washington State Department of Ecology (Ecology), Updated March 2024, Determining Irrigation Efficiency and Consumptive Use, Water Resources Program Guidance. Publication 20-11-027.

Washington State Department of Ecology (Ecology), January 2024, Draft Instructions: How to File a Court Claim. Draft for Public Comment Only, ECY 070-744.

Washington State Department of Ecology (Ecology), 2007, Defining and Delineation of Water Sources, Water Resources Program Policy POL-2010.

Washington State Department of Health (Health), Revised June 2020, Water System Design Manual, DOH Pub 331-123.


East Campus Well
STEILACOOM BLVD
T20N R02E S32
T20N R02E S33
T19N R02E S5
T19N R02E S4
ANGLE LN
Field Well
Well 1
Well 2
Well
Place Of Use
Township and Range
Pierce County Tax Parcels (Overlapping Site)
Place of Use and Current Water System
Western State Hospital
Lakewood, Washington
Aspect Consulting
FEB-2024
1

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
JUN 26 1972
COUNTY TREASURER

1 NAME WESTERN STATE HOSPITAL

ADDRESS FORT STEILACOOM, WASHINGTON

ZIP CODE 98494

2 SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED. Ground Water (SURFACE OR ~~GROUND~~ WATER)

W.R.I.A. 12 (LEAVE BLANK)

A IF GROUND WATER, THE SOURCE IS Well No. 1

B IF SURFACE WATER, THE SOURCE IS

3 THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A QUANTITY OF WATER CLAIMED 900 Gallons Per Minute (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED ~~900 Gallons Per Minute~~

B. ANNUAL QUANTITY CLAIMED 726 Acre Feet (ACRE FEET PER YEAR) PRESENTLY USED 726 Acre Feet

C IF FOR IRRIGATION, ACRES CLAIMED -0- PRESENTLY IRRIGATED -0-

D TIME(S) DURING EACH YEAR WHEN WATER IS USED: January 1 thru December 31 (365 Days)

4 DATE OF FIRST PUTTING WATER TO USE MONTH YEAR ~~1938~~ (Approximately)

5 LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 3039 FEET East AND 40 FEET South FROM THE Northwest CORNER OF SECTION 4

BEING WITHIN N.E. 1/4 of the N.W. 1/4 OF SECTION 4, T 19 N N., R 2 E (E OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT BLOCK OF

(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED. Western State Hospital, Comprising the former U.S. Military Reserve in Secs. 32 & 33, T. 20 N, R. 2 E. W. M.; and Government Lots 2, 3, & 4 and the North 450 Feet of Government Lots 5 (East) and 5 (West) in Sec. 4, T. 19 N., R. 2 E.W.M. Less Roads

COUNTY Pierce

7 PURPOSE(S) FOR WHICH WATER IS USED Community Domestic Supply

8 THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED Origin Unknown

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE

DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO

JUN 26 72 014863

DIRECTOR DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF

X W. Connell

DATE June 23, 1972

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

W. V. Connell, Business Manager
Western State Hospital
Fort Steilacoom, Washington 98494

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
P O BOX 829 OLYMPIA WASHINGTON 98501

ORIGINAL

Claim G2-014864CL

Farm Well

DEPARTMENT OF ECOLOGY
State of Washington

STATE OF WASHINGTON
FINAL
REPORT OF EXAMINATION
FOR WATER RIGHT CHANGE

WR Doc ID
6805961

Changed Point of Withdrawal

APPLICATION DATE	WATER RIGHT CHANGE APPLICATION NUMBER
February 27, 2024	CG2-014864CL

PRIORITY DATE OF CLAIM PROPOSED FOR CHANGE	CLAIM NUMBER PROPOSED FOR CHANGE
1938	G2-014864CL

NAME AND MAILING ADDRESS	SITE ADDRESS (IF DIFFERENT)
Washington State Dept. of Social and Health Services PO Box 45848 Olympia, WA 98504	Western State Hospital 9601 Steilacoom Blvd SW. Lakewood, WA 98498

Total Rate and Quantity Authorized for Withdrawal	
WITHDRAWAL RATE (gpm)	ANNUAL QUANTITY (ac-ft/yr)
500	405.7

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

PURPOSE	WITHDRAWAL RATE (gpm)	ANNUAL QUANTITY (ac-ft/yr)	PERIOD OF USE
Municipal	500	405.7	Continuous (01/01 – 12/31)

PUBLIC WATER SYSTEM INFORMATION	
WATER SYSTEM NAME and ID	CONNECTIONS
951501	610

Source Location			
COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
Pierce	Groundwater	N/A	12

SOURCE NAME	PARCEL	WELL TAG	T.	R.	S.	QQ Q	LATITUDE	LONGITUDE
Farm Well	0219041000	AEC930	19 N	02 E	04	NW NE	47.169785	-122.556634

QQ Q = Quarter Quarter
Datum: NAD83/WGS84

Place of Use

LEGAL DESCRIPTION OF THE AUTHORIZED PLACE OF USE
Western State Hospital, comprising the former U.S. Military Reserve in Sections 32 and 33, Township 20 North, Range 2 East. W.M.; and Government Lots 2, 3, and 4 and the North 450 feet of Government Lots 5 (East) and 5 (West) in Section 4, Township 19 North, Range 2 East. W.M. Less Roads.

Attention: If the criteria in RCW 90.03.386(2) are not met and a Water System Plan/Small Water System Management Program was approved after September 9, 2003, the place of use of this water right is the service area described in that document. If the criteria in RCW 90.03.386(2) are not met and no Water System Plan/Small Water System Management Program has been approved after September 9, 2003, the place of use reverts to the last place of use described by the Department of Ecology in a water right authorization.

Proposed Works

All infrastructure to utilize the water under the subject claim is in-place. The proposed well to be added (Farm Well) was drilled in 2003.

The Group A public water system includes a distribution capacity of 730,830 gallons and serves the 572 connections (610 connections are currently approved) via distribution system that consists of 4", 5", 6", 8", and 12" mains.

Development Schedule

BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	PUT WATER TO FULL USE BY THIS DATE
Started	Completed	In Use

Measurement of Water Use

HOW OFTEN MUST WATER USE BE MEASURED AND RECORDED?	Weekly
HOW OFTEN MUST WATER USE DATA BE REPORTED TO ECOLOGY?	Annually by January 31
WHAT VOLUME SHOULD BE REPORTED?	Total annual quantity in acre-feet
WHAT RATE SHOULD BE REPORTED?	Annual peak rate of withdrawal in gpm

Provisions

Water Right Limitations

Water right claims G2-014863CL and G2-014864CL, and Water Right Certificates GWC 7602-A and GWC 7025-A are utilized by the Western State Hospital water system. These rights allow for cumulative withdrawals of 1,156 ac-ft/year and 2,650 gpm.

Measurements, Monitoring, Metering, and Reporting

An approved measuring device must be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", chapter 173-173 WAC, which describes the requirements for data accuracy, device installation and

operation, and information reporting. It also allows a water user to petition the Department of Ecology (Ecology) for modifications to some of the requirements.

Recorded water use data shall be submitted electronically by January 31 each year. To set up an Internet reporting account, contact the Southwest Regional Office. If you do not have Internet access, you can still submit hard copies by contacting the Southwest Regional Office for forms to submit your water use data.

Schedule and Inspections
Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the project location, and to inspect at reasonable times, records of water use, wells, diversions, measuring devices and associated distribution systems for compliance with water law.

Health Department Approval Required
Prior to any new construction or alterations of a public water supply system, the State Board of Health rules require public water supply owners to obtain written approval from the Office of Drinking Water of the Washington State Department of Health. Please contact the Office of Drinking Water at Northwest Drinking Water Operations, 20435 72nd Avenue S, Suite 200, K17-12, Kent, WA 98032-2358, (253) 396-6750, prior to beginning (or modifying) your project.

Conservation Requirement
The water right holder is required to maintain efficient water delivery systems and use of up-to-date water conservation practices consistent with RCW 90.03.005.

Well Identification
All wells shall be tagged with a Department of Ecology unique well identification number. If you have an existing well and it does not have a tag, please contact the well-drilling coordinator at the regional Department of Ecology office issuing this decision. This tag shall remain attached to the well. If you are required to submit water measuring reports, reference this tag number.

Easement Right-of-Way
The water source and/or water transmission facilities are not wholly located upon land owned by the applicant. Issuance of a water right change authorization by this Department does not convey a right of access to, or other right to use, land which the applicant does not legally possess. Obtaining such a right is a private matter between applicant and owner of that land.

Findings of Fact and Order

Upon reviewing the investigator's report, I find all facts, relevant and material to the subject application, have been thoroughly investigated.

Therefore, I ORDER **APPROVAL** of Change Application No. CG2-014863CL, subject to existing rights and the provisions specified above.

Your Right To Appeal

You have a right to appeal this Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal, you must do the following within 30 days of the date of receipt of the Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order to Ecology in paper form - by mail or in person (see addresses below). E-mail is not accepted.

You must also comply with other applicable requirements in chapter 43.21B RCW and chapter 371-08 WAC.

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503 **Pollution Control Hearings Board** 1111 Israel RD SW, Ste 301 Tumwater, WA 98501	**Department of Ecology** Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608 **Pollution Control Hearings Board** PO Box 40903 Olympia, WA 98504-0903

For additional information, visit the Environmental Hearings Office Website: http://www.eho.wa.gov. To find laws and agency rules, visit the Washington State Legislature Website: http://www1.leg.wa.gov/CodeReviser.

Authorizing Signature

Signed at Olympia, Washington, this 20th day of August 2024

Michael J. Gallagher

Mike Gallagher, Section Manager
Water Resources Program/Southwest Regional Office
Department of Ecology

INVESTIGATOR'S REPORT

Water Right Change Application No.: CG2-014864CL Washington State Department of Social and Health Services (DSHS)
Investigator: Jill Van Hulle, Aspect Consulting
Reviewed by: Jeff Marti, Department of Ecology

BACKGROUND

This report serves as the written findings of fact concerning Water Right Change Application Number CG2-014864CL.

The intent of this project proposal is to change the point of withdrawal (POW) to designate the Farm Well (also referred to as Well 3) as an additional POW authorized by G2-014863CL and G2-014864CL. The Farm Well is located less than 100 feet from Well 1 (authorized by G2-014863CL) and Well 2 (authorized by G2-014864CL) but has not been officially added to the subject water right claims through the water right change application process. For this reason, the Farm Well is considered to be a "de-facto" source having been used to exercise the claims since its construction in 2003.

Additionally, during the change process, the Washington State Department of Social and Health Services (DSHS) requests the purpose of use be clarified as being for municipal water supply purposes, since the past and current water use meets the definition provided in RCW 90.03.015(4).

Table 1. Existing Water Right Attributes

Name on Water Right Document	Western State Hospital
Claim Number	G2-014864CL
Priority Date	1938
County	Pierce
WRIA	12
Water Source	Well 2
Place of Use	Western State Hospital, comprising the former U.S. Military Reserve in Sections 32 and 33, Township 20 North, Range 2 East. W.M.; and Government Lots 2, 3, and 4 and the North 450 feet of Government Lots 5 (East) and 5 (West) in Section 4, Township 19 North, Range 2 East. W.M. Less Roads.

Purpose	Instantaneous Rate (gpm)	Annual Quantity (ac-ft/yr)	Begin Season	End Season
Community Domestic Supply	500	430	01/01	12/31

Source Name	Parcel	Well Tag	Township	Range	Section	QQ Q	Latitude	Longitude
Well 2	0219041000	AEC932	19 N.	02 E. W.M.	04	NW NE	47.169788	-122.556627

WRIA = Water Resource Inventory Area; gpm = Gallons per Minute; ac-ft/yr = Acre-feet per Year; QQ Q = Quarter Quarter

Datum: WGS84

Table 2. Requested Water Right Attributes

Applicant Name	Washington State Department of Social and Health Services (DSHS)
Application Date	February 27, 2024
County	Pierce
WRIA	12
Water Source	Farm Well (Well 3)
Place of Use	Area served by the DSHS's Western State Hospital.

Purpose	Instantaneous Rate (gpm)	Annual Quantity (ac-ft/yr)	Begin Season	End Season
Municipal	500	405.7	01/01	12/31

Source Name	Parcel	Well Tag	Township	Range	Section	QQ Q	Latitude	Longitude
Well 3 (Farm Well)	0219041000	AEC930	19 N.	2 E. W.M.	04	NW NE	47.169737	-122.556865

Datum: WGS84

Cost Reimbursement

This application is being processed under a cost reimbursement agreement between the applicant and the Department of Ecology. This report has been prepared by Aspect Consulting and reviewed by [Ecology staff name] with the Department of Ecology's Water Resources Program.

INVESTIGATION

The intent of this filing is to formally change the point of withdrawal associated with the subject water right claim. While claims can be amended via RCW 90.14.065 which provides that amendments are allowed in the case of a *change in circumstances not foreseeable at the time the original claim was filed,* Ecology has taken the position that only the filing of an Application for Change can be utilized to reflect the change in point of withdrawal associated with replacement wells that are authorized by claims.

A site visit by Jill Van Hulle of Aspect Consulting was conducted on May 9, 2024. Ms. Van Hulle visited the locations of the relevant wells, and distribution system with a focus on evidence of historical structures including some of the original animal barns, orchard areas and location of significant water supply infrastructure.

History of Water Use

Site Description

Western State Hospital is located in Lakewood, within the boundaries of Water Resource Inventory Area 12, the Clover-Chambers Creek Watershed. WRIA's define surface water drainages and is defined as the area that drains from higher elevations in the eastern part of the watershed to Puget Sound via Spanaway, Clover, and Chambers creeks. This watershed is one of the most intensely populated basins in Western Washington.

Water System Description

Western State Hospital is a Group A Community public water system (PWS ID 951501) that has been approved by the Washington State Department of Health to supply the equivalent of 610 residential

connections. The system currently utilizes two wells (Source 02 the East Campus Well, and Source 05 the Farm Well) and an intertie with Lakewood Water District (Source 04) for its source of water and has a distribution system storage capacity of 730,830 gallons. The Western State Hospital complex includes a number of buildings. The water system also supplies water to the Child Study and Treatment Center. The water system also continues to be used for the irrigation needs of the complex and adjoining Fort Steilacoom Park, which includes play areas (baseball and soccer fields) lawns, other landscaping and robust horticulture program raising flowers and trees.

Water Use Under Water right claims G2-014863CL and G2-014864CL

Water right claims G2-014863CL and G2-014864CL were filed to document a water use that originated over 85 years ago in 1938. While documenting historical water use patterns from that long ago can be challenging, Western State Hospital is a historically significant facility, and there is an extensive body of supporting information detailing daily life – and with that water use – at this facility.

The hospital's unique history includes the fact it once had its own baseball stadium and its own team. The stadium and grandstand have been replaced with roads and a small set of bleachers, but the baseball field remains on the southwest corner of the campus.

It was also once the site of a significant farming operation, which once produced one-third the cost of subsistence at the hospital and included everything from beets and radishes to rhubarb, kale and squash. The hospital's agricultural pursuits also included building new barns and adding a dairy herd to supply milk as well as patient activity. Meat came from hogs and chickens, the latter also providing eggs. Patients also assisted in the carpenter, tin, and blacksmith shops, and in the laundry and the kitchen. Work became therapeutic occupation for patients. The farm progressed as a set of interconnected activities until farming operations ended in 1965[1].

Western State Hospital is located on the site of historic Fort Steilacoom, which served as a military post from 1849 to 1868 until the federal government abandoned it. The Washington territory purchased the fort with the intent of turning it into a hospital for people who suffered from mental illness. The Washington Territory began acquiring land for the hospital in 1868, although land acquisitions continued for many years until the final parcel was purchased in 1947. The hospital, then called the Insane Asylum of Washington Territory, opened in 1871 with 15 male and six female patients.

Water use estimates for the extent of development under water right claims G2-014863CL and G2-014864CL, from the 1940s, are summarized in **Table 3** and discussed in detail in the Tentative Determination section of this Report of Examination.

Table 3. Historic Water Use Under Water right claims G2-014863CL and G2-014864CL

Type of Use	Peak Annual Use (Ac-ft/Yr)	Comment/Evidence
Potable/Domestic	459.2	Dodds & Milligan Report, and DOH Design Manual
Potable/Stockwater	26.2	DOH Design Manual
Agricultural/Irrigation	646.3	Washington Irrigation Guide, aerial photo review, 1941, 1945, and 1957
Total	1,131.7	

[1] https://dshswa.medium.com/western-state-hospital-celebrates-its-150-year-anniversary-this-month-daf5cb213eb3

According to the claim filings Well Nos. 1 and 2 produced 900 and 500 gpm respectively for a combined total of 1,400 gpm. A 1961 engineering report prepared for Western State Hospital (Dodds & Milligan, 1961) indicated that both wells were equipped to produce 750 gpm, for a combined total of 1,500 gpm. Given the wells were in close proximity to each other and operated as a wellfield it is likely that the pumping rate fluctuated between them to maximize supply, with Well 1 being the better, more productive and reliable source. We note that while it is likely that 1,400 gpm of instantaneous capacity was developed at the site that the new point of withdrawal (the Farm Well) is currently operated at a rate of 1,000 gpm.

Proposed Changes

The intent of this Application for Change is to modify the point of withdrawal that is authorized by water right claims G2-014863CL and G2-014864CL. The originally designated withdrawal points (Wells 1 and 2) were constructed in 1938 and after 65 years of continuous use were replaced in 2003.

The applicant has additionally requested that Ecology modify the purpose of use to reflect the municipal nature of the purpose of use.

RCW 90.03.015 defines municipal water supply as a beneficial use of water meeting one of several criteria, including for fifteen or more residential connections, or providing residential use of water for a non-residential population that is on average, at least 25 people for at least 60 days a year. Since Western State Hospital supplies a residential population that equates to 572 equivalent residential units (ERU's) it qualifies as a municipal water supplier.

Other Rights Associated with Project or Place of Use

DSHS currently holds 6 ground water rights: 2 certificates (Ground Water Certificate (GWC) 7602-A and GWC 7025-A) and 4 water right claims (G2-014863CL, G2-014864CL, G2-014865CL, and G2-014866CL[2]) as inventories on Table 4A. Combined these documents amount to 3,600 gallons per minute (gpm) and 2,957 acre-feet per year (afy) The certificates authorize withdrawal of 1,400 gpm and 1,156 afy from Well No. 3 (East Campus Well). The claims authorize withdrawal of 2,200 gpm and 1,801 afy from Well Nos. 1 and 2 and Canyon Spring.

The subject claims G2-014863CL and G2-014864CL appear to represent the documentation of the earliest water use associated with the hospital facility, however there are additional authorizations that need to be accounted for in order to determine the full extent of the water right portfolio. Ecology's guidance document (Publication 20-11-065) regarding Uses and Terms that Clarify Relationships between Water Rights indicates that in the course of water right change decisions the relationship of multiple related rights should be understood and clarified. Accordingly, in addition to determining the extent of historical use under claims G2-014863CL and G2-014864CL, the full water right portfolio will be evaluated with the intent of establishing how much water can be withdrawn under all water rights in Western State Hospital's portfolio. Table 4B describes the likely extent of the water rights based on how the various documents relate to each other.

[2] On this claim form, the legal doctrines upon which the right of claim is based is identified as, "Certificate of Record No. 15, Page No. 7025-A State of Washington, County of Pierce, Ground Water Permit No. 9115." For this evaluation, it is believed that this claim is likely intended to document the existing GWC 7025-A and not an additional water right. It will be depicted as being non-additive for both instantaneous rate and annual volume for these reasons.

The key factors necessary for correctly interpreting water rights are:

a) Overlapping characteristics among water rights (e.g. source, place of use, purpose of use, period of use, ownership).

b) The amount of water, both instantaneous and annual, embodied in each right.

c) The amount of water that can be reasonably put to beneficial use for each right (subject to other applicable statutes including the 2003 Municipal Water Law).

Additionally, while not specifically addressed in Ecology's guidance document, another factor is the sequencing of the various authorizations and an interpretation of how Ecology would have viewed the rights at the time permit and allocation decisions were made.

Water Right Claim Filing G2-014865CL

G2-014865CL was filed to capture the use of water from a source referred to as the "Canyon Artesian Well", the long form claim filing includes a location placing the source within the Garrison Creek Canyon. Garrison Springs are the name given to the springs and creek which flow from Western State Hospital into Puget Sound by Chambers Creek. The springs provided water for the United States Military garrison at Fort Steilacoom, and we presume that this same – or a related source – was the subject of the 1974 claim filing. A Department of Fish and Wildlife hatchery was built in 1974 near the site referenced as the point of withdrawal in the claim filing. Based on early (pre-1970) descriptions of the Western State Water system, a spring source was being used to augment the capacity of Wells 1 and 2 and used interchangeably with the wells.

For the purposes of quantifying the DSHS portfolio we suggest that G2-014865CL not be included in the inventory for the following reasons:

1. Any use of the springs would have been captured by the evaluation of beneficial use from Well 1 and 2 under claims G2-014863CL and G2-014864CL.
2. The springs have not been used for the facility for decades, and may have been redeveloped by WDFW to supply the hatchery in the early-1970s. There is no reference to the use of the springs in Ecology's 1968 review of the pending applications for the East Campus well which makes it likely they were not in use at that time.
3. Unlike the pre-code water right authorizations associated with Well 1 and 2 where DSHS recognized the existence of the claims and took action to continue to exercise the water right via the drilling and use of the Farm Well, we see no parallel that would serve to preserve a legal right to the springs for continued domestic supply for the DSHS.

The WDFW has secured its own water right certificates that are specific to the operation of the hatchery, making the resolution of the standing of this claim a low priority; however, given that the basin has yet to be adjudicated and the claim proports a date of first use that dates to 1915 it might be prudent to not take a formal action at this time. **Table 4B** does not include this claim filing.

Water Right Claim Filing G2-014866CL

G2-014866CL was filed to capture the use of the East Campus Well however we suggest that this filing is redundant in nature since at the time the claim was filed a groundwater certificate (Certificate GWC 7602-A) had been previously issued. Further, since the East Campus Well was not installed until 1968 its date of first use does not predate the 1945 groundwater code rendering the claim unlikely to be found valid as a pre-code water right. We suggest that it might be less confusing if the applicant voluntarily agreed to relinquish this potential right and **Table 4B** does not include the attributes of this right in the quantification.

Certificate GWC 7602-A

Certificate GWC 7602-A authorized withdrawal from the East Campus well. With its March 7, 1968 priority date this filing predates the opening of the claim registration period and thus represents Ecology's first opportunity to assess water demand for the facility. The application and background investigative information reflects the ongoing use of Wells 1 and 2 but indicates no other water rights are appurtenant to the project. In its May 15, 1968 Report of Examination the permit writer estimated that the facility would need 430 acre-feet to meet the hospital's demands. For purposes of understanding the relationship between water rights we presume that if the state had recognized the pre-code use of water under the development of Wells 1 and 2 and because the amount of water that had been previously developed exceeded 430 acre-feet, that Certificate GWC 7602-A would have been issued with a non-additive/supplemental annual allocation and an additive/primary instantaneous withdrawal capacity to reflect the need for an additional source.

Certificate GWC 7025-A

GWC 7025-A also authorizes withdrawals from the East Campus well and has a priority date of October 21, 1968. In the body of its decision approving this water right, the state recognizes that Wells 1 and 2 were actively being used, that 1,051 acre-feet had been withdrawn by the hospital in the previous year, and that DSHS had a projected demand for 1,156 acre-feet. Since the earlier filing for the East Campus Well (Certificate GWC 7602-A) authorized only 430 acre-feet per year, the junior filing allowed for the withdrawal of an additional 726 acre-feet per year to meet the intended total of 1,156 acre-feet. Since the recommended annual quantity associated with the pre-code water use from Wells 1 and 2 amounts to 1,131.7 acre-feet, we presume that the annual quantity associated with GWC 7025-A should be administratively adjusted to reflect a primary allocation of 24.3 acre-feet per year with the balance of 701.7 being classified as non-additive to Claims G2-014863Cl and G2-014864CL.

Table 4A - Water Right Summary (Based on Water Right Documents)

Water Right Number	Source	Instantaneous Rate (gpm)		Annual Volume (afy)	
		Additive	**Non-Additive**	**Additive**	**Non-Additive**
G2-014863CL	Farm Well (*de facto change*)	900	0	726	0
G2-014864CL	Farm Well (*de facto change*)	500	0	430	0
G2-014865CL	Canyon Spring	800	0	645	0
G2-014866CL	East Campus Well	0	900	0	726
GWC 7602-A	East Campus Well	500	0	430	0
GWC 7025-A	East Campus Well	900	0	726	0
Subtotal Farm Well (de facto change)		*1,400*	-	*1,156*	-
Subtotal Canyon Spring		*800*		*645*	-
Subtotal East Campus Well		*1,400*	-	*1,156*	-

Table 4B – Revised Water Right Summary (Based on Clarification of Relationship Between Rights)

Water Right Number	Source	Instantaneous Rate (gpm)		Annual Volume (afy)	
		Additive	**Non-Additive**	**Additive**	**Non-Additive**
G2-014863CL	Farm Well	750	0	726	0
G2-014864CL	Farm Well	500	0	405.7	0
G2-014866CL	East Campus Well	Recommend Relinquishment for Record Clarity			
GWC 7602-A	East Campus Well	500	0	0	430
GWC 7025-A	East Campus Well	900	0	24.3	701.7
Subtotal Farm Well		*1,250*	*0*	*1,131.7*	*0*
Subtotal East Campus Well		*1,400*	*0*	24.3	1,131.7
Grand Total		**2,650**		**1,156**	**1,131.7**

Hydrogeologic Evaluation

Background information regarding the hydrogeological setting of the project site is contained in the document entitled *Hydrogeologic Evaluation – Source of Water Determination for Washington State Department of Social and Health Services' Western State Hospital Well #3, Aspect Consulting, James Bush and Jonathan Turk, June 5, 2019, (Bush and Turk).*

Bush and Turk (2019) refer to the Farm Well as Well 3. For clarity, this well will be referred to as the Farm Well here. The Farm Well was completed in April 2003 as a replacement for Wells 1 and 2 to provide water to the Western State Hospital campus. The well is located in the northwest quarter of the northeast quarter of Section 4, Township 19 North, Range 2 East in Lakewood, Washington. The wellhead is approximately 5,000 feet southeast of the hospital campus.

The Farm Well draws water from the aquifer through two screened intervals (sections of the well casing partially open to the aquifer):

- From 486 to 491 feet below ground surface (bgs), and
- From 520 and 560 feet bgs.

Table 5. Well Construction Information

Well	Total Depth (feet)	Depth of Screened Interval (feet)	Aquifer Zone Tapped
Well 1	935	500 to 935	Likely Aquifer E through G Undifferentiated Deposits
Well 2	500	Unknown	Likely Aquifer A3 through E
Farm Well	574	486 to 491 520 to 560	Aquifer E Aquifer E

Aspect reviewed recent work by the US Geological Survey (USGS) describing the local hydrogeologic conditions and groundwater flow system to evaluate the extent and characteristics of the body of groundwater associated with the water rights (Savoca et al., 2010; Johnson, Savoca, and Clothier, 2011). Additional information was gathered from water well drilling reports (well logs) accessed through Ecology's well log database.

Regional Geology/Hydrogeology

The subject wells are all situated within the surface water drainage of WRIA 12, and the northeastern and southwestern administrative boundaries of the WRIA 12 are roughly aligned with groundwater divides. Groundwater generally flows from the foothills in the southeast to Puget Sound in the northwest.

WRIA 12's hydrostratigraphy consists of 2,000 feet of sediment of glacial and nonglacial origin, and is typical of the Puget Lowland geologic province. The Farm Well draws water from the relatively deep "E" Aquifer. The aquifer is present throughout and appears to extend beyond the surface water catchment of the watershed. The E Aquifer has not been identified at ground surface within WRIA 12 and is not known to be in direct hydraulic connection to any surface water body except Puget Sound. Regionally, the aquifer is primarily composed of glacial silt, sand, and gravel with discontinuous till and lacustrine deposits. Well logs near the Farm Well identify the E Aquifer as being composed of sand and gravel with minor amounts of silt and clay. The E Aquifer is generally thinnest in the southeast of the basin, and pinches out against bedrock in the Cascade Foothills to the southeast of the basin. The aquifer generally thickens to the northwest, and near the Farm Well the aquifer is identified as being approximately 70 to 100 feet thick.

The E Aquifer is confined above by the low permeability D Confining Unit (composed of interglacial silt and clay deposits with occasional ash), and below by the F Confining Unit (composed of silts and clays with minor lenses of sand and gravel). Both the D Confining Unit and the F Confining Unit are present throughout the watershed. At the Farm Well, the D Confining Unit is approximately 80 feet thick and the F Confining Unit is over 147 feet thick. Both thickness values are typical for WRIA 12.

Recharge enters the E Aquifer by leaking through the D Confining Unit throughout WRIA 12, with more recharge likely occurring in the southeast where the aquifer is closest to ground surface. Groundwater then flows from southeast to northwest, and discharges to Puget Sound. Hydraulic conductivity (the ability of the aquifer to transmit water) varies widely throughout the study area. Throughout much of the study area, hydraulic conductivity of the E Aquifer ranges between 20 and 100 feet per day. Areas of relatively low hydraulic conductivity (1 to 10 feet per day) occur at the far northwest of the WRIA, beneath western Tacoma. Discontinuous areas of high hydraulic conductivity of the E Aquifer (100 to 2,000 feet per day) occur in the central and southwestern portions of the WRIA, including near the Farm Well.

Well Nos. 1 and 2 were converted into monitoring wells when the Farm Well was constructed in 2003.

Materials Submitted in Support of Application

Provided with this Application for Change is an extensive collection of historical documents, reports from DSHS regarding resident population, and newspaper articles that chronical the development and extent of agricultural development at Western State Hospital.

ANALYSIS

Under Washington State statutory (RCW 90.03.380 and 90.44.100) and case law, in evaluating a water right change application, Ecology is required to determine whether, and to what extent, a water right is valid and eligible to be changed. Further, the following criteria must be assessed for a change to a groundwater claim.

- The existing right must not be enlarged.
- The proposed change and resulting water use must not cause impairment of existing rights.
- The water source must not change.
- Water must be physically available at the new point of withdrawal.
- Water use must continue to be beneficial.
- The proposed change and resulting water use must not be detrimental to the public interest (public welfare).

Tentative Determination of Validity and Extent

A tentative determination of the validity and extent of a water right must be performed for any proposed water right change. Ecology must evaluate the historical use of the subject right and other factors to determine the rate and quantity of water that may be changed.

Canyon Spring (1915), followed by Wells 1 and 2 (1938) were the original documented sources of water supply for the Western State Hospital complex supplying both the extensive domestic needs of the residents and also providing water to meet the larger industrial demands of the complex which included the hospital's food production. In 1968 applications were filed for the use of the East Campus Well, and

a body of record developed that served to document the use of the original wells while allocating water for the facility's current and future needs. Based on the 1969 Report of Examination prepared for GWC 7025-A in 1968 the hospital used 342,585,000 gallons which equates to 1,051 acre-feet per year.

Instantaneous Rate

The claimed instantaneous rate for Well 1 is 900 gpm and for Well 2 is 500 gpm. This is a combined total of 1,400 gpm from the two wells under the associated water right claims. This section will review the peak historic use and determine what instantaneous rate has been claimed and pumped and is capable of being carried through the water right change application process.

Based on the Dodds & Milligan (1961) report, both wells were equipped with vertical lineshaft turbine pumps with rated capacities of 750 gpm. However, Well 2 ceased to be used since 1959 due to severe pump vibrations that was likely due to poor pump alignment. Canyon Spring was also used during the winter months and could provide another 1,000 gallons per minute; however, the spring had limited capacity and was not used during the summer months, by 1968 when the state Department of Water Resources (Ecology's predecessor agency) was evaluating DSHS's application for the East Campus Well water right permit the spring was no longer in use.

Table 6 breaks down how the instantaneous rate will be allocated to each claim.

Table 6 - Instantaneous Rate Tentative Determination

Well	Claim	Claimed Rate (gpm)	Physical Capacity (gpm)	Tentative Determination (gpm)
Well No. 1	G2-014863CL	900	750	750
Well No. 2	G2-014864CL	500	750	500
	Total	**1,400**	**1,500**	**1,250**

Annual Volume

The annual volume claimed for Well 1 is 726 ac-ft/yr and for Well 2 is 430 ac-ft/yr. This is a combined total of 1,156 ac-ft/yr from the two wells under the associated water right claims. This section will review the peak historic use and determine what annual volume has been claimed and pumped and is capable of being carried through the water right change application process.

Since the water use is for municipal water supply purposes, and is not subject to statutory relinquishment, we have estimated the peak historic use.

Domestic Use

Western State Hospital is one of the largest inpatient psychiatric hospitals in the country, and at one time included more than 800 beds and 2,500 employees. The amount of domestic water used can be extrapolated from the maximum number of inpatient and resident staff. Potable water use at the facility was considerable due to a combination of aging infrastructure, and the hospital-type accommodations with expanded laundry facilities and general sanitation needs.

In addition to potable water, Western State Hospital was developed to be largely self-sufficient both as a cost-savings measure but also as a form of occupational therapy which has long been a treatment staple at Western State Hospital as a way to reduce patient frustration and the need for medications and physical restraints.

While documenting historical water use patterns can be challenging Western State Hospital is a historically significant facility and we benefit from a robust body of supporting information that serves to document how water would have been used. For this project there are two primary sources of information, firstly a 1961 engineering review of the Western State Hospital water system (Dodd & Millegan) that estimated domestic flow rates from a comparison with sewage treatment capacity, and secondly numerous newspaper articles that detailed Western State Hospital's food producing prowess.

Dodd & Millegan projected a daily demand of approximately 400,000 gallons a day based on a composite population (residents, and staff) of 4,000 people using an average of 100 gallons a day. This estimate was substantiated by the sewer treatment plant records which showed a daily flow of 422,400 gallons. The estimate is additionally consistent with the Washington State Department of Health's Design Manual (DOH 331-123, June 2020), which would place domestic water demand at about 459 ac-ft/yr (**Table 7**) compared to the 448 ac-ft/yr Dodd & Millegan snapshot.

Table 7. Domestic Water Use Estimate

Category	**Units**	**Gallons per Day/Unit[3]**	**Acre-Feet/year**
Residents	800 beds	325	291.2
Employees	2,500 (mix of residential and non-residential staff)	60	168.0
Potable Water			**459.2**

During the summer the daily demand increases significantly because of irrigation and other related water demands. The 1961 estimates equate to approximately 724 acre-feet a year (448 ac-ft used over the calendar year for potable supply, and 276 ac-ft used during the irrigation season). Water use however, would have been higher prior to 1961 based on a more detailed inventory of types of water uses, and fact that farming was decreasing at Western State Hospital at that time.

Table 8 breaks out use between types of uses related to the care and processing of animals, and Table 7 details the types of irrigation-based uses associated with the facility's municipal needs.

Table 8 – Stockwater Use Estimate

Category	**Units**	**Gallons per Day/Unit[4]**	**Acre-Feet/year**
Chickens, Turkeys and Ducks	60,000 – 70,000	9 per 100 birds[5]	7.1
Pigs	800	4	3.6
Cattle	200	12	2.7
Dairy Cow (Drinking)	100	35	3.9
Dairy Operation	100 milking cows	35	3.9
General Farm Demand	Cleaning, butchering, etc.		5.0
Total			26.2

[3] Based on Table 3-2: Guide for Maximum Daily Nonresidential Water Demand hospitals use between 250 and 400 gallons per day per bed.
[4] Based on Table 3-2: Guide for Maximum Daily Nonresidential Water Demand hospitals use between 250 and 400 gallons per day per bed.
[5] How to File a Court Claim ECY 070-744 (January 2024)

Irrigation

In order to assess the extent of irrigation Aspect reviewed aerial photos from 1941, 1945, and 1957; the aerial images from 1941 and 1957 were retrieved from USGS EarthExplorer and the image from 1945 was from Pierce County's PublicGIS website. The image from Pierce County was helpful in painting a larger picture of water use but was ultimately not used to estimate water use as it was of lower quality.

Upon review of the historical aerial images, it was estimated that in 1941 as many as 255 acres may have been in some form of irrigated cultivation. Since different types of crops require different water duties, a refinement that adjusts for different crops and associated water duties is provided below. Aspect's suggested crop demand estimates are based on the USDA's Natural Resource Conservation Service Washington Irrigation Guide https://www.nrcs.usda.gov/ for the Tacoma Station.

Application efficiency is a variable in the calculation to convert crop irrigation requirement into total irrigation requirement. It is believed that most irrigation occurring at Western State Hospital in the 1940s and 1950s was likely handline or wheelline with impact sprinklers. The application efficiency range and average are shown in **Table 9** (Ecology, 2024).

Table 9 - Application Efficiency for Irrigation Methods Likely Utilized

Method	Application Efficiency Range (%)	Application Efficiency Average (%)
Sprinkler - Periodic Move (Handline)	60-85	75
Sprinkler – Side Roll (Wheelline)	60-85	75

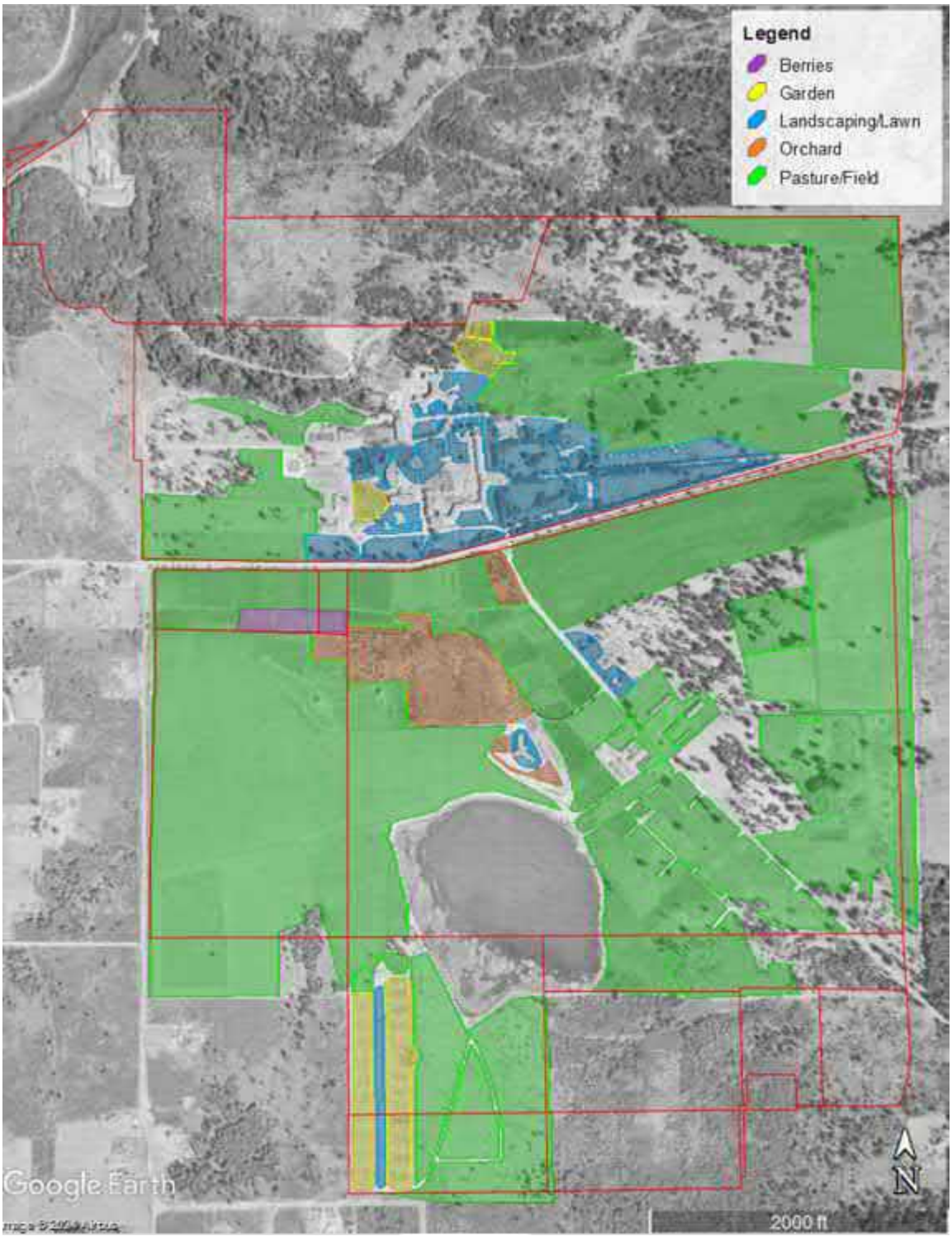
Since the irrigation occurring at Western State Hospital was being performed by staff and patients, as opposed to commercial farmers, and occurred a number of years ago, it is assumed that the application efficiency would have been less than the present-day average. For this reason, we have assumed an application efficiency of 70% for all irrigation that occurred under these water rights.

Irrigation of Western's grounds falls into several categories and have been summarized in **Table 10**.

Table 10 – Number and Type of Irrigated Acres in 1941

Approximate Acreage				Total Acres
Fields/Silage	Landscaping/Lawn	Garden/Berries	Orchard	
331.9	31.6	14.4	17.2	395.2

Figure 1 shows the irrigated acres on a 1941 aerial photo.



Fields/Silage

Fields include the property maintained for the production of cattle feed. The facility maintained numerous livestock including dairy cows and since the animals were not pastured the ability to produce silage for feed was important to making the operation economically viable. Based on

historical references (1959 News Tribune article) 260 tons of mixed grass-legume silage was produced in 1959 which would have required extensive acreage.

A total water duty for the production of grass-legume silage was developed by averaging the water demands of peas (8.86 inches) and grass (17.64 inches), for a crop irrigation requirement of 13.25 inches, as measured at the Tacoma station in the Washington Irrigation Guide (NRCS, 1985). Assuming an application efficiency of 70%, the total irrigation requirement would be 18.93 inches (1.58 feet). Based on the estimated acreage from 1941, 331.9 acres, the total fields/silage irrigation use would equal 524.5 acre-feet/yr.

Landscaping/Lawns

The hospital's grounds included lawns and the facility's extensive flower beds and other landscaping amenities. Landscaping appears to account for approximately 31.6 acres for the year estimated.

Based on a crop requirement of 20.37 inches (pasture/turf at Tacoma Station; NRCS 1992) and assuming the irrigation system has an application efficiency of 70%, the total irrigation requirement would be 29.10 inches (2.43 feet). Based on the acreage estimate for landscaping/lawns of 31.6 acres, the total landscaping/lawns irrigation use would equal 76.8 ac-ft/yr.

Gardens/Berries

Western State Hospital's operations included the cultivation of approximately 14.4 but as high as 20 acres of gardens and based on historical narratives a wide-variety of crop types were grown including berries, root crops, legumes and greens. **Table 11** lists the Washington Irrigation Guide crop irrigation requirements for examples from these categories for the Tacoma station (NRCS, 1985).

Table 11. Crop Irrigation Requirements (Tacoma Station) – NRCS 1985

Crop	Crop Irrigation Requirement (inches)
Grapes	11.26
Raspberries	23.18
Strawberries	5.05
Green Beans	7.42
Carrots	9.11
Crucifer	5.75
Cucumber	7.15
Green Onion	5.32
Peas	8.86
Potato	12.75
Radish	0.83
Spinach	2.97
Tomato	11.17
Squash	7.11
Average	**8.42**

Since the water duty for these crop types varies considerably (with greens needing less than 3 inches during their short growing season and raspberries needing over 23 inches – NRCS, 1985), we used the average crop irrigation requirement in our calculations. The average crop irrigation requirement is 8.42 inches.

Assuming a 70% application efficiency the total irrigation requirement for the gardens/berries is 12.03 inches (1.00 feet). Based on the 1941 estimate for gardens/berries of 14.4 acres, the total gardens/berries irrigation use would equal 14.4 ac-ft/yr.

Orchards

In addition to the garden area Western State Hospital also operated an orchard that produced mostly apples, but also included pears, and plums. The orchard appears to have encompassed around 17.2 acres, interfingered in amongst other plantings, but largely contained in the center of the property, north of Mud Lake.

Based on the crop irrigation requirement for apples without cover of 14.91 inches (NRCS, 1985) and assuming an application efficiency of 70%, the total irrigation requirement for the orchards would have been 21.30 inches (1.78 feet). Based on the 1941 acreage estimate for orchard of 17.2 acres, the total orchard irrigation use would equal 30.6 ac-ft/yr.

Table 12. Summary of all Irrigation Water Use Estimates

Crop	Crop Irrigation Requirement (inches)	Application Efficiency	Total Irrigation Requirement (inches)	Total Irrigation Requirement (feet)	Acres	Annual Volume (ac-ft/yr)
Fields/Silage	13.25	70%	18.93	1.58	331.9	524.5
Landscaping/ Lawns	17.64	70%	29.10	2.43	31.6	76.8
Gardens/Berries	8.42	70%	12.03	1.00	14.4	14.4
Orchards	14.91	70%	21.30	1.78	17.2	30.6
				Total Irrigation	**395.2**	**646.3**

Based on the estimates calculated above, the maximum historic use under the two groundwater claims is shown in **Table 13**.

Table 13. Historic Water Use

Type of Use	Peak Annual Use (Ac-ft/Yr)
Domestic	459.2
Stockwater	26.2
Irrigation	646.3
Total	**1,131.7**

This annual volume is consistent with the annual volume reported as being used at Western State Hospital during preparation of the report of examination in 1969 that ultimately led to ground water certificate 7025-A associated with the East Campus Well. In that report of examination, it states, “In 1968, the hospital withdrew 342,585,000 gallons (1,051 acre-feet) from Well #1 and 2.”

Based on the total use from Wells 1 and 2, and the tentative determination on the instantaneous rate as documented in **Table 13**. **Table 14** shows the breakdown in how this annual volume is split between the two claims.

Table 14. Annual Volume Tentative Determination

Well	Claim	Claimed Volume (ac-ft/yr)	Tentative Determination (ac-ft/yr)
Well No. 1	G2-014863CL	726	726
Well No. 2	G2-014864CL	430	405.7
	Total	**1,156**	**1,131.7**

Enlargement

A water right may not be enlarged through the change process; however, since there is no change proposed for the purpose of use there should be no increase over historical use.

Impairment

In analyzing impairment, Ecology must determine whether existing water rights, including instream flows established by Ecology rules[6], will be impaired by the proposed change. Accordingly, Aspect assessed whether the proposed change in the point of withdrawal had the potential to impact other water users or instream resources[7].

The depth of the E Aquifer and the presence of multiple confining units between the aquifer and surface water bodies indicate that impairment of instream flows is unlikely.

A water right change also may not be allowed to impair groundwater rights, including those in the E Aquifer. We calculated preliminary estimates of drawdown caused by withdrawing the water right using the Theis Equation (Theis, 1935) and image well theory to assess the distance at which a well using the water right might influence another water right (the radius of influence).

Using hydraulic property values for the E Aquifer estimated during post-installation pump testing by Robinson and Noble (2003; hydraulic conductivity = 4,700 feet^2/day, specific storage = 8 x 10^{-4}, aquifer thickness = 40 feet), a well pumping at maximum instantaneous flow allowed under the water right (Qi = 1,400 gallons per minute) for until the Qa is exhausted (187 days of continuous pumping) is expected to cause up to 32.7 feet of drawdown at Lakewood Well S-2 (located 1,400 ft from the new POW) and 1 foot of drawdown up to 8.4 miles from the point of withdrawal. These values likely estimate a wider radius of influence than would actually be observed, because the Theis equation does not account for leakage into the aquifer through the overlying confining unit. These values indicate that impairment due to drawdown interference is unlikely given that potentiometric head levels are approximately 200 feet above the top surface of the E Aquifer.

[6] Instream flow rules (water rights assigned to surface water bodies) for WRIA 12 were adopted in 1979, and codified under WAC 173-512.

[7] It is important to note that drawdown influence does not necessarily mean that the ability of a source to use their water right will be impaired, but instead estimates the distance from a well at which that well's influence may be observed. If two sources are located too near to each other, they may negatively impact each other's operations and ability to exercise their water right due to drawdown interference.

Several major wells have been identified as drawing water from the E Aquifer within WRIA 12 (Johnson, Savoca, and Clothier, 2011); however, given the depth of the aquifer and fact that the requested change will only result in a minor shift in the point of withdrawal, there should be no additional impacts to other water users.

Same Source

A water right may only be transferred to a new point of withdrawal within the same body of Groundwater, which per Ecology's Policy 2010 – Defining and Delineation of Water Sources are defined by the following conditions:

- Are hydraulically connected
- Share a common recharge area
- Are part of a common flow regime
- Are separated from other water sources by effective barriers to hydraulic flow

Further the requested change may not impair the ability of other water rights holders to withdraw their water rights.

Based on Aspect's review, the presence of the E Aquifer throughout WRIA 12, lack of hydraulic barriers within the aquifer, and the presence on hydraulically restrictive layers both above (D Confining Unit) and below (F Confining Unit) the aquifer throughout the WRIA indicate that the water rights should be transferrable anywhere within the areal extent of the basin as long as the new point of withdrawal taps the E Aquifer (i.e., the E Aquifer is the same body of groundwater throughout WRIA 12). Regional aquifer conditions such as the thickness and hydraulic conductivity of the E Aquifer suggest no restrictions on where a new point of withdrawal may be located, subject to local conditions and the potential for pumping interference from other points of withdrawal. The Farm Well is of similar construction to Wells 1 and 2 and is in close proximity such that existing and proposed well share the same body of groundwater.

Water Availability

Water must be physically available at the proposed point(s) of withdrawal. For water to be physically available, it must be present in quantities and quality and on a sufficiently frequent basis to provide a reasonably reliable source for the requested beneficial use or uses.

Wells 1 and 2 supplied the needs of this facility for 65 years before being replaced by a comparable new supply source known as the Farm Well. The Farm Well is currently in use and has not experienced supply limitations.

Beneficial Use

The proposed change must be for a continued beneficial use of water.

Municipal supply is considered a beneficial use of water under RCW 90.54.020(1).

Public Interest

No detriment to the public interest was identified in the investigation of this application for change. The proposed change is largely administrative and does not alter the fundamental use of the water as developed prior to the enactment of the groundwater code.

The project site is situated in Water Resource Inventory Area 12, the Clover-Chambers Creek watershed. While the watershed is largely closed to new appropriations of groundwater that could impact surface water flows there are no new impacts anticipated as a result of the change because the replacement well is located in close proximity to the original sources and the amount of water being used is not increasing.

Other Administrative Requirements

The following must be considered when evaluating a proposed water right change.

Notification to the Washington Department of Fish and Wildlife
Per RCW 90.03.280 and 77.57.020, Ecology must give notice to the Washington Department of Fish and Wildlife (WDFW) of applications to divert, withdraw, use, or store water.

WDFW was provided notice of this water right change application on March 20, 2024.

State Environmental Policy Act (SEPA)
Under chapter 197-11 WAC, a water right application is subject to a SEPA threshold determination (i.e., an evaluation of whether there will be significant adverse environmental impacts) if any of the following conditions are met:

- It is a surface water right application for more than 1 cfs, unless that project is for agricultural irrigation, in which case the threshold is increased to 50 cfs, so long as that irrigation project will not receive public subsidies;
- It is a groundwater right application for more than 2,250 gpm;
- It is an application that, in combination with other water right applications for the same project, collectively exceed the amounts above;
- It is a part of a larger proposal that is subject to SEPA for other reasons (e.g., the need to obtain other permits that are not exempt from SEPA);
- It is part of a series of exempt actions that, together, trigger the need to do a threshold determination, as defined under WAC 197-11-305.

Considering that none of the above conditions are met, the application under review is categorically exempt from a SEPA threshold determination.

Public Notice
RCW 90.03.280 requires that notice of a water right application be published once a week, for two consecutive weeks, in a newspaper of general circulation in the county or counties where the water is to be stored, diverted and used. Notice of this application was published in the Tacoma News Tribune on March 20th and 27th, 2024. No protests were received as a result of this public notice.

Conclusions

I find that in regard to the evaluation of Water Right Claim G2-014864:

- 500 gpm and 405.7 ac-ft/yr of water is valid and eligible for change.
- The proposed change will not result in an enlargement of the subject water right.
- The proposed change will not impair existing rights.
- The existing and proposed points of withdrawal draw water from the same source.
- Water is physically available at the new point of withdrawal.
- Municipal Use is a beneficial use.
- Approval of this change application will not be detrimental to the public interest.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend this request for a water right change be **APPROVED** in the amounts and within the limitations listed below and subject to the provisions listed above.

Recommended Quantities, Purpose of Use, and Project Location

The rate and quantity of water recommended are maximum limits. The water right holder may only withdraw water at a rate and quantity within the specified limits that are reasonable and beneficial:

Table 15. Recommended Project Limits and Location

Maximum Instantaneous Rate (gpm)	500
Maximum Annual Quantity (ac-ft/yr)	405.7
Purpose(s) of Use	Municipal Use
Point of Withdrawal	Farm Well - NW¼ NE¼, Section 4, Township 19 North, Range 2 E.W.M.
Place of Use	Western State Hospital, comprising the former U.S. Military Reserve in Sections 32 and 33, Township 20 North, Range 2 East. W.M.; and Government Lots 2, 3, and 4 and the North 450 feet of Government Lots 5 (East) and 5 (West) in Section 4, Township 19 North, Range 2 East. W.M. Less Roads.

Jill E. VanHulle

August 14, 2024

Report Writer *Date*

James Bush

August 14, 2024

Hydrogeologic Reviewer *Date*

Jeffrey S. Matts

August 14, 2024

Ecology Reviewer *Date*

To request ADA accommodation including materials in a format for the visually impaired, call Ecology Water Resources Program at 360-407-6872. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

References

Dodd & Millegan Consulting Engineers, 1961, Water Supply & Distribution System, Western State Hospital, Fort Steilacoom, Washington.

Johnson, K.H., M.E. Savoca, and B.C. Clothier, 2011, Numerical Simulation of the Groundwater- Flow System in the Chambers-Clover Creek Watershed and Vicinity, Pierce County, Washington: U.S. Geological Survey Scientific Investigations Report 2011-5086.

NRCS, 1985 and 1992, Washington Irrigation Guide.

Robinson & Noble, Inc., 2003, Construction and Testing of Western State Hospital Well 4.

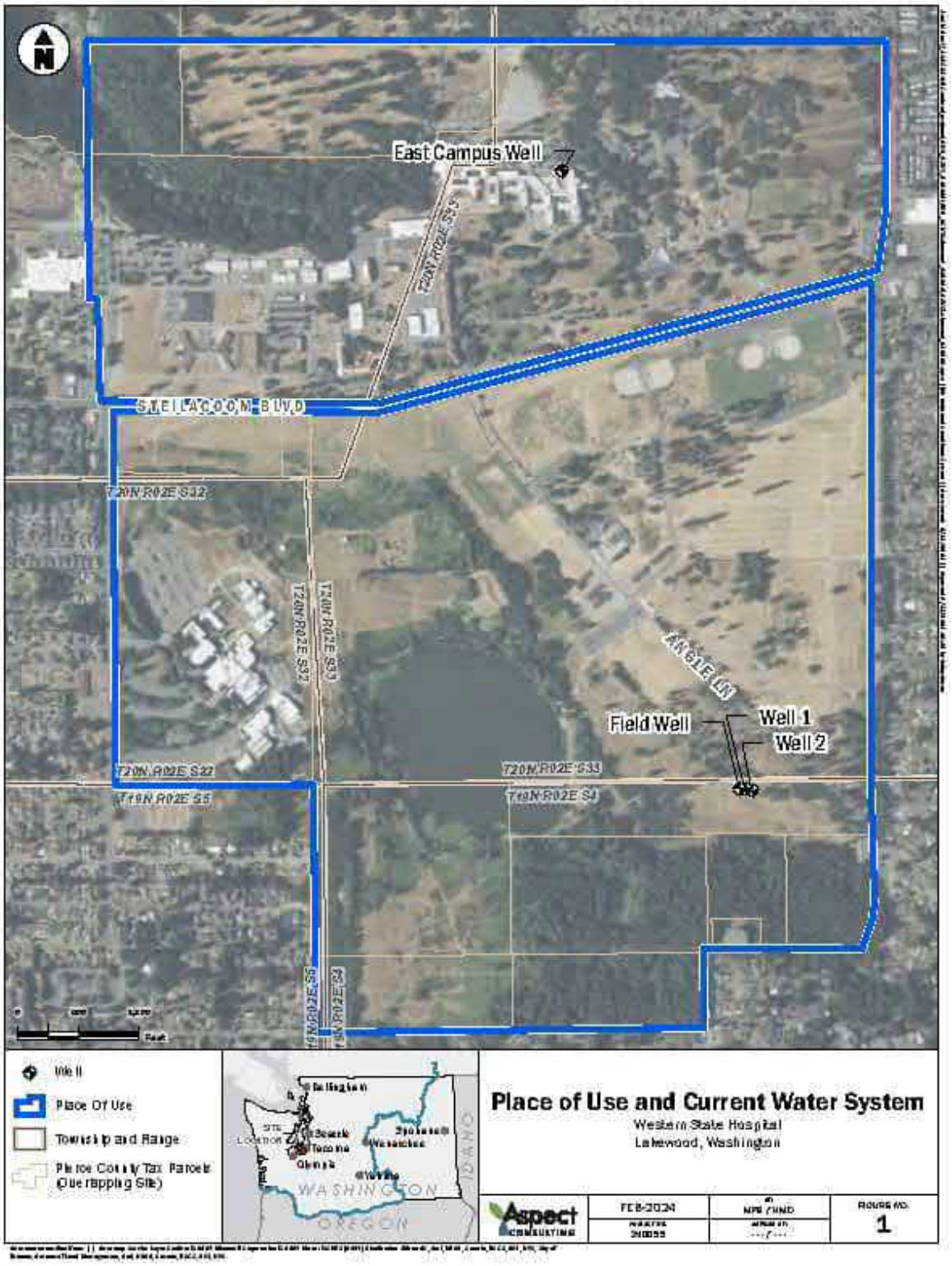
Savoca, M.E., W.B. Welch, K.H. Johnson, R.C. Lane, B.C. Clothier, and E.T. Fasser, (USGS) 2010, Hydrogeologic Framework, Groundwater Movement, and Water Budget in the Chambers-Clover Creek Watershed and Vicinity, Pierce County, Washington: U.S. Geological Survey Scientific Investigations Report 2010-5055.

Theis, C.V., 1935, The Lowering of the Piezometric Surface and the Rate and Discharge of a Well Using Ground-Water Storage, Transactions, American Geophysical Union 16:519-24.

Washington State Department of Ecology (Ecology), Updated March 2024, Determining Irrigation Efficiency and Consumptive Use, Water Resources Program Guidance. Publication 20-11-027.

Washington State Department of Ecology (Ecology), January 2024, Draft Instructions: How to File a Court Claim. Draft for Public Comment Only, ECY 070-744.

Washington State Department of Ecology (Ecology), 2007, Defining and Delineation of Water Sources, Water Resources Program Policy POL-2010.
Washington State Department of Health (Health), Revised June 2020, Water System Design Manual, DOH Pub 331-123.


East Campus Well
STEILACOOM BLVD
T20N R02E S32
T20N R02E S33
T19N R02E S5
T19N R02E S4
ANGLE LN
Field Well
Well 1
Well 2
Well
Place Of Use
Township and Range
Pierce County Tax Parcels (Overlapping Site)
Place of Use and Current Water System
Western State Hospital
Lakewood, Washington
Aspect Consulting
FEB-2024
1

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

JUN 26 72 320472

CASH ___ OTHER ___ NONE ___

1 NAME WESTERN STATE HOSPITAL

ADDRESS Fort Steilacoom, Washington

ZIP CODE 98494

2 SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: ~~Ground Water~~ (SURFACE OR ~~GROUND~~ WATER)

W.R.I.A. 12 (LEAVE BLANK)

A IF GROUND WATER, THE SOURCE IS Well No. 2

B. IF SURFACE WATER, THE SOURCE IS ___

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A QUANTITY OF WATER CLAIMED 500 Gallons per Minute (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED ~~-0- Gallons per Minute~~

B. ANNUAL QUANTITY CLAIMED 430 Acre feet (ACRE FEET PER YEAR) PRESENTLY USED ~~-0- Acre feet~~

C IF FOR IRRIGATION, ACRES CLAIMED -0- PRESENTLY IRRIGATED -0-

D TIME(S) DURING EACH YEAR WHEN WATER IS USED: January 1 thru December 31 (365 Days)

4 DATE OF FIRST PUTTING WATER TO USE MONTH ___ YEAR ~~1938(approximately)~~

5 LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 3039 FEET East AND 40 FEET South FROM THE Northwest CORNER OF SECTION 4

BEING WITHIN N.E. 1/4 of the N.W. 1/4 OF SECTION 4, T 19 N., R. 2 E. W.M. (E.OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT ___ BLOCK ___ OF ___

(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED. ~~Western State Hospital Comprising the~~ Former U.S. Military Reserve in Secs. 32 & 33, T. 20N, R. 2E. W.M.; and Government Lots 2, 3, & 4 and the North 450 Feet of Government Lots 5 (east) and 5 (west) in Sec. 4, T. 19 N. R. 2 E.W.M. Less Roads

COUNTY Pierce

7 PURPOSE(S) FOR WHICH WATER IS USED Community Domestic Supply

8 THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED. ~~Origin Unknown~~

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OF AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE

DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO

JUN 26 72 014864

DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF

X W. Connell

DATE June 23, 1972

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

W. V. Connell, Business Manager
Western State Hospital
Fort Steilacoom, Washington 98494

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL COPY

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
P O BOX 829 OLYMPIA WASHINGTON 98501

Certificate GWC 7025-A

East Campus Well

State of Washington
Department of Ecology

SUPERSEDING CERTIFICATE OF WATER RIGHT

This certificate supersedes Water Right Certificate issued on October 8, 1970 and is subject to the following provisions.

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
10/21/1968	09847	09115	G2-GWC7025

MAILING ADDRESS	SITE ADDRESS (IF DIFFERENT)
WASHINGTON DEPARTMENT OF SOCIAL AND HEALTH SERVICES 1115 S. WASHINGTON STREET-MS: 45848 PO BOX 45848 OLYMPIA, WA 98504-5848	

Quantity Authorized for Withdrawal or Diversion

WITHDRAWAL OR DIVERSION RATE	UNITS	ANNUAL QUANTITY (AF/YR)
900	GPM	726

Purpose

PURPOSE	WITHDRAWAL OR DIVERSION RATE			ANNUAL QUANTITY (AF/YR)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON-ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	
Municipal Supply Purposes	900		GPM	726		01/01 - 12/31

REMARKS: This Water Right Certificate is being re-issued at the request of the water right holder for a conforming document. In addition, a ministerial error is being corrected with regard to the well location.

IRRIGATED ACRES		PUBLIC WATER SYSTEM INFORMATION	
ADDITIVE	NON-ADDITIVE	WATER SYSTEM ID	CONNECTIONS
		95101	

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
PIERCE	N/A	N/A	12-Clover/Chambers

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWP	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
EAST CAMPUS WELL	0220321022	ACM787	20N	02E	33	NENW	47.1812	-122.5621

Place of Use

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

The place of use of this water right is the service area described in the most recent Water System Plan for the Western State Hospital Water System approved by the Washington State Department of Health. RCW 90.03.386 may have the effect of revising the place of use of this water right if the criteria in section RCW 90.03.386(2) are met.

Provisions

This certificate of water right is specifically subject to relinquishment for non-use of water as provided in Chapter 90.14 RCW.

Given under my hand and the seal of this office at Olympia, Washington, this 3rd day of August 2022.

DEPARTMENT OF ECOLOGY
STATE OF WASHINGTON

Laura Watson, Director
Department of Ecology

Michael J. Gallagher

DATA REVIEW
OK/TH

Michael J. Gallagher, Section Manager
Southwest Regional Office
Water Resources Program

To request ADA accommodation including materials in a format for the visually impaired, call Ecology Water Resources Program at 360-407-6872. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

IN THE MATTER OF AN ADMINISTRATIVE ORDER AGAINST WA DOI/Western State Hospital	)))	ORDER NO. DE 02WRSR-3828

To:

WA DOI/Western State Hospital
9601 Steilacoom Boulevard SW
Tacoma, WA 98498

This is an Administrative Order requiring WA DOI/Western State Hospital to comply with RCW 90.03.360 by taking certain actions which are described below. RCW 43.21A.064 authorizes the Department of Ecology (Ecology) to issue Administrative Orders in order to more effectively manage the state's resources.

Ecology recently completed rulemaking of Chapter 173-173 WAC which outlines new metering installation, maintenance, and reporting requirements for water users in this state. For these reasons, and in accordance with RCW 90.03.360, IT IS ORDERED that WA DOI/Western State Hospital take the following actions:

1. An approved measuring device shall be installed and maintained for the source diversion(s) and withdrawal(s) for the following water right claim(s), permit(s) and certificate(s) No. G2-*09847CWRIS.

   Such measuring devices shall be in accordance with the rule "Requirements for Measuring and Reporting Water Use", Chapter 173-173 WAC. The rule above describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition Ecology for modifications to some of the requirements. Summary information on installation, operation and maintenance requirements is enclosed.

2. Water use data shall be recorded weekly and shall be submitted annually to Ecology by January 31 of each calendar year.

3. At a minimum, the following information shall be included with each submittal of water use data on a form prescribed by Ecology:

   - water right holder name, mailing address and daytime phone number,
   - contact name and phone number, if different than water right holder,
   - WRIA,
   - parcel number for place of use of water rights (except for public water systems),
   - Permit, Certificate or Claim number(s),
   - source name,
   - annual quantity of diversion or withdrawal ("Qa"),
   - maximum rate of diversion or withdrawal during the entire year ("Qi"),
   - date (if available) of maximum rate of diversion or withdrawal,

- monthly meter readings (note: Ecology is requiring submittal of monthly meter readings and maximum rate of diversion or withdrawal for each month to collect seasonal information for water resource planning, management and compliance),
- maximum rate of diversion or withdrawal during each month,
- type of meter,
- last calibration or inspection date, and
- period of use.

4. Within sixty (60) days of the date of this Order, notify Ecology, in writing; whether metering is occurring for the claim(s), permits(s) and certificate(s) referenced in this Order and if each of the data elements listed in Section 3 above is currently being collected. If these data are not being collected, include in the notification to Ecology when that data collection will begin.

Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the records of water use that are kept to meet the above conditions, and to inspect at reasonable times any measuring device used to meet the above conditions.

Failure to comply with this Order may result in the issuance of civil penalties or other actions, whether administrative or judicial, to enforce the terms of this Order.

This Order may be appealed pursuant to RCW Chapter 43.21B. The person to whom this Order is issued, if he or she wishes to file an appeal, must file the appeal with the Pollution Control Hearings Board **within thirty (30) days of receipt of this Order**. Send the appeal to: Pollution Control Hearings Board, P.O. Box 40903, Olympia, Washington 98504-0903. At the same time, a copy of the appeal **must** be sent to: Department of Ecology, Water Resources Appeals Coordinator, P.O. Box 47600, Olympia, Washington 98504-7600. All others receiving notice of this Order, who wish to file an appeal, must file the appeal with the Pollution Control Hearings Board within **thirty (30) days of the date the Order was mailed.** The appeal must be filed with both the Pollution Control Hearings Board and the Department of Ecology, in the same manner as described above.

DATED on March 29, 2002, at Olympia, Washington.

J. Mike Harris, Section Manager
Water Resources Program

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

March 29, 2002

CERTIFIED MAIL

WA DOI/Western State Hospital
9601 Steilacoom Boulevard SW
Tacoma, WA 98498

Dear Sir or Madam:

Re: G2-*09847CWRIS

Enclosed is Order No. DE 02WRSR-3828 requiring source water metering and reporting. It describes the recording frequency, data parameters, and reporting deadline for your water right(s).

The Department of Ecology (Ecology) is preparing forms to assist water right holders in submitting the required data. In the future, you will be able to submit data over the Internet at Ecology's website. In the interim, water use data should be submitted by hand on Ecology-approved forms. A sample form to submit water use data is enclosed for your use. Ecology is also working on a metering compliance form to assist you in responding to the terms of Condition 4 in the enclosed Order. This form will be sent to you.

The state Legislature is providing $3.4 million in grants to assist water users in purchasing water measuring devices. Ecology has grant funds for the cost of purchase, installation, and initial calibration of water measuring devices. Some funds are also available for telemetry equipment for water measurement data. Maximum cost share by Ecology ranges from 50 percent to 85 percent depending on total eligible costs. The maximum eligible project cost is $50,000. Applications for funds must be postmarked within ninety (90) days of the postmark of this letter.

If you have any questions concerning the content of the document or funding applications, please call or write Vicki Cline at telephone/address (360) 407-0278, Southwest Regional Office, Department of Ecology, PO Box 47775, Olympia, WA 98504-7775. The enclosed Order may be appealed. The appeal procedures are described in the Order. A copy of the updated water measurement rule is available on Ecology's web site at http://www.ecy.wa.gov/programs/wr/measuring/measuringhome.html

Sincerely,

J. Mike Harris, Section Manager
Water Resources Program

JMH:VC:le(enforce/order)
Enclosure(s): Order No. DE 02WRSR-3828
Requirements for Measuring & Reporting Water Use

cc: Darlene Treece, WR/HQ
CELP

S. F. No. 7361—(Rev. 6-70).

CERTIFICATE RECORD NO. 15, PAGE NO. 7025-A

STATE OF WASHINGTON, COUNTY OF Pierce

CERTIFICATE OF GROUND WATER RIGHT

(Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology thereunder.)

THIS IS TO CERTIFY *That* WASHINGTON STATE DEPARTMENT OF INSTITUTIONS *of* Olympia, Washington, *has made proof to the satisfaction of the Department of Ecology of a right to the use of the public ground waters of the State of Washington from* a well *located within* Thomas M. Chambers D.L.C. No. 43 within former U. S. Military Reserve of *Sec.* 33, *Twp.* 20 *N., R.* 2 E. *W.M.,* *for the purpose(s) of* community domestic supply *under and specifically subject to provisions contained in Ground Water Permit No.* 9115 *issued by the Department of Ecology and that said right to the use of said ground waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the Department of Ecology and entered of record in Volume* 15 *at page* 7025-A *that the priority of the right hereby confirmed dates from* October 21, 1968; *that the quantity of ground water under the right hereby confirmed for the aforesaid purposes, is limited to an amount actually beneficially used for said purposes, and shall not exceed* 900 gallons per minute; 726 acre-feet per year, continuously during entire year for community domestic supply.

A description of the lands to which such ground water right is appurtenant is as follows:

Western State Hospital, comprising the former U. S. Military Reserve in Secs. 32 and 33, T. 20 N., R. 4 E.W.M.; and Government Lots 2, 3 and 4 and the north 450 feet of Government Lots 5 (East) and 5 (West) in Sec. 4, T. 19 N., R. 4 E.W.M.; LESS roads.

The right to use of water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390 and 90.44.020.

This certificate of ground water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and seal of this office at Olympia, Washington, this 8th *day of* October, *19* 70.

JOHN A. BIGGS, *Director*
Department of Ecology

Engineering Data
OK

by Glen H. Fiedler
Glen H. Fiedler

S. F. No. 7265—OS.

RECEIVED

Proof of Appropriation of Water

Application No. 9847 Permit No. 9115

1. Name of Permittee Department of Institutions, Western State Hospital
c/o Division of Engineering and Architecture
2. Postoffice address (include zip code) 219 General Administration Bldg., Olympia, Wash. 98501
3. Actual source of appropriation Well
4. For what purpose or purposes is water used? Community Domestic Supply
5. Give date of beginning of construction of hydraulic system:
6. Give date of completion of construction of this work, including water distribution system
September 16, 1969
7. Give date when water was completely applied to permitted use May 15, 1970
8. If used for irrigation:
Give number of acres described in permit
Give number of acres actually irrigated
9. If used for power: HP actually developed
10. LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS USED:

Former United States Military reserve in Sections 32 and 33, T20N, R4E WM and Government Lots 2,3 and 4 and the North 450 feet of Government Lots 5(East) and 5 (West) in Section 4, T19N, R4EWM, Less Roads.

11. If source is a well, is an access port or airline now installed? Yes
12. During what months is water used? Continously
13. Does map filed with your application show correctly the location of well(s) or point(s) of diversion for withdrawal of water, and area of land where water is used? Yes
14. If the dimensions, location, or type of hydraulic system and structure do not correspond to those described in your permit, state what changes have been made, giving dimensions, etc.
15. Actual measured discharge or diversion of permanent system: 900 (gpm)

(Sign certification on reverse side)

O.K. for Cert - issue like Permit - B.L.

STATE OF WASHINGTON,
County of Pierce } ss.

I, W V Connell, being first duly sworn, depose and say that I have read the above and foregoing proof of appropriation; that I know the contents thereof; and that the facts therein stated are true.

IN WITNESS WHEREOF, I have hereunto set my hand this 20th day of August, 19 70

W V Connell

Subscribed and sworn to before me this 20th day of August, 19 70

Notary Public.

Notice of Completion of Construction

ENGINEERING & ARCHITECTURAL DIV. RECEIVED OCT 17 1969

I, Department of Institutions, the holder of Ground Water Permit No. 9115 issued by the State Supervisor of Water Resources of the State of Washington for the appropriation of ground waters withdrawn from a well (Well, tunnel or infiltration trench), in accordance with the tenor of such permit and the limitations endorsed therein by the State Supervisor of Water Resources, have completed the construction of the works described therein, on the 25th day of September, 1969

If construction has been abandoned: Date _____ Reason _____

Remarks: Drilling and construction is completed; but Well is not productive due to electrical problems.

IN WITNESS WHEREOF, I have hereunto set my hand this 10th day of October, 1969

W. V. Connell
(Signature of applicant)

Fort Steilacoom, Washington
(Present address)

S. P. No. 378—OS—1-63.

O.K. for C.C. post — send P.A. form — BEL

S. P. No. 7284—OS—7-68.

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT

Permit to Appropriate Public Ground Waters of the State of Washington

Book No. 19 of Ground Water Permits, on page 9115 under Application No. 9867

WASHINGTON STATE DEPARTMENT OF INSTITUTIONS

of Olympia, Washington

is hereby granted a permit to appropriate the following described public ground waters of the State of Washington, subject to existing rights, and to the limitations and provisions set out herein.

Priority date of this permit is October 21, 1968

Source of the proposed ground water appropriation is a well

within _____ area, _____ sub-area

_____ zone. Name or number of works is _____

Quantity of water appropriated shall be limited to the amount which can be beneficially applied and not to exceed 900 gallons per minute; 726 acre-feet per year, to be used for the following purposes: community domestic supply

as more definitely set out below.

Location of the well, tunnel, or infiltration trench is Approximately 1100 feet south and 1140 feet west of north quarter corner of Sec. 33

being within Thomas M. Chambers D.L.C. No. 43 within former U.S. Military Reserve of Sec. 33, T. 20 N., R. 2 E.W.M.
county of Pierce

Use, or uses to which water is to be applied:

For municipal supply: _____ gallons per minute; _____ acre-feet per year, to supply _____

For irrigation: _____ gallons per minute; _____ acre-feet per year, for the irrigation of _____ acres.

For miscellaneous uses: 900 gallons per minute; 726 acre-feet per year, for community domestic supply continuously during entire year.

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Western State Hospital, comprising the former U.S. Military Reserve in Secs. 32 and 33, T. 20 N., R. 4 E.W.M.; and Government Lots 2, 3 and 4 and the north 450 feet of Government Lots 5 (East) and 5 (West) in Sec. 4, T. 19 N., R. 4 E.W.M.; LESS roads.

5-14-69
Copy

DESCRIPTION OF WORKS FROM WHICH WATER IS TO BE WITHDRAWN

The well will be drilled (Dug or drilled) and have a diameter of 16 inches, and depth of 320 feet.

Description of tunnel or infiltration trench:

SPECIAL LIMITATIONS AND PROVISIONS: The installation of an access port as described in Ground Water Bulletin No. 1 shall be required prior to issuance of final Certificate of Water Right.

As provided under RCW 43.21.130, 90.03.360, 90.44.250 and 90.44.020, a meter meter shall be installed in this system to measure the total amount of the withdrawal.

This permit shall be subject to cancellation should the permittee fail to comply with the development schedule contained herein and/or fail to give notice to the Division of Water Management on forms provided by said office documenting such compliance.

Construction work shall begin on or before Started

and shall thereafter be prosecuted with reasonable diligence and completed on or before May 1, 1970

and complete application of water to proposed use shall be made on or before May 1, 1971

Given under my hand and the seal of this office at Olympia, Washington, this 14th day of May, 19 69

Glen L. Fiddler

Assistant Director
Division of Water Management
Department of Water Resources

Report of Examination on Ground Water

Received date October 21, 1968 Date of exam. December 20, 1968 Appl. No. 9842

Name Washington State Dept. of Institution Address Olympia, Wash.

Type of works a well Dimensions 16" x 500'

Progress of works Well drilled and capped (project started)

Quantity applied for 900 g.p.m. - acre-feet per year

Legal sub Thomas J. Chambers D.L.C. No. 43 within former U. S. Military Reserve Sec. 33 Twp. 20 N., Rge. 2 E.W.M. County Pierce

Use Community domestic supply

Irrigation-acreage: Present Planned None Feasible

Municipal: Population as of

Industrial

Time pump will be operated Continuously

Other water rights appurtenant to this land See below

Proximity to existing works, springs, wells, or streams Ground Water Certificate No. 5540 (Lakewood Water District), northeast 1350 feet.

Area Sub-area Zone

RECOMMENDATIONS

Approved for 900 g.p.m. 726 acre-feet per year, subject to existing water rights. (1 acre-foot 325,850 gallons.)

The installation of an access port as described in attached Ground Water Bulletin No. 1 shall be required prior to issuance of final certificate of water right. The applicant may, for his own convenience, wish to install an air-line and gage in addition to the access port.

The subject well is applicant's Well #3. Wells 1 and 2 have been in use for considerable time. As there are no rights with this office attached to Wells 1 and 2, applicant's rights, if any, to withdraw water through these wells are unknown.

The hospital has accomodations for 1794 patients and 1039 employees with no planned expansion of any consequence. During 1968 the hospital withdrew 342,585,000 gallons (1051 acre-feet) from Wells #1 and 2. Allowing for a 10% increase in water useage, applicant's projected needs are 1156 acre-feet per year.

Applicants have Ground Water Permit No. 8531 on the same well as the subject application. This permit was issued for 500 gallons per minute, 430 acre-feet per year, for community domestic supply for the hospital. Therefore, this application is approved for 726 acre-feet per year, which, combined with permit No. 8531, will allow applicants 1400 gallons per minute, 1156 acre-feet per year from this well.

As provided under RCW 43.21.130, 90.03.360, 90.44.250 and 90.44.020, a master meter shall be installed in this system to measure the total amount of the withdrawal.

Signed at Olympia, Washington
this 2 day of April, 1969.

Dean Wood

DEAN WOOD, Water Resources Inspector
Division of Water Management

9947

WASHINGTON STATE DEPARTMENT of INSTITUTIONS

Olympia Washington October 21, 1948

a well

Thomas M. Chambers D.L.C. No. 43, within former U.S. Military reserve

39 20 2 E. Pierce

900 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

continuously community domestic supply

15th November 48

GLEN H. TYDEMAN

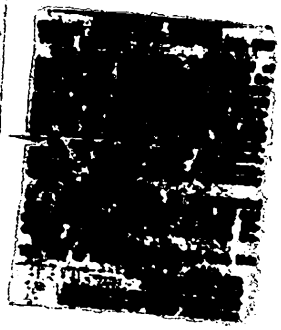
Form 119

AFFIDAVIT OF PUBLICATION

9847

STATE OF WASHINGTON
County of Pierce } ss.

Kathryn Edwards, being first duly sworn, on oath, says: that she is the chief clerk of THE TACOMA NEWS TRIBUNE, a daily newspaper, published in Tacoma, Pierce County, Washington, and of general circulation in said State, and having a daily circulation of over 102,000 copies. That said newspaper is now and at all of the times hereinafter mentioned was a legal newspaper as defined by the laws of this State, duly approved by the Superior Court of Pierce County, Washington.



That the advertisement, of which the attached is a printed copy as it was published in the regular issues (and not in supplement form) of said newspaper, was published once each week for 2 consecutive weeks commencing on the 25th day of November, 19 68, and ending on the 2nd day of December, 19 68, both dates inclusive.

That the full amount of the fee charged for said publication was the sum of $ 15.00

Kathryn Edwards

Subscribed and sworn to before me on this seventh day of February, 19 69

Notary Public in and for the State of Washington,
Residing at Tacoma, Pierce County, Washington.

ENGINEERING & ARCHITECTURE DIV.
RECEIVED
FEB 12 1969
FILE NO.
SUP. INT.
TO CNTL.

S. P. No. 70-S-C6-8-67.

ENGINEERING & ARCHITECTURE DIV.
RECEIVED
OCT 1 1 1968

FILE________NO.________
SUP.________INT.________
TO________WIT.________

$10.00 examination fee should accompany each application.

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
Division of Water Management

PRIORITY
Date 10-21-68
Time 2 P.M.
Accepted [illegible]

APPLICATION FOR A PERMIT

To Appropriate Public Ground Waters
OF THE STATE OF WASHINGTON

Application No. G. W. 9847

Washington State Department of Institutions,
I, ~~St[illegible] Hospital, [illegible]~~ions
(Name of applicant)

of Olympia, Washington 98501
(Complete post office address)

do hereby make application for a permit to appropriate the following described public ground waters of the State of Washington, subject to existing rights. This application is made under the provisions of Chap. 263 of the Session Laws of 1945, and amendments thereto of the State of Washington and subject to the rules and regulations of the Department of Water Resources.

1. *The proposed appropriation will be from* a well (Well, tunnel, infiltration trench)

located at Western State Hospital (Give approximate distance and direction from nearest city or town)

*Area*________ (Leave blank) *Sub-area*________ (Leave blank)

*Zone*________ (Leave blank)

*Applicant's name or number of well or other works, if any*________

2. *The quantity of water which applicant intends to withdraw for beneficial use is* 900 *gallons per minute;* ________ *acre feet per year.*

3. *The use or uses to which water is to be applied* Community Domestic Supply
(Domestic supply, irrigation, municipal, manufacturing, industrial use, etc.)

4. *The time during which water will be required each year* continuously

5. *Location of well or other works for withdrawal of water: In county of* Pierce

(a) Approx. 1100 feet South & 1140 ~~2300~~ feet West ~~East of Northeast~~ N 1/4 corner of Sec. 33
(Give distance and bearing from nearest corner of section or legal subdivision)

being within the Thomas M. Chambers D.L.C. No. 43 (Give smallest legal subdivision) (*of Sec.* 33, *Twp.* 20 *N., Rge.* 2E (E. or W.)
within former U.S. Military Reserve)

or *(b) If within limits of recorded platted property, town or city: Lot*________, *Block*________,

*of*________ (Give name of plat or addition) ________ (If within town or city, give name)

(c) Show this location on accompanying section plat. Other adequate maps or drawings will be acceptable.

Same well as G.W. Per. # 8531
E.

6. DESCRIPTION OF WORKS:

(a) Well will be drilled (Dug or drilled) and have a diameter of 16 inches and an estimated depth of 500 feet.

(b) Tunnels or trenches to be described: (Attach additional sheets if needed for full description.)

(c) Distribution system to be described:

(d) If pumps are to be used, give size and type:

900 GPM Deep Well Turbine

(e) Give capacity and type of motor or engine to be used:

Electric

(f) If the location of the well, tunnel, or other works is less than one-fourth mile from a natural stream or stream channel, give the distance to the nearest point on each of such channels and the difference in elevation between the stream bed and the ground surface at the source of development:

(g) Ownership of each existing well or other works from which ground water is withdrawn within a radius of one-quarter mile and the distance and direction from well or other works being reported herein:

(Name)	(Direction)	(Distance)
(Name)	(Direction)	(Distance)
(Name)	(Direction)	(Distance)

SUPPLY THE FOLLOWING INFORMATION ACCORDING TO USE PROPOSED:

7. For Municipal Supply: To supply the city, town, or community of ....., in the county of ....., having a present population of ....., and an estimated population of ....., in 19....

8. For Irrigation: Number of acres to be irrigated ..... acres.

9. *Legal Description of Property on which water is to be used for all purposes other than municipal supply:*

(Copy legal description from deed)
(If more space is required, attach separate sheet)

Western State Hospital, comprising the former U. S. Military Reserve in Secs. 32 & 33 T. 20 N., R. 4E. W.M.; AND Gov't. Lots 2, 3 & 4 and the North 450 Feet of Gov't Lots 5 (East) and 5 (West) in Sec. 4, T. 19 N., R. 4E. W. M.; LESS Roads.

(On accompanying plat show location of the existing wells or works)

10. *What interest do you have in the above described property?* Owner

(Owner, lessee, contract buyer, etc.)

11. *Do you have any other water rights appurtenant to the above described property?* Yes

If so, from what source? Institution owned wells. and Claim #1531

12. *Construction work will begin on or before* May 1, 1968

13. *Construction work will be completed on or before* July 1, 1968

14. *Water will be put to complete beneficial use on or before* September 1, 1968

X Sidney B Coleman
(Signature of applicant)

15. *Name and address of owner of land on which well or works are located:*

Department of Institutions (Name) Olympia, Washington (Address)

X Sidney B Coleman
(Signature of legal landowner)

Signed in the presence of us as witnesses:

(Name) (Address of witness)

(Name) (Address of witness)

STATE OF WASHINGTON,
COUNTY OF THURSTON. } *ss.*

This is to certify that I have examined the foregoing application, together with the accompanying maps and data, and return the same for correction or completion as follows:

In order to retain its priority, this application must be returned to the Department of Water Resources, with corrections, on or before , 19

WITNESS my hand this *day of* , 19

Division of Water Management.
Department of Water Resources.

Frederick R. Mott, Engineering Assist.
Dept. of General Admin.
Div. of Engineering and Arch[illegible].
218 General Admin.
Olympia, Wash.

5-1-71 pd

Progress Sheet—Ground Water Application

State of Washington
Western State Hospital, Dept. ~~of Institutions~~
Olympia

NAME Washington 98501 Assigned to

G. W. APPLI. NO. 9847 PERMIT NO. 9115 CERT. NO. 7025 A

AMENDED CANCELLED

Application received October 21, 1968 Initial $10.00 fee received October 30, 1968
Statement of additional examination fee $ Sent Received
Application returned for completion or correction Received

TEMPORARY PERMIT: Approved by Issued

PUBLICATION:
O.K.'d by [illegible] Date 11-7-68 Notice sent 11-15-68
Protests
Filed
Affidavit received and checked 2-10-69 Time expired 1-1-69
Amended notice sent Affidavit received
Time expires

DEPT. OF GAME REPORT

EXAMINATION Made 12-20-68 by [illegible]
O.K.'d for permit 5-12-69 by [illegible]
Statement of permit fee sent 4-4-69 Amount $ 20.00 Received 5-12-69

E.E.J. PERMIT NO. 9115 ISSUED 5-14-69

BEGINNING OF CONSTRUCTION: Notice sent Started Filed
Extension fee $ Extended to
Extended to

WELL DRILLER'S REPORT: Sent 5-14-69 Filed Log in file GWC 6928A

COMPLETION OF CONSTRUCTION: Notice sent 5-14-69 Filed 10-23-69
$2.00 extension fee Extended to
To

PROOF OF APPROPRIATION: Sent 10-23-69 Filed
$2.00 extension fee Extended to

Statement of certificate fee sent $ Received 9-29-70

CERTIFICATE OF GROUND WATER RIGHT NO. 7025 A ISSUED 10-8-70

STATE PRINTING PLANT OLYMPIA, WASHINGTON

Certificate GWC 7602-A

East Campus Well

File NR G2-GWC07602
WR Doc ID 2218863

State of Washington
Department of Ecology

THIRD SUPERSEDING CERTIFICATE OF WATER RIGHT

This certificate supersedes Superseding Water Right Certificate issued on February 29, 1972 and is subject to the following provisions.

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
03/07/1968	09303	08531	G2-GWC07602

MAILING ADDRESS	SITE ADDRESS (IF DIFFERENT)
WASHINGTON DEPARTMENT OF SOCIAL AND HEALTH SERVICES 1115 S. WASHINGTON STREET-MS: 45848 PO BOX 45848 OLYMPIA, WA 98504-5848	

Quantity Authorized for Withdrawal or Diversion

WITHDRAWAL OR DIVERSION RATE	UNITS	ANNUAL QUANTITY (AF/YR)
500	GPM	430

Purpose

PURPOSE	WITHDRAWAL OR DIVERSION RATE			ANNUAL QUANTITY (AF/YR)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON-ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	
Municipal Supply Purposes	500		GPM	430		01/01 - 12/31

REMARKS: This Water Right Certificate is being re-issued to correct ministerial errors on the Second Superseding Certificate regarding the well location. The Second Superseding Certificate was issued at the request of the water right holder for a conforming document.

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
PIERCE	N/A	N/A	12-Clover/Chambers

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWP	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
EAST CAMPUS WELL	0220321022	ACM787	20N	02E	33	NENW	47.1812	-122.5621

Place of Use

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

The place of use of this water right is the service area described in the most recent Water System Plan for the Western State Hospital Water System approved by the Washington State Department of Health. RCW 90.03.386 may have the effect of revising the place of use of this water right if the criteria in section RCW 90.03.386(2) are met.

Provisions

This certificate of water right is specifically subject to relinquishment for non-use of water as provided in Chapter 90.14 RCW.

Given under my hand and the seal of this office at Olympia, Washington, this 7th day of September 2022.

DEPARTMENT OF ECOLOGY
STATE OF WASHINGTON

Laura Watson, Director
Department of Ecology

Michael J. Gallagher

DATA REVIEW
OK/TH

Michael J. Gallagher, Section Manager
Southwest Regional Office
Water Resources Program

To request ADA accommodation including materials in a format for the visually impaired, call Ecology Water Resources Program at 360-407-6872. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341

State of Washington
Department of Ecology

SECOND SUPERSEDING CERTIFICATE OF WATER RIGHT

This certificate supersedes Superseding Water Right Certificate issued on February 29, 1972 and is subject to the following provisions.

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
03/07/1968	09303	08531	G2-GWC7602

MAILING ADDRESS	SITE ADDRESS (IF DIFFERENT)
WASHINGTON DEPARTMENT OF SOCIAL AND HEALTH SERVICES 1115 S. WASHINGTON STREET-MS: 45848 PO BOX 45848 OLYMPIA, WA 98504-5848	

Quantity Authorized for Withdrawal or Diversion

WITHDRAWAL OR DIVERSION RATE	UNITS	ANNUAL QUANTITY (AF/YR)
500	GPM	430

Purpose

PURPOSE	WITHDRAWAL OR DIVERSION RATE			ANNUAL QUANTITY (AF/YR)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON-ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	
Municipal Supply Purposes	500		GPM	430		01/01 - 12/31

REMARKS: This Water Right Certificate is being re-issued at the request of the water right holder for a conforming document. In addition, a ministerial error is being corrected with regard to the well location.

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
PIERCE	N/A	N/A	12-Clover/Chambers

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWP	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
~~WELL 1~~	~~6021340470~~	~~ABA845~~	~~18N~~	~~04E~~	~~20~~	~~NWNW~~	~~47.0370300000~~	~~-122.3353600000~~
East Campus Well	0220321022	ACM787	20N	02E	33	NENW	47.1812	-122.5621

Western State Hospital

Place of Use

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

The place of use of this water right is the service area described in the most recent Water System Plan for the ~~Southwood Water System~~ approved by the Washington State Department of Health. RCW 90.03.386 may have the effect of revising the place of use of this water right if the criteria in section RCW 90.03.386(2) are met.

Provisions

This certificate of water right is specifically subject to relinquishment for non-use of water as provided in Chapter 90.14 RCW.

Given under my hand and the seal of this office at Olympia, Washington, this 3rd day of August 2022.

DEPARTMENT OF ECOLOGY
STATE OF WASHINGTON

Laura Watson, Director
Department of Ecology

Michael J. Gallagher

DATA REVIEW
OK/TH

Michael J. Gallagher, Section Manager
Southwest Regional Office
Water Resources Program

To request ADA accommodation including materials in a format for the visually impaired, call Ecology Water Resources Program at 360-407-6872. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341

S. F. No. 7361—(Rev. 6-70).

CERTIFICATE RECORD NO. 16, PAGE NO. 7602-A

STATE OF WASHINGTON, COUNTY OF Pierce

CERTIFICATE OF GROUND WATER RIGHT

THIS CERTIFICATE SUPERSEDES GROUND WATER CERTIFICATE NO. 6928-A, ISSUED ON AUGUST 12, 1970.

(Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology thereunder.)

THIS IS TO CERTIFY *That* WASHINGTON STATE DEPARTMENT OF SOCIAL and HEALTH SERVICES, WESTERN STATE HOSPITAL

of Olympia, Washington, *has made proof to the satisfaction of the Department of Ecology of a right to the use of the public ground waters of the State of Washington from* a well *located within* Thomas M. Chambers D.L.C. No. 43, within former U. S. Military Reserve of *Sec.* 33, *Twp.* 20 *N., R.* 2 E. *W.M.,* *for the purpose(s) of* community domestic supply *under and specifically subject to provisions contained in Ground Water Permit No.* 8531 *issued by the Department of Ecology and that said right to the use of said ground waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the Department of Ecology and entered of record in Volume* 16 *at page* 7602-A; *that the priority of the right hereby confirmed dates from* March 7, 1968; *that the quantity of ground water under the right hereby confirmed for the aforesaid purposes, is limited to an amount actually beneficially used for said purposes, and shall not exceed* 500 gallons per minute, 430 acre-feet per year, during entire year, for community domestic supply, for estimated 2833 persons each year at Western State Hospital.

A description of the lands to which such ground water right is appurtenant is as follows:

Western State Hospital, comprising the former U. S. Military Reserve in Secs. 32 and 33, T. 20 N., R. 2 E.W.M.; AND Government Lots 2, 3 and 4 and the north 450 feet of Government Lots 5 (east) and 5 (west) in Sec. 4, T. 19 N., R. 2 E.W.M.; LESS roads.

The right to use of water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390 and 90.44.020.

This certificate of ground water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and seal of this office at Olympia, Washington, this 29th *day of* February, *19* 72.

JOHN A. BIGGS, *Director*
Department of Ecology

Engineering Data
OK

by R. Jerry Bollen

S. F. No. 7361—(Rev. 6-70).

CERTIFICATE RECORD NO. 14, PAGE NO. 6928-A

STATE OF WASHINGTON, COUNTY OF Pierce

CERTIFICATE OF GROUND WATER RIGHT

(Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology thereunder.)

THIS IS TO CERTIFY *That* STATE OF WASHINGTON, WESTERN STATE HOSPITAL, DEPARTMENT OF INSTITUTIONS *of* Olympia, Washington, *has made proof to the satisfaction of the Department of Ecology of a right to the use of the public ground waters of the State of Washington from* a well *located within* Thomas M. Chambers D.L.C. No. 43, within former U.S. Military Reserve of Sec. 33, *Twp.* 20 *N., R.* 2 E. *W.M.,* *for the purpose(s) of* community domestic supply *under and specifically subject to provisions contained in Ground Water Permit No.* 8531 *issued by the Department of Ecology and that said right to the use of said ground waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the Department of Ecology and entered of record in Volume* 14 *at page* 6928-A; *that the priority of the right hereby confirmed dates from* March 7, 1968; *that the quantity of ground water under the right hereby confirmed for the aforesaid purposes, is limited to an amount actually beneficially used for said purposes, and shall not exceed* 500 gallons per minute, 430 acre-feet per year, during entire year, for community domestic supply, for estimated 2833 persons each year at Western State Hospital.

A description of the lands to which such ground water right is appurtenant is as follows:

Western State Hospital, comprising the former U. S. Military Reserve in Secs. 32 and 33, T. 20 N., R. 4 E.W.M.; AND Government Lots 2, 3 and 4 and the north 450 feet of Government Lots 5 (east) and 5 (west) in Sec. 4, T. 19 N., R. 4 E.W.M.; LESS roads.

The right to use of water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390 and 90.44.020.

This certificate of ground water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and seal of this office at Olympia, Washington, this 12th *day of* August, *19* 70.

JOHN A. BIGGS, *Director*
Department of Ecology

Engineering Data
OK

by Glen H. Fiedler
Glen H. Fiedler

S. F. No. 7355—OS.

Proof of Appropriation of Water

Application No. 9847 Permit No. 8531

1. Name of Permittee Western State Hospital, Division of Institutions
2. Postoffice address (include zip code) Ft Steilacoom, Washington 98494
3. Actual source of appropriation A well
4. For what purpose or purposes is water used? Community Domestic Supply
5. Give date of beginning of construction of hydraulic system: Feb 24, 69
6. Give date of completion of construction of this work, including water distribution system May 12, 70
7. Give date when water was completely applied to permitted use Oct 1, 69
8. If used for irrigation:

   Give number of acres described in permit

   Give number of acres actually irrigated
9. If used for power: HP actually developed
10. LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS USED:

    Western State Hospital, comprising the former US Military Reserve in Section 32 & 33, Township 20N, Range 4 East W.M. and Government Lots 2, 3 and 4 and the North 450 feet of Government Lots 5 (East) and 5 (West) in Section 4, Township 19 North, Range 4 East W.M., Less roads.

11. If source is a well, is an access port or airline now installed? 1/4" Copper Air line
12. During what months is water used? 12 months
13. Does map filed with your application show correctly the location of well(s) or point(s) of diversion for withdrawal of water, and area of land where water is used? Yes
14. If the dimensions, location, or type of hydraulic system and structure do not correspond to those described in your permit, state what changes have been made, giving dimensions, etc.
15. Actual measured discharge or diversion of permanent system: 780 (gpm or cfs).

(Sign certification on reverse side)

OK for cert. issue like permit
7/23/70

STATE OF WASHINGTON,
County of Pierce } ss.

I, W. V. Connell, Business Manager, being first duly sworn, depose and say that I have read the above and foregoing proof of appropriation; that I know the contents thereof; and that the facts therein stated are true.

IN WITNESS WHEREOF, I have hereunto set my hand this 16th day of July, 1970.

W. V. Connell

Subscribed and sworn to before me this 16th day of July, 1970.

Leslie Arbuckle
Notary Public.

S. F. No. 7354—OS—6-67.

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT

Permit to Appropriate Public Ground Waters of the State of Washington

Book No. 18 of Ground Water Permits, on page 8531 under Application No. 9303

STATE OF WASHINGTON, WESTERN STATE HOSPITAL, DEPARTMENT OF INSTITUTIONS

of Olympia, Washington

is hereby granted a permit to appropriate the following described public ground waters of the State of Washington, subject to existing rights, and to the limitations and provisions set out herein.

Priority date of this permit is March 7, 1968

Source of the proposed ground water appropriation is a well

within ..... area, ... sub-area

..... zone. Name or number of works is .....

Quantity of water appropriated shall be limited to the amount which can be beneficially applied and not to exceed 500 gallons per minute; 430 acre-feet per year, to be used for the following purposes: community domestic supply

as more definitely set out below.

Location of the well, tunnel, or infiltration trench is 1,100 feet south and 1,140 feet west from north quarter corner of Sec. 33

being within Thomas M. Chambers D.L.C. No. 43, within former U.S. Military Reserve of Sec. 33, T. 20 N., R. 2 E.W.M.
county of Pierce

Use, or uses to which water is to be applied:

For municipal supply: ..... gallons per minute; ..... acre-feet per year, to supply .....

For irrigation: ..... gallons per minute; ..... acre-feet per year, for the irrigation of ..... acres.

For miscellaneous uses: 500 gallons per minute; 430 acre-feet per year, for community domestic supply for estimated 2833 persons each year at Western State Hospital continuously during entire year.

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Western State Hospital, comprising the former U.S. Military Reserve in Secs. 32 and 33, T. 20 N., R. 2 E.W.M.; AND Gov't. Lots 2, 3 and 4 and the north 450 feet of Gov't Lots 5 (east) and 5 (west) in Sec. 4, T. 19 N., R. 2 E.W.M.; LESS roads.

(2) gh 2-1-72

(2) gh 2-1-72

DESCRIPTION OF WORKS FROM WHICH WATER IS TO BE WITHDRAWN

The well will be drilled and have a diameter of 16 inches, and depth of 500 feet.
(Dug or drilled)

Description of tunnel or infiltration trench:

Please read carefully provisions below)

Particular specifications required by the Department of Water Resources for the purpose of preventing waste of public waters: 1)The installation of an access port as described in attached Ground Water Bulletin No. 1 shall be required prior to issuance of final Certificate of Water Right. 2) As provided under RCW 43.21.130, 90.03.360, 90.44.250 and 90.44.020, a master meter shall be installed in this system to measure the total amount of the withdrawal.

Construction work shall begin on or before June 1, 1969

and shall thereafter be prosecuted with reasonable diligence and completed on or before

June 1, 1970

and complete application of water to proposed use shall be made on or before

June 1, 1971

Given under my hand and the seal of this office at Olympia, Washington, this 10th day of June, 1968

Glen H. Ludlow

Assistant Director
Division of Water Management
Department of Water Resources

Rep of Examination on Gr id Water

Received date March 7, 1968 Date of exam. May 2, 1968 Appli. No. 9303

Name State of Washington Western State Hospital Department of Institutions Address Olympia, Washington 98501

Type of works a well Dimensions 16" x 500'

Progress of works Not started

Quantity applied for 500 g.p.m. acre-feet per year

Legal sub. / Sec. 33 Twp. 20 N. Rge. 2 E. County Pierce
Thomas M. Chambers D.L.C. No. 43, within former U.S. Military Reserve

Use Community domestic supply for Western State Hospital

Irrigation-acreage: Present Planned - Feasible

Municipal: Population as of

Industrial

Time pump will be operated Continuously

Other water rights appurtenant to this land None recorded

Proximity to existing works, springs, wells, or streams Ground Water Certificate No. 5540 (Lakewood Water District), northeast 1350 feet. There are no other recorded ground water rights within ½ mile of applicant's proposed well.

Area Sub-area Zone

RECOMMENDATIONS

Approved for 500 g.p.m. 430 acre-feet per year, subject to existing water rights. (1 acre-foot 325,850 gallons.)

The installation of an access port as described in attached Ground Water Bulletin No. 1 shall be required prior to issuance of final Certificate of Water Right. The applicant may, for his own convenience, wish to install an air-line and gage in addition to the access port.

Use of the waters to be appropriated under this application will be for a public water supply. State Board of Health rules require every owner of a public water supply to obtain written approval from the State Director of Health prior to any new construction or alterations of a public water supply. The applicant is advised to contact the Washington State Department of Health, 304 Public Health Building, Olympia, with regard to the need for compliance.

The annual quantity is based on estimated maximum requirements for the capacity of the Hospital as follows:

1794 patients @ 200 gallons per capita per day	402 acre-feet per year
160 resident employees @ 100 gallons per capita per day	18 " " " "
879 non-resident employees @ 15 gallons per capita per working day	10 " " " "
	430 acre-feet per year

(over)

As provided under RCW 43.21.130, 90.03.360, 90.44.250 and 90.44.020, a master meter shall be installed in this system to measure the total amount of the withdrawal.

Signed at Olympia, Washington
this 15 day of May, 1968

Dean Wood

DEAN WOOD, Water Resources Inspector
Division of Water Management

Form

AFFIDAVIT OF PUBLICATION

STATE OF WASHINGTON
County of Pierce } *ss.*

..... Ida F. Medley ....., *being first duly sworn, on oath, says: that he is the* ..... Chief Clerk ....*of THE TACOMA NEWS TRIBUNE, a daily newspaper published in Tacoma, Pierce County, Washington, and of general circulation in said State, and having a daily circulation of over* 99,000 *copies. That said newspaper is now and at all of the times hereinafter mentioned was a legal newspaper as defined by the laws of this State, duly approved by the Superior Court of Pierce County, Washington.*

That the advertisement, of which the attached is a printed copy as it was published in the regular issues (and not in supplement form) of said newspaper, was published once each week for .... 2 ..... *consecutive weeks commencing on the* .. 25th ... *day of* ... March ., *19* 68 ..., *and ending on the* .. 1st .... *day of* .. April ...., *19* 68 ..., *both dates inclusive.*

That the full amount of the fee charged for said publication was the sum of $17.98 .....

..... Ida F. Medley ...

Subscribed and sworn to before me on this .... 10th .....
day of ... April ....., *19* 68 ....

Elizabeth J. Benson
.....
Notary Public in and for the State of Washington, Residing at Tacoma, Pierce County, Washington.
Puyallup

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
OLYMPIA
NOTICE OF GROUND WATER
RIGHT APPLICATION NO. 9303
TAKE NOTICE:
That STATE OF WASHINGTON, WESTERN STATE HOSPITAL, DEPARTMENT OF INSTITUTIONS of Olympia, Washington on March 7, 1968 filed application for permit to withdraw public ground waters through a well situated within Thomas M. Chambers D.L.C. No. 43, within former U.S. Military Reserve of Section 33, Township 20 N., Range 2 E. W.M., in Pierce County, in the amount of 500 gallons per minute, subject to existing rights continuously, each year for the purpose of community domestic supply for Western State Hospital.
Any objections must be accompanied by a two dollar ($2.00) recording fee and filed with the Department of Water Resources within thirty (30) days from April 1, 1968.
Witness my hand and official seal this 18 day of March, 1968.
GLEN H. FIEDLER
Assistant Director
Division of Water Management
Department of Water Resources

S. F. No. 370-B—OS—6-67.

$10.00 examination fee should accompany each application.

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
Division of Water Management

PRIORITY
Date 3-7-68
Time 4:15 PM
Accepted WRE

APPLICATION FOR A PERMIT

To Appropriate Public Ground Waters
OF THE STATE OF WASHINGTON

Application No. G. W. 9303

I, State of Washington, Western State Hospital, Department of Institutions
(Name of applicant)

of Olympia, Washington 98501
(Complete post office address)

do hereby make application for a permit to appropriate the following described public ground waters of the State of Washington, subject to existing rights. This application is made under the provisions of Chap. 263 of the Session Laws of 1945, and amendments thereto of the State of Washington and subject to the rules and regulations of the Department of Water Resources.

1. *The proposed appropriation will be from* well
(Well, tunnel, infiltration trench)

located at Western State Hospital
(Give approximate distance and direction from nearest city or town)

Area ..... (Leave blank) *Sub-area* ..... (Leave blank)

Zone ..... (Leave blank)

Applicant's name or number of well or other works, if any well #1 & #2

2. *The quantity of water which applicant intends to withdraw for beneficial use is* 500 *gallons per minute;* 400 *acre feet per year.*

3. *The use or uses to which water is to be applied* community domestic supply for Western State Hospital
(Domestic supply, irrigation, municipal, manufacturing, industrial use, etc.)

4. *The time during which water will be required each year* continuously

5. *Location of well or other works for withdrawal of water: In county of* Pierce

(a) ~~Approx.~~ 1,100 feet south and ~~1,500~~ 1140 feet ~~east of~~ west from north quarter corner of Sec. 33
(Give distance and bearing from nearest corner of section or legal subdivision)

being within the ..... (Give smallest legal subdivision) of Sec. 33, Twp. 20 N., Rge. 2E (E. or W.)
Thomas M. Chambers D.L.C. No. 43, within former U.S. Military Reserve

or (b) *If within limits of recorded platted property, town or city: Lot* ....., *Block* .....,

of ..... (Give name of plat or addition) ..... (If within town or city, give name)

(c) *Show this location on accompanying section plat. Other adequate maps or drawings will be acceptable.*

6. DESCRIPTION OF WORKS:

(a) Well will be **drilled** *(Dug or drilled) and have a diameter of* **16** *inches and an estimated depth of* **500** *feet.*

(b) Tunnels or trenches to be described: (Attach additional sheets if needed for full description.)

(c) Distribution system to be described:

(d) If pumps are to be used, give size and type:

500 g.p.m. deep well turbine

(e) Give capacity and type of motor or engine to be used:

Electric

(f) If the location of the well, tunnel, or other works is less than one-fourth mile from a natural stream or stream channel, give the distance to the nearest point on each of such channels and the difference in elevation between the stream bed and the ground surface at the source of development:

(g) Ownership of each existing well or other works from which ground water is withdrawn within a radius of one-quarter mile and the distance and direction from well or other works being reported herein:

(Name)	(Direction)	(Distance)
(Name)	(Direction)	(Distance)
(Name)	(Direction)	(Distance)

SUPPLY THE FOLLOWING INFORMATION ACCORDING TO USE PROPOSED:

7. *For Municipal Supply: To supply the city, town, or community of ....., in the county of ....., having a present population of ....., and an estimated population of ....., in 19....*

8. *For Irrigation: Number of acres to be irrigated ..... acres.*

9. *Legal Description of Property on which water is to be used for all purposes other than municipal supply:*

(Copy legal description from deed)
(If more space is required, attach separate sheet)

~~Western State Hospital Campus~~

Western State Hospital, comprising the former U.S. Military Reserve in Secs. 32 and 33, T. 20 N., R. 2 E.W.M.; and Govt Lots 2, 3 and 4 and the north 430 feet of Govt. Lots 5(east) and 5(west) in Sec. 4, T. 19 N., R. 2 E.W.M.; LESS roads

(On accompanying plat show location of the existing wells or works) BW 3/4/68

10. *What interest do you have in the above described property?* Owner

(Owner, lessee, contract buyer, etc.)

11. *Do you have any other water rights appurtenant to the above described property?* Yes

If so, from what source? Institution owned wells.

12. *Construction work will begin on or before* May 1, 1968

13. *Construction work will be completed on or before* July 1, 1968

14. *Water will be put to complete beneficial use on or before* September 1, 1968

Sidney Coleman
(Signature of applicant) 3/1/68

15. *Name and address of owner of land on which well or works are located:*

Department of Institutions
(Name)

Olympia, Washington
(Address)

Sidney Coleman
(Signature of legal landowner)

Signed in the presence of us as witnesses:

Judith Selman
(Name)

Olympia, Washington
(Address of witness)

Evelyn Barry
(Name)

Olympia, Washington
(Address of witness)

STATE OF WASHINGTON,
COUNTY OF THURSTON. } *ss.*

This is to certify that I have examined the foregoing application, together with the accompanying maps and data, and return the same for correction or completion as follows:

In order to retain its priority, this application must be returned to the Department of Water Resources, with corrections, on or before ....., 19.....

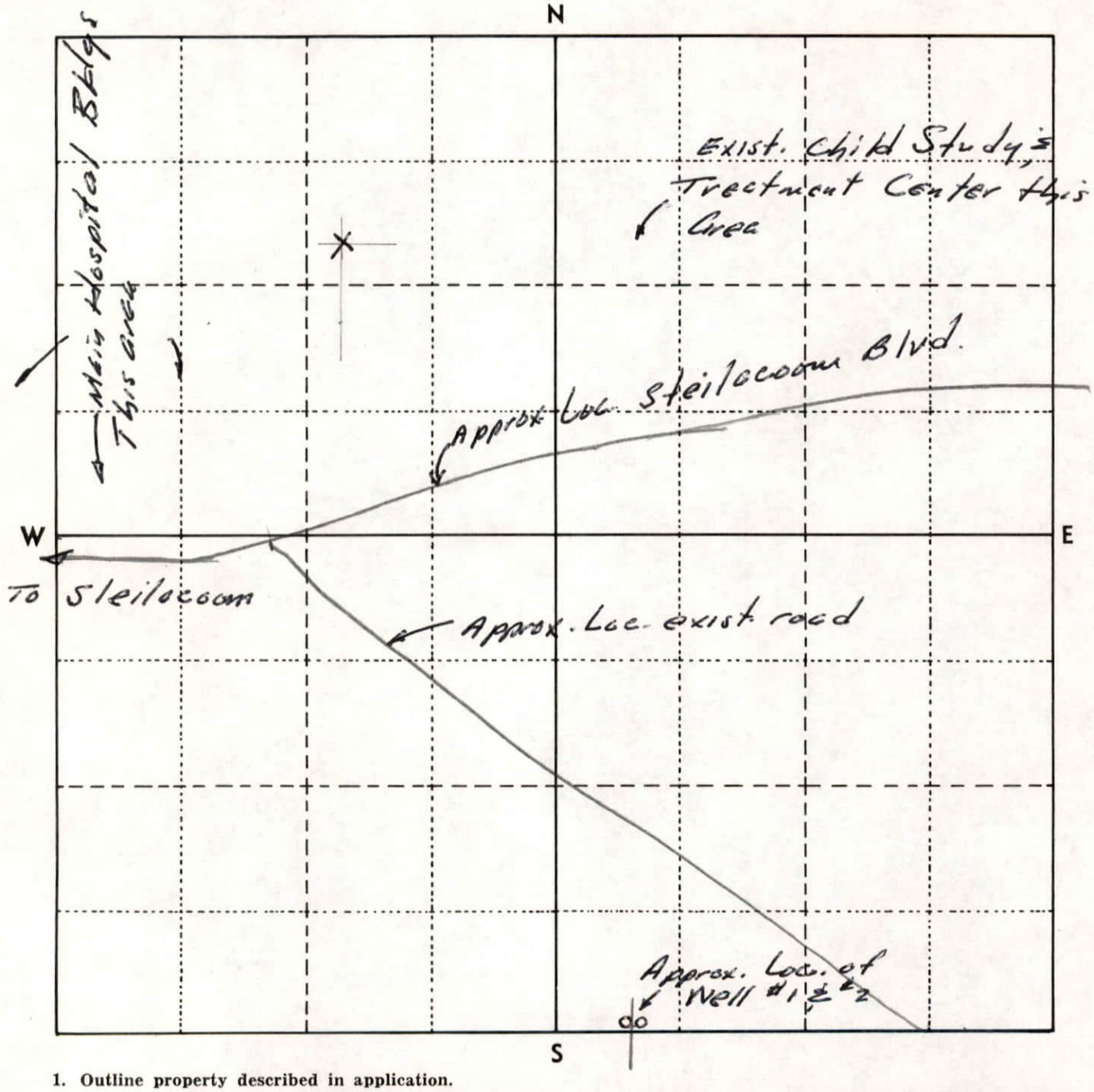
WITNESS my hand this ..... *day of* ....., 19.....

Division of Water Management.
Department of Water Resources.

S. F. No. 1854-A—OS

SECTION PLAT

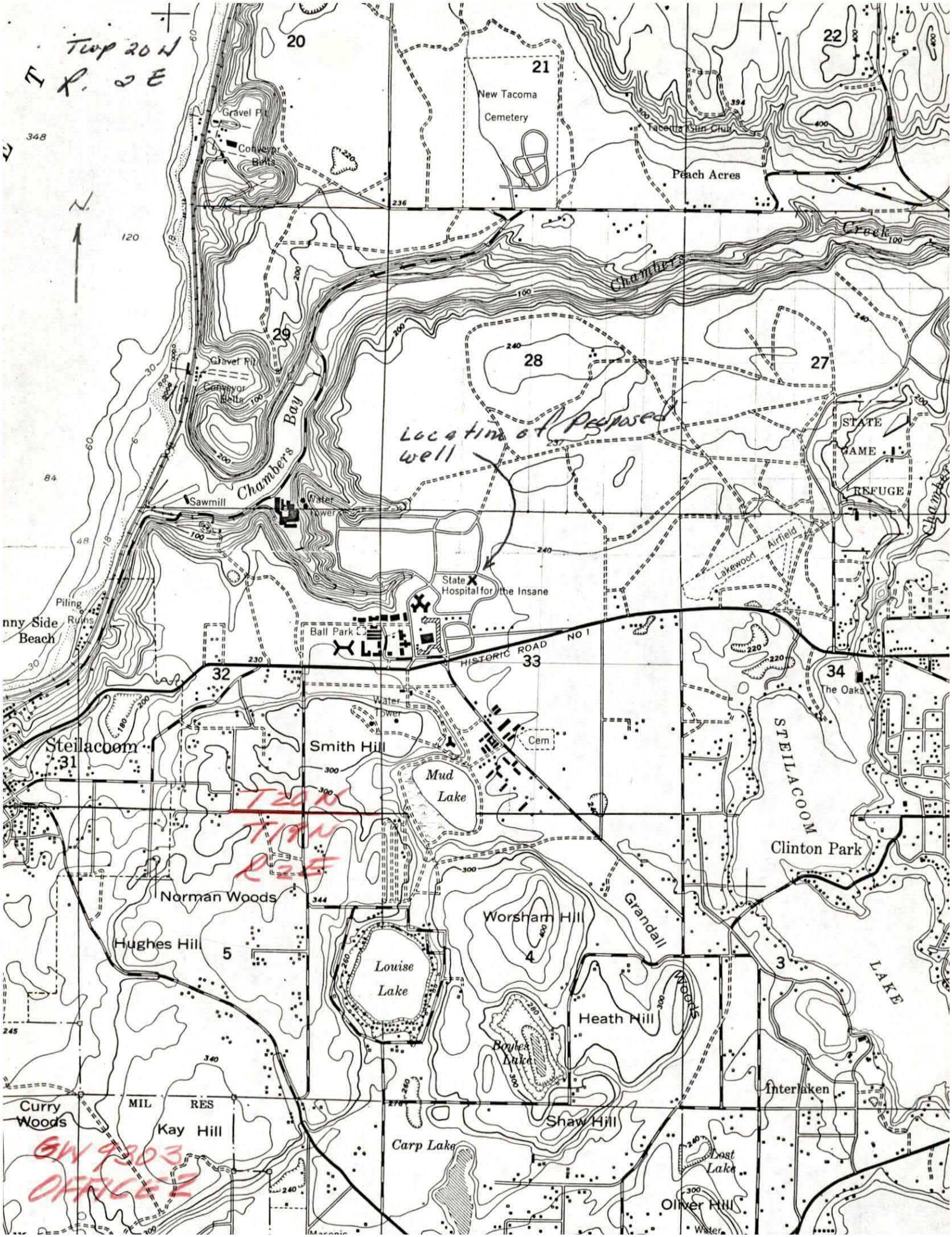
Sec. 33 Twp. 29 N. R. 21 E



1. Outline property described in application.
2. Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source). For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile.
3. Indicate traveling directions from nearest town.

OFFICE 3 Scale: 1 inch = 800 feet (each small square = 10 acres)

9303


Twp 20 N
R. 2 E
20
21
22
New Tacoma
Cemetery
Gravel Pit
Conveyor Belts
Tacoma Gun Club
Peach Acres
Chambers Creek
29
28
27
Gravel Pit
Conveyor Belts
Chambers Bay
Location of Proposed well
STATE GAME REFUGE
Sawmill
Water Tower
Lakewood Airfield
State Hospital for the Insane
Piling Ruins
Ball Park
HISTORIC ROAD NO 1
32
33
34
The Oaks
Water Tower
Steilacoom
31
Smith Hill
Cem
Mud Lake
STEILACOOM
Clinton Park
T20N
T19N
R2E
Norman Woods
Worsham Hill
Grandall
Hughes Hill
5
4
3
Louise Lake
Heath Hill
Boyles Lake
LAKE
Curry Woods
MIL RES
Kay Hill
Carp Lake
Shaw Hill
Interlaken
Lost Lake
Oliver Hill
GW 9203
OFFICE 2

Attn. Robert A. Strecker
1 Senior Engineer
Dept. Gen. Admin.
Div. of Engrg. & Architecture
Olympia.
Phone 5490
Send correspondence to ↑

6-1-70 ✓
pd.

Progress Sheet—Ground Water Application

State of Washington, Western State Hospital
Department of Institutions
Olympia,

NAME Washington 98501 Assigned to Superseding # 7602-A

G. W. APPLI. NO. 9303 PERMIT NO. 8531 CERT. NO. 6928 A
(Contract No. 67-590 AB)
Western State Hospital

AMENDED CANCELLED

Application received March 7, 1968 Initial $10.00 fee received March 15, 1968
Statement of additional examination fee $ Sent Received
Application returned for completion or correction Received

TEMPORARY PERMIT: Approved by Issued

PUBLICATION:
O.K.'d by [signature] Date 3/18/68 Notice sent 3-18-68 P
Protests
Filed
Affidavit received and checked 4-15-68 Time expired 5-1-68
Amended notice sent Affidavit received
Time expires

DEPT. OF GAME REPORT

EXAMINATION Made 5-2-68 by [signature]
O.K.'d for permit 6-6-68 by WRL
Statement of permit fee sent 5-15-68 Amount $ 20.00 Received 6-6-68
X Ref.

PERMIT NO. 8531 ISSUED 6-10-68

BEGINNING OF CONSTRUCTION: Notice sent 6-11-68 Filed 7-26-68
Extension fee $ Extended to
Extended to

WELL DRILLER'S REPORT: Sent 6-11-68 Filed 12-20-68

COMPLETION OF CONSTRUCTION: Notice sent 8-1-68 Filed 7-9-70
$2.00 extension fee Extended to
To

PROOF OF APPROPRIATION: Sent 7-9-70 Filed 7-20-70
$2.00 extension fee Extended to

Statement of certificate fee sent $ Received

CERTIFICATE OF GROUND WATER RIGHT NO. 6928 A ISSUED 8-12-70

Superseding Cert. # 7602-A 2-29-72

STATE PRINTING PLANT OLYMPIA, WASHINGTON

Appendix J

Wellhead Protection Plan

APPENDIX J | WELLHEAD PROTECTION PROGRAM

INTRODUCTION

A wellhead protection program (WHPP) is a proactive and ongoing effort of a water purveyor to protect the health of its customers by preventing contamination of the groundwater it supplies for drinking water. Section 1428 of the 1986 Amendments to the Federal Safe Drinking Water Act (SDWA) mandates that each state develop a WHPP. In Washington State, the Department of Health (DOH) is the lead agency for the development and administration of the state's WHPP. All federally defined Group A public water systems that use groundwater as their source are required to implement a WHPP. All required elements of a local WHPP must be documented and included in either the Water System Plan (applicable to Western State Hospital) or Small Water System Management Program (not applicable). The state mandate for wellhead protection and the required elements of a WHPP are contained in Washington Administrative Code (WAC) 246-290-135, Source Protection. The minimum requirements of a WHPP for water systems in Washington State that rely on groundwater are as follows:

- A completed susceptibility assessment of each water source.
- Delineation of wellhead protection areas for each water source with the 6-month, 1-, 5-, and 10-year time of travel boundaries marked using DOH or U.S. Environmental Protection Agency (EPA) guidance for delineation.
- An inventory of known and potential contaminant sources located within the defined wellhead protection areas. This inventory list shall be updated every 2 years.
- Documentation of the purveyor's notification to all owners/operators of known and potential sources of groundwater contamination within the defined wellhead protection areas.
- Documentation of the purveyor's notification to regulatory agencies and local governments of the defined boundaries of the wellhead protection areas and the findings of the contaminant source inventory.
- A contingency plan to ensure that customers have an adequate supply of water in the event that contamination causes a temporary or permanent loss of the system's principal source of supply.
- Documentation of the purveyor's coordination with local emergency spill responders (including police, fire, and health departments), including notification of wellhead protection area boundaries, and results of the susceptibility assessment, inventory findings, and contingency plan.

RECENT PROGRAM ACTIVITIES

The Western State Hospital (WSH) does not have an established WHPP. This appendix outlines the WHPP adopted by WSH to protect the health of its patients and employees by preventing the contamination of groundwater.

SUSCEPTIBILITY ASSESSMENT

In 1994, DOH developed the Susceptibility Assessment Survey Form for water purveyors to complete to determine a drinking water source's potential for contamination. The results of the susceptibility assessment may provide monitoring waivers that allow reduced source water quality monitoring.

Based on the results of WSH's most recent susceptibility assessment, DOH assigned a susceptibility rating for each source. The three susceptibility ratings are low, moderate, and high. DOH assigned a high susceptibility rating to the East Campus Well (S02), and a low susceptibility rating to the Farm Well (S05). The sources were granted a susceptibility waiver that allowed WSH to avoid monitoring of dioxin, endothall, glyphosate, diquat, and insecticides.

DELINEATION OF WELLHEAD PROTECTION AREAS

A wellhead protection area is the surface and subsurface area surrounding a well, well field, or spring through which contaminants are likely to pass and eventually be transported into the drinking water system. This is the area around the source that must be managed to protect the water supply from contamination. Establishing or delineating the boundaries of the wellhead protection area for each source is most commonly accomplished using the estimated time of travel rates of groundwater.

Wellhead Protection Area Zones

The first component of a wellhead protection area is the sanitary control area required by WAC 246-290-135. This protective area should already be tightly controlled by the purveyor to minimize direct contamination at the wellhead. The minimum sanitary control area for a well shall be a radius of 100 feet around the wellhead and 200 feet around springs. The construction, storage, disposal, or application of known or potential contaminants is prohibited within this area, unless permitted by DOH and the water purveyor.

Wellhead protection areas are based on 6-month, 1-year, 5-year, and 10-year time of travel zones. For example, a 1-year time of travel zone represents an area around the well or well field in which contaminants could reach the well within 1 year. Each zone has different management strategies based on the urgency of response and characteristics of risks to public health posed by contaminants within the zones. An additional zone, called the buffer zone, also may be established to provide an area of added protection outside the 10-year time of travel zone for the wellhead protection area.

Delineation Methods

There are several delineation methods that can be used to define wellhead protection areas, but the simplest approach is the Calculated Fixed Radius (CFR) method. This method requires the least amount of technical data and is typically used for the initial delineation to identify immediate threats to water quality. Data input includes the annual volume pumped by the well, the open interval or length of the well screen, aquifer porosity, and the desired travel time

(typically 6-month, 1-year, 5-year, and 10-year). The Time of Travel (TOT) data calculated from the CFR method is used to create circular boundaries around each of the wells or well fields representing the hypothetical distance that a contaminant will travel for the given length of time.

The major drawback of the CFR method is that groundwater rarely behaves this simply; therefore, additional study of the aquifer in question is recommended to determine more accurate protection zones. Other more complex (and probably more accurate) delineation methods utilize analytical models, hydrogeologic mapping, and computer flow models. WSH's wellhead protection TOT zones were based on the CFR method and modified based on recommendations by a licensed hydrogeologist after review of geologic and hydrologic characteristics of major topographic and hydraulic characteristics identified on maps of the area. The East Campus Well is located onsite near WSH's East Campus Wards, Building 29, and an adjacent parking lot. The Farm Well is located off campus, approximately ¼ mile south of WSH, on property owned by the City of Lakewood. The wellhead protection area boundaries, based on TOT calculations for each of WSH's active water sources, are shown in **Figure J-1**.

Delineation Results

WSH utilized the CFR method and annual water rights quantity to develop the wellhead protection area boundaries. **Table 1** presents data for each of WSH's active well sources and the results of the CFR computations. The wellhead protection area boundaries for the 6-month, 1-year, 5-year, and 10-year time of travel computations are presented in **Figure J-1**.

Table 1

Well Data and CFR Values

Description	East Campus Well	Farm Well
Data		
Source No.	S02	S05
Section, Township, Range	33, 20, 2	4, 19, 2
Year Constructed	1968	2003
Ground Elevation (ft)	235	235
Well Depth (ft)	337	560
Depth to Top of Screen or Perforations (ft)	314	486
Depth to Bottom of Screen or Perforations (ft)	337	560
Water Bearing Interval or Length of Screen (ft)	23	50
Static Water Depth (ft)	135	71
2023 Pumping Rate (gpm)	135	1,000
Annual Water Right (gallons)	7,917,640	368,740,453
Aquifer Porosity (estimated)	0.22	0.22
Calculated Fixed Radius (CFR) Values		
6-Month Time of Travel (ft)	182	845
1-Year Time of Travel (ft)	258	1,194
5-Year Time of Travel (ft)	577	2,671
10-Year Time of Travel (ft)	816	3,777

Delineation Update Requirements

DOH recommends that water systems upgrade their initial delineation using a more sophisticated groundwater flow model approach within 5 years following the initial delineation. In addition, wellhead protection area boundaries should be reviewed and revised when new wells are brought online or when there is a change in the annual volume pumped from a well. DOH recommends re-evaluation of the wellhead protection area boundaries during the WSP updates, which occurs on a 10-year schedule. As described in the CIP in **Chapter 9** of the WSH WSP, WSH plans to update the delineation of the wellhead protection areas using a groundwater flow model approach as recommended by DOH.

INVENTORY OF POTENTIAL CONTAMINANT SOURCES

An essential element of wellhead protection is an inventory of all potential sources of groundwater contamination throughout delineated wellhead protection areas. The purpose of the inventory is to identify past, present, and proposed activities that may pose a threat to the source of water supply (i.e., the aquifer).

Inventory Approach

The toxics cleanup site database maintained by the Washington State Department of Ecology https://apps.ecology.wa.gov/neighborhood and the EPA listing of contaminated sites

https://map22.epa.gov/cimc/ was reviewed for former and current listed contaminated sites. Aerial images of the East Campus Well's and Farm Well's wellhead protection areas were surveyed during its susceptibility assessment for large yards and agricultural areas that could be sources of fertilizer, yard chemicals, and pet/farm animal waste pollution to groundwater.

Inventory Findings

The Washington State Department of Ecology and EPA inventory review revealed no potential sources of contamination located with the East Campus wellhead protection areas (WHPAs) and one former contaminated site that has been listed as cleaned up requiring no further action in the Farm Well WHPA. The Farm Well site is on the Fort Steilacoom Park grounds, and there is a low risk of area-wide contamination from application of fertilizers or pesticides on the park grounds. The recent expansion of Building 28 has encroached into the sanitary control area for the East Campus Well and the adjacent parking lot and access road poses some risk within the various TOT areas. However, the East Campus Well is offline due to PFAS contamination and will likely be relocated to an area with appropriate sanitary control in the future.

Other potential sources of contamination that are not specifically shown in **Figure J-1** are discussed in this section.

Hazardous Spills on Highways – Vehicle accidents along Steilacoom Boulevard SW could result in spills of gasoline or other transported hazardous materials that would threaten the aquifer of the East Campus and Farm Wells. A request for collision data from WSDOT for 2015 to 2023 revealed no hazardous spills along Steilacoom Boulevard NW in the TOT zones. Although no accidents involving hazardous materials have been reported, spills are always a concern given the wells' proximity to Steilacoom Boulevard.

Pesticide and Herbicide Use along Roads – Pesticides and herbicides are typically applied along roads and highways by Pierce County and WSDOT, respectively. Although the chemicals in pesticides and herbicides are a potential source of contamination to the WSH's water sources, proper application will most likely avoid contaminating the groundwater.

Septic Systems – Septic systems for wastewater disposal and treatment are found in areas near WSH that are not served by WSH's sewage collection system. These on-site sewage disposal systems, which typically consist of a septic tank and drain-field, may pose a threat to WSH's groundwater sources. The ability to remove pollutants from the discharge of these systems depends on the type of surrounding soil. In addition, septic systems may be unlawfully used for the disposal of toxic materials.

Home Oil Furnace Tanks – Some residents near WSH may be using oil furnaces to heat their homes. The number and location of these is unknown. The fuel for oil furnaces can be stored in above-grade or buried tanks. WSH's groundwater sources may be threatened by heating oil that leaks out of the tanks into the underlying soil. The risk of this potential contaminant depends on the location of the leaking tanks relative to the WSH's wells, the amount and rate of leakage, and the type of underlying soil.

Hazardous Household Materials – Almost all households have hazardous materials that are commonly used for a variety of cleaning and maintenance purposes. Some of these materials include cleaning solvents, paints, antifreeze, and engine oil. Improper use or disposal of these may result in contamination of WSH's groundwater sources. Both wells have single-family residences located within their wellhead protection areas.

Private Wells – Poorly constructed private wells with inadequate seals and improperly abandoned wells may pose a threat to WSH's groundwater sources. Poorly constructed private wells with insufficient seals provide a direct pathway for contaminants from stormwater runoff, rodents, and other pollutants to enter the same aquifer used by WSH's wells.

Stormwater – Stormwater runoff can potentially contaminate WSH's groundwater sources. Runoff from industrial and commercial areas can contain high levels of metals and hydrocarbons. Runoff from residential areas is typically high in nutrients, pesticides, and metals. Stormwater ponds are located within the East Campus Well and Farm Well 5-year time of travel.

Creeks – Creeks located within the wellhead protection areas can carry contaminants that may pose a threat to WSH's groundwater sources. There are creeks located within the 10-year, 5-year, and 1-year times of travel of the East Campus Well.

Lawn Care and Agricultural Practices – Farms and residences with large lawns or crops within the wellhead protection areas can be a threat to WSH's groundwater sources. Inadequate cleanup of animal waste is the most likely source of potential contamination found on ranches. Fertilizer runoff is a potentially dangerous source of nitrates (exposure to nitrates and nitrites causes "Blue Baby Syndrome" in infants). There are many residences and many large lawns, as well as farmland in and around the WSH area.

Inventory Update Requirements

In accordance with WAC 246-290-135, the inventory list of actual and potential groundwater contaminant sources located within the delineated wellhead protection areas must be updated every 2 years. Inventory updates should be scheduled such that every third update is accomplished at the same time as the re-evaluation of the wellhead protection area boundaries, which is required during each 10-year WSP update.

NOTIFICATION OF INVENTORY FINDINGS

Regulatory agencies, local governments, and emergency response agencies also will be notified of the location of the wellhead protection areas, contaminant source inventory findings, contingency plans, and emergency response procedures. **Table 2** lists the notification recipients. An example of each of the three types of notification letters that will be sent is attached in **Appendix M**. All existing customers were notified of the wellhead protection program and the importance of protecting the WSH's sources in the 2023 Consumer Confidence Report included in **Appendix K** of the WSP.

Table 2

Notification Recipients

Agency or Business	Contact Person	Mailing Address	City, State Zip
Regulatory Agencies and Local Governments			
Washington State Department of Health Office of Drinking Water	Northwest Regional Manager	PO Box 47800	Olympia, WA 98504
Washington State Department of Ecology Southwest Regional Office	Director	300 Desmond Drive SE	Lacey, WA 98503
Tacoma-Pierce County Health Department	Director	3629 South D Street	Tacoma, WA 98418
Pierce County Planning Department	Planner	2401 S 35th Street	Tacoma, WA 98409
Washington State Department of Transportation	Olympic Region Director	7407 31st Avenue NE	Lacey, WA 98516
Emergency Response Agencies			
West Pierce Fire & Rescue	Fire Chief	3631 Drexler Drive W	University Place, WA 98466
Lakewood Police Department	Police Chief	9401 Lakewood Drive W	Lakewood, WA 98499
Pierce County Sheriff	Sheriff	930 Tacoma Avenue S	Tacoma, WA 98402
Washington State Patrol	District One Captain	2502 112th Street E	Tacoma, WA 98445
WSH Water Customers			
All Water Customers	Varies	Varies	Lakewood, WA

CONTINGENCY PLANNING

WSH has developed an Emergency Response Plan for the water system. The Emergency Response Plan includes a contingency operation plan for the wells and other water system facilities. The contingency operation plan for the wells in the event of contamination of the water source is as follows.

Emergency Condition: Aquifer Contamination

Impact on System: Potentially major impact. If water is not suitable for potable use, there is a major loss of supply.

Emergency Response:

1. Shut down the wells that pump water from the aquifer that is contaminated and use the other non-affected wells or notify Lakewood Water District and request use of the emergency intertie.
2. Notify DOH of the aquifer contamination.
3. Notify all WSH staff of the problem and instruct them to boil all water to be used for consumption and cooking.
4. Analyze water quality of water within reservoirs and dispose of properly if contaminated.
5. Disinfect reservoirs and water mains, as necessary, to remove contaminated residuals.
6. Adjust control of system facilities, as necessary, to provide supply from storage facilities if water within them is not contaminated.
7. Monitor water quality at affected well field and investigate cause of contamination.

8. Implement water use reduction measures, as necessary, to ensure an adequate supply of water.

WSH's plan to pursue long-term alternative sources of supply will improve WSH's ability to maintain uninterrupted water supply during times of source water quality emergencies.

PROGRAM IMPLEMENTATION AND RECOMMENDATIONS

WSH's Wellhead Protection Program is an ongoing effort that requires staffing and resources to ensure its effectiveness in protecting the source of drinking water that is supplied to WSH's customers. As discussed previously, the regulations require that WSH perform an inventory of all potential sources of groundwater contamination throughout the delineated wellhead protection areas every 2 years. In addition, DOH recommends that water systems upgrade their initial delineation using a more sophisticated groundwater flow model approach within 5 years of the initial delineation. At a minimum, WSH must re-evaluate the wellhead protection area boundaries during the WSP update process, which occurs every 10 years.

WSH should adopt a wellhead protection standard that addresses permitted uses and performance standards for properties located within designated wellhead protection areas.

The following tasks will be pursued as part of WSH's ongoing Wellhead Protection Program and should be included in the update of the Wellhead Protection Program as described in the CIP in **Chapter 9** of the WSP.

- Perform a more accurate delineation of the wellhead protection area boundaries utilizing a combined analytical and hydrogeological approach.
- Update and perform a more detailed inventory of potential sources of groundwater contamination.
- Confirm location, condition, and proper closure of abandoned private wells, especially those within 1-year time of travel zones.
- Distribute the required notifications as a result of updated delineations and inventory findings. Letters should be sent to local responders, regulatory agencies, and owners/operators of known and potential sources of groundwater contamination within the defined wellhead protection areas.
- Restrict land uses in the 1-year time of travel zones that pose a high risk to groundwater, such as gas stations, oil recycling, dry cleaners, fuel storage facilities, high-density animal keeping, high-density septic systems, and golf courses. Update WSH's wellhead protection standards as necessary. Coordinate these efforts with Pierce County.
- Develop signage at the perimeter of and at strategic locations around the wellhead protection areas to inform people that they are entering an area that contains the WSH's drinking water source and is vulnerable to surface activities.

Legend

- Western State Hospital Campus Area
- Western State Hospital Water Service Area (Retail and Future)
- Well

Wellhead Protection Areas

- 6 Month Time of Travel
- 1 Year Time of Travel
- 5 Year Time of Travel
- 10 Year Time of Travel

Puget Sound

East Campus Well

Farm Well

ZIRCON DR SW
PHILLIPS RD SW
91ST AVE SW
78TH ST SW
STEILACOOM BLVD SW
CUSTER RD SW
JOHN DOWER RD W
88TH ST SW
STEILACOOM BLVD
RAINIER ST
MAIN ST
BLAINE ST
OLD MILITARY RD
MILITARY RD SW
101ST ST SW
104TH ST SW
LAKE LOUISE DR SW
ELWOOD DR SW
ANGLE LN SW
IDLEWILD RD SW
INTERLAAKEN DR SW
MEADOW RD SW
DEKOVEN DR SW
100TH ST SW
ALFARETTA ST SW

Waughop Lake
Lake Louise
Steilacoom Lake

This map is a graphic representation derived from the Dept. of Social and Health Services (DSHS) Geographic Information System. It was designed and intended for DSHS staff use only; it is not guaranteed to survey accuracy. This map is based on the best information available on the date shown on this map.

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Vicinity Map

FigureJ-1
Wellhead Protection Areas
Dept. of Social and Health Services
Western State Hospital
Water System Plan

Washington State Department of Social & Health Services
Transforming lives

1 inch : 700 Feet

0 350 700 1,400 Feet

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

RH2

NORTH

J:\DATA\DSHS\24-00688\PHASE 3 - WATER SYSTEM PLAN\GIS\DSHS_WSH_2024WSP\DSHS_WSH_2024WSP.APRX BY: LMOJARAB PLOT DATE: SEP 17, 2024 COORDINATE SYSTEM: NAD 1983 HARN STATEPLANE WASHINGTON SOUTH FIPS 4602 FEET

Appendix K

Consumer Confidence Report

2023 CONSUMER CONFIDENCE REPORT

Western State Hospital ID# 951501

Tacoma, WA 98498

Northwest Water Systems is pleased to present you with the annual Water Quality Report on behalf of **Western State Hospital** as required by the Safe Drinking Water Act (SDWA). This report is a snapshot of last years' Water Quality, and the purpose is to provide you with details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. Our staff routinely monitors for contaminants in your drinking water in accordance with Federal, State, or local laws. We encourage you to take a few moments and review the enclosed table showing the results of the water quality monitoring for **January 1 to December 31, 2023.** We would like you to share our confidence in your drinking water. Safe drinking water is essential, and we are committed to informing you so that you can make personal health-based decisions regarding your drinking water consumption and become more involved in decisions which may affect your health. We welcome your questions, concerns, and observations. If you would like to receive more information about current water quality issues, make comments, or ask questions, please go to our website: nwwatersystems.com; doh.wa.gov/drinking water, or call 360-876-0958. We take pride in keeping you informed about the quality of your water and the service we provide.

How To Contact Us:

Office: 7245 SE Bethel Burley RD Port Orchard, WA 98366

Phone Number: 360-876-0958

E-Mail: info@nwwatersystems.com

Website: www.nwwatersystems.com/w

NAME
ADDRESS
CITY STATE ZIP

Northwest Water Systems
PO Box 123
Port Orchard, WA 98366

Additional Health Information

Contaminants in Drinking Water:

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the number of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water hotline (1-800-426-4791). Sources of drinking water (both tap water and bottled water) can include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animal or human activity.

Lead in Drinking Water:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. **Western State Hospital** is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or online at: http://www.epa.gov/safewater/lead

Do I Need to Take Special Precaution?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by **Cryptosporidium** and other microbial contaminants are available from the Safe Water Drinking Hotline: 800-426-4791

Waivers:

Source: 2 and 5

Complete Inorganic (IOC) 9 Year Waiver. Next Due: 09.2025
Volatile Organics (VOC) 6 Year Waiver. Next Due: 08.2025
Herbicides & Pesticides 9 Year Waiver. Next Due: 03.2030

NOTE: if the sample does not have a date next to it, that means the sample was collected during the reporting period.

Please forward this report to your rental tenants upon arrival.

EPA UNREGULATED: *Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining their occurrence in drinking water and whether future regulation is warranted.*
About Iron: *This contaminant is not currently regulated by USEPA. However, the state has set an MCL for this contaminant for all Group A Systems.*
About Manganese: *This contaminant is not currently regulated by USEPA. However, the state has set an MCL for this contaminant for all Group A Systems. Manganese is one of the most abundant elements in the earth's crust. It is an essential nutrient for many living organisms, including humans. Adverse health effects may be caused by over exposure.*

Terms and Abbreviations Used:

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water.
SDRL (State Detection Reporting Limit): The minimum reportable detection of an analyte
AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
IOC (Inorganic Chemicals): Mineral-based compounds
ppb: Parts per billion
N/A: Not applicable
N/D: None Detected
µmhos/cm: Micromhos per centimeter
pCi/L: Picocuries per Liter
mg/L: Milligrams per Liter
Dist: Distribution
ug/L: Micrograms per Liter
ng/L: Nanograms per Liter
THM: Total Trihalomethane
HAA5: Halo-Acetic Acids
NTU: Nephelometric Turbidity Units

2023 Water Quality Data

Western State Hospital ID# 951501

Western State Hospital is a public Water System that is regulated by Washington State's Department of Health.

Western State Hospital runs on 1 primary well and 2 emergency wells and is currently treated.

Source	IOC	SDRL	MCL	Your Water	In Compliance?	Typical Sources
02	Nitrate **mg/L (Taken: 2022)**	**0.5**	**10**	**0.2**	Y	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
05	Nitrate **mg/L**	**0.5**	**10**	**0.2**	Y	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
05	Sodium **mg/L (Taken: 2021)**	**5.0**	**NA**	**5**	Y	Erosion of Natural Deposits
05	Arsenic **mg/L (Taken: 2021)**	**0.0010**	**0.0104**	**0.00.30**	Y	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
05	Hardness **mg/L (Taken: 2021)**	**10**	**NA**	**51**	Y	Erosion of Natural Deposits
05	Conductivity **Umhos/cm (Taken: 2021)**	**70**	**700**	**117.9**	Y	Substances that form natural deposits
02	Sodium **mg/L (Taken: 2016)**	**5.0**	**NA**	**6**	Y	Erosion of Natural Deposits
02	Hardness **mg/L (Taken: 2016)**	**10**	**NA**	**72**	Y	Erosion of Natural Deposits
02	Conductivity **Umhos/cm (Taken: 2016)**	**70**	**700**	**165**	Y	Substances that form natural deposits
02	Turbidity **NTU (Taken: 2016)**	**0.1**	**NA**	**0.2**	Y	Soil Runoff
Source	**Disinfection By Products**	**SDRL**	**MCL**	**Your Water**	**In Compliance?**	**Typical Sources**
DIST	HAA5 **ug/L**	**NA**	**60.4**	**0**	Y	By-Product of Drinking Water Disinfection
DIST	THM **ug/L**	**NA**	**80.4**	**0**	Y	By-Product of Drinking Water Disinfection
Source	**Radionuclides**	**SDRL**	**MCL**	**Your Water**	**In Compliance?**	**Typical Sources**
05	Gross Alpha **pCi/L (Taken: 2022)**	**3.0**	**NA**	**3.0**	Y	Erosion of natural deposits
05	Radium 228 **pCi/L (Taken: 2022)**	**1.0**	**5.0**	**.329**	Y	Erosion of natural deposits
02	Gross Alpha **pCi/L (Taken: 2017)**	**3.0**	**NA**	**3.0**	Y	Erosion of natural deposits
02	Radium 228 **pCi/L (Taken: 2017)**	**1.0**	**NA**	**1.0**	Y	Erosion of natural deposits
Source	**Secondary & Unregulated Contaminants**	**SDRL**	**MCL**	**Your Water**	**In Compliance?**	**Typical Sources**
05	Iron **mg/L (Taken: 2021)**	**0.1**	**0.3**	**0.1**	Y	Leaching from natural deposits; industrial wastes
05	Manganese **mg/L (Taken: 2021)**	**0.01**	**0.05**	**0.01**	Y	Discharge of drilling wastes, metal refineries and erosion of natural deposits
02	Iron **mg/L (Taken: 2016)**	**0.1**	**0.3**	**0.1**	Y	Leaching from natural deposits; industrial wastes
02	Manganese **mg/L (Taken: 2016)**	**0.01**	**0.05**	**0.01**	Y	Discharge of drilling wastes, metal refineries and erosion of natural deposits
05	Chloride **mg/L (Taken: 2021)**	**20**	**250**	**2.5**	Y	Urban and agricultural runoff, and discharges from municipal wastewater plants, industrial plants, and the drilling of oil and gas wells
05	Sulfate mg/L **(Taken: 2021)**	**50**	**250**	**3.4**		Naturally occurring minerals in some soil and rock formations that contain groundwater
02	Chloride **mg/L (Taken: 2016)**	**20**	**250**	**5**	Y	Urban and agricultural runoff, and discharges from municipal wastewater plants, industrial plants, and the drilling of oil and gas wells
02	Sulfate **mg/L (Taken: 2016)**	**50**	**250**	**9**	Y	Naturally occurring minerals in some soil and rock formations that contain groundwater.

Source	Lead & Copper (Taken at Customer Taps)	AL	More Than AL	90th Percentile	In Compliance?	Typical Sources
DIST	Lead **ppb**	**15**	**0 of 20**	**1.6**	Y	Corrosion of household plumbing systems; erosion of natural deposits
DIST	Copper **mg/L**	**1.3**	**0 of 20**	**0.043**	Y	Corrosion of household plumbing systems; erosion of natural deposits

Source	SOC	SDRL	SAL	Your Water	In Compliance?	Typical Sources
02	PFBS **ng/L**	**2.0**	**NA**	**6.9**	Y	Runoff or Leaching from Firefighting Foam, Industrial Discharge, and Landfills; Wastewater Treatment Plants
02	PFHpA **ng/L**	**2.0**	**NA**	**2.6**	Y	Runoff or Leaching from Firefighting Foam, Industrial Discharge, and Landfills; Wastewater Treatment Plants
02	PFHxS **ng/L**	**2.0**	**NA**	**18**	Y	Runoff or Leaching from Firefighting Foam, Industrial Discharge, and Landfills; Wastewater Treatment Plants
02	PFOS **ng/L**	**2.0**	**NA**	**28**	Y	Runoff or Leaching from Firefighting Foam, Industrial Discharge, and Landfills; Wastewater Treatment Plants
02	PFOA **ng/L**	**2.0**	**NA**	**4.4**	Y	Runoff or Leaching from Firefighting Foam, Industrial Discharge, and Landfills; Wastewater Treatment Plants
02	PFHxA **ng/L**	**2.0**	**NA**	**4.4**	Y	Runoff or Leaching from Firefighting Foam, Industrial Discharge, and Landfills; Wastewater Treatment Plants
02	PFBA **ng/L**	**2.0**	**NA**	**2.3**	Y	Runoff or Leaching from Firefighting Foam, Industrial Discharge, and Landfills; Wastewater Treatment Plants
02	PFPeA **ng/L**	**2.0**	**NA**	**4.7**	Y	Runoff or Leaching from Firefighting Foam, Industrial Discharge, and Landfills; Wastewater Treatment Plants
02	PFPeS **ng/L**	**2.0**	**NA**	**3.1**	Y	Runoff or Leaching from Firefighting Foam, Industrial Discharge, and Landfills; Wastewater Treatment Plants
05	PFAS **ng/L**				Y	Runoff or Leaching from Firefighting Foam, Industrial Discharge, and Landfills; Wastewater Treatment Plants

Cross Connection:

You might have seen cross-connection surveys sent to you by mail. Here is a little information on why: Cross-connections are found in all plumbing systems. It is important that each cross-connection be identified and evaluated as to the type of back-flow protection required to protect the drinking water supply. Some plumbing fixtures have built-in back-flow protection in the form of a physical air gap. However, most cross connections will need to be controlled through the installation of an approved mechanical back-flow prevention device or assembly.

Saving Water Can Be Simple!

Turn water off while brushing your teeth and rinsing your dishes! Cut the time per shower by a few minutes and save up to 150 gallons per month. Run full loads in dishwasher and washing machine. Insulate hot water pipes to save water and energy!

What Are PFAS?

Per- and Polyfluoroalkyl substances (PFAS) are a large family of chemicals in use since the 1950's, to make a wide variety of stain-resistant, water resistant, and non-stick consumer products. Some examples include food packaging, outdoor clothing, and non-stick pans. PFAS also have many Industrial uses because of their special properties. In Washington State, PFAS were used in certain types of firefighting foams.

What Is Water Conservation?

For many, it is as easy as buying a water efficient appliance or turning off the faucet while brushing your teeth, however, water conservation is more complex than that. Water conservation is any beneficial reduction in water use, loss, or waste. We can all do our part in using our water more efficiently; small changes can make a large impact. In addition to saving money on your utility bill, water conservation will help protect this precious natural resource.

Appendix L
Water Quality Plan

APPENDIX L | WATER QUALITY MONITORING PLAN

INTRODUCTION

This Water Quality Monitoring Plan presents the requirements for monitoring water quality at the sources and in the distribution system in accordance with drinking water regulations contained in Washington Administrative Code (WAC) 246-290-300. This plan also provides a summary of the existing water system facilities and operation.

Existing System Description

Water System Information

The Washington State Department of Social and Health Services owns and operates the Western State Hospital (WSH), which includes a public water system for the hospital campus and some small adjacent areas. Water system data on file at the Washington State Department of Health (DOH) for WSH's system is shown in **Table 1**.

Table 1

Water System Information

Information Type	Description
System Type	Group A - Community - Public Water System
System Name	Western State Hospital
County	Pierce
DOH System ID Number	951501
Address	9601 Steilacoom Boulevard, Tacoma, WA 98498
Contact	Kevin Odegard
Contact Phone Number	(360) 876-0958 ext. 113

Water System Operation and Control

The WSH water system is relatively flat and only one pressure zone is required. System pressures are regulated by the Upper Reservoir and Lower Reservoir levels, with overflow elevations of 389 feet. The Farm Well (S05) pumps water directly into the Upper and Lower Reservoirs, which then supply the distribution system. The East Campus Well (S02) has been offline since per- and polyfluoroalkyl (PFAS) compounds were detected in May and July of 2023.

Pressure Zones

The WSH water system serves customers within an elevation range of approximately 215 feet, near Building 28 at the intersection of Circle Drive and Totem Street, to approximately 246 feet in the northeastern part of campus near Building 56. As the areas served are all contained within the WSH campus, only one pressure zone is required. The pressure is regulated by reservoir levels with overflow elevations of 389 feet.

Water Sources

A list of WSH's existing water sources is presented in **Table 2**.

Table 2

Water Sources

Name	Year Constructed	Status	Usage	Existing Capacity (gpm)	Well Depth (feet)	Well Diameter (feet)	Pump Type	Pump Motor Size (hp)
S02 (East Campus Well)	1968	Active[1]	Emergency	500	337	16	Submersible	100
S08 (Farm Well)	2003	Active	Permanent	1,000	560	16	Submersible	125

[1] = the East Campus Well is currently offline.
gpm = gallons per minute
hp = horsepower

Water Storage

A list of WSH's existing water storage facilities is presented in **Table 3**.

Table 3

Water Storage Facilities

Name	Year Constructed	Material	Capacity (gal)	Diameter (feet)	Height (feet)	Base Elevation (feet)	Overflow Elevation (feet)
Lower Reservoir	1903	Steel	317,077	30	60	329	389
Upper Reservoir	1940	Steel	413,375	40	44	345	389

Water Treatment

Routine water quality samples of the distribution system have shown the presence of total coliform. Samples taken in October 2000 and July 2020 have indicated *E. coli* exceeding the Maximum Contaminant Level (MCL) of 0 milligrams per liter (mg/L). Based upon these previous assessments, DOH issued a Formal Compliance Agreement to mandate WSH to provide a free chlorine residual throughout the distribution system. As a short-term, temporary solution to address coliform concentrations in the distribution system, 12.5-percent sodium hypochlorite feed systems were installed at both S02 and S05 well houses in 2023 to operate until permanent treatment is established.

Water from Lakewood Water District's emergency intertie is filtered and chlorinated.

SOURCE WATER QUALITY MONITORING

WSH is required to perform water quality monitoring at each of its permanent active sources (those not designated for emergency use) for inorganic chemicals and physical substances, organic chemicals, unregulated inorganic and organic chemicals, and radionuclides. The monitoring requirements that WSH must comply with are specified in WAC 246-290-300. WSH must comply with the requirements for groundwater system monitoring. **Table 4** summarizes the source water quality monitoring requirements for the next several years. The table is based on information available at the time this document was prepared and may change in the future.

Table 4

Monitoring Schedule for 2024 Through 2034

Date	Monitor	Monitoring Group	Test Method	Upon Violation
		2024		
Jun-24	S05	Arsenic	IOC	Quarterly for 2 Quarters
Jul-24	S05	Nitrate	NIT	Quarterly for 2 Quarters
Sep-24	1 Site in Distribution System	Stage 2 DBPs	TTHM and HAA5	1 Site per Quarter
		2025		
Jun-25	10 Sites in Distribution System	Lead and Copper	LCR	Two 6-Month Periods
Jul-25	S05	Nitrate	NIT	Quarterly for 2 Quarters
Aug-25	S05	VOC	VOC-524.2	Quarterly for 2 Quarters
Sep-25	1 Site in Distribution System	Stage 2 DBPs	TTHM and HAA5	1 Site per Quarter
		2026		
Jan-26	S05	PFAS	PFAS-533	Quarterly until less than MCL
Jul-26	S05	Nitrate	NIT	Quarterly for 2 Quarters
Sep-26	1 Site in Distribution System	Stage 2 DBPs	TTHM and HAA5	1 Site per Quarter
		2027		
Apr-27	S05	PFAS	PFAS-533	Quarterly until less than MCL
Jun-27	S05	Arsenic	IOC	Quarterly for 2 Quarters
Jul-27	S05	Nitrate	NIT	Quarterly for 2 Quarters
Sep-27	1 Site in Distribution System	Stage 2 DBPs	TTHM and HAA5	1 Site per Quarter
		2028		
Jun-28	10 Sites in Distribution System	Lead and Copper	LCR	Two 6-Month Periods
Jun-28	S05	Gross Alpha	RAD	Quarterly until less than MCL
Jun-28	S05	Radium 228	RAD	Quarterly until less than MCL
Jul-28	S05	Nitrate	NIT	Quarterly for 2 Quarters
Sep-28	1 Site in Distribution System	Stage 2 DBPs	TTHM and HAA5	1 Site per Quarter
		2029		
Jul-29	S05	Nitrate	NIT	Quarterly for 2 Quarters
Sep-29	1 Site in Distribution System	Stage 2 DBPs	TTHM and HAA5	1 Site per Quarter
		2030		
Mar-30	S05	Herbicides	SOC	Quarterly for 2 Quarters
Mar-30	S05	Pesticides	SOC	Quarterly for 2 Quarters
Apr-30	S05	PFAS	PFAS-533	Quarterly until less than MCL
Jun-30	S05	Arsenic	IOC	Quarterly for 2 Quarters
Jun-30	S05	IOC	IOC	Quarterly for 2 Quarters
Jul-30	S05	Nitrate	NIT	Quarterly for 2 Quarters
Sep-30	1 Site in Distribution System	Stage 2 DBPs	TTHM and HAA5	1 Site per Quarter
		2031		
Jun-31	10 Sites in Distribution System	Lead and Copper	LCR	Two 6-Month Periods
Jul-31	S05	Nitrate	NIT	Quarterly for 2 Quarters
Sep-31	1 Site in Distribution System	Stage 2 DBPs	TTHM and HAA5	1 Site per Quarter
		2032		
Jul-32	S05	Nitrate	NIT	Quarterly for 2 Quarters
Sep-32	1 Site in Distribution System	Stage 2 DBPs	TTHM and HAA5	1 Site per Quarter
		2033		
Apr-33	S05	PFAS	PFAS-533	Quarterly until less than MCL
Jun-33	S05	Arsenic	IOC	Quarterly for 2 Quarters
Jul-33	S05	Nitrate	NIT	Quarterly for 2 Quarters
Sep-33	1 Site in Distribution System	Stage 2 DBPs	TTHM and HAA5	1 Site per Quarter
		2034		
Jun-34	10 Sites in Distribution System	Lead and Copper	LCR	Two 6-Month Periods
Jun-34	S05	Gross Alpha	RAD	Quarterly until less than MCL
Jun-34	S05	Radium 228	RAD	Quarterly until less than MCL
Jul-34	S05	Nitrate	NIT	Quarterly for 2 Quarters
Aug-34	S05	VOC	VOC-524.2	Quarterly for 2 Quarters
Sep-34	1 Site in Distribution System	Stage 2 DBPs	TTHM and HAA5	1 Site per Quarter

IOC = Inorganic contaminants

NIT = Nitrate suite

DBP = Disinfection byproducts

TTHM = Total trihalomethane

HAA5 = Halo-acetic acids

LCR = Lead and copper rule

VOC = Volatile organic contaminants

RAD = Radionuclides

Monitoring Requirements and Procedures

Inorganic Chemical and Physical Substances

A minimum of one sample shall be taken after treatment at the entry point to the distribution system for each permanent source. Monitoring for primary and secondary inorganic chemical (IOC) and physical substances, except for arsenic, nitrate, and asbestos, shall be accomplished once every 3 years. The Farm Well (S05) currently has a 9-year IOC waiver. If the MCL is exceeded, quarterly sampling is required for at least two quarters.

Monitoring for nitrate shall be accomplished once per year. The repeat monitoring frequency shall be quarterly for at least 1 year following any sample in which the concentration is greater than or equal to 50 percent of the MCL for nitrate or nitrite.

Monitoring for manganese is not required for the Farm Well.

Volatile Organic Chemicals

A minimum of one sample shall be taken after treatment at the entry point to the distribution system for each permanent source. Monitoring for volatile organic chemicals (VOCs) shall be accomplished once every 3 years for each compliance period. If an MCL is exceeded, quarterly sampling is required for at least two quarters. The state may then allow annual monitoring if the results are satisfactory. After three consecutive samples that comply with the MCLs, a waiver for reduced monitoring may be applied for again. The Farm Well currently has a 6-year VOC waiver with the next sample due in 2025.

Synthetic Organic Chemicals

A minimum of one sample shall be taken after treatment at the entry point to the distribution system for each permanent source. Monitoring for synthetic organic chemicals (SOCs) shall be accomplished once every 3 years for each compliance period if a monitoring waiver is not provided by the state. If an MCL is exceeded, quarterly sampling is required for at least two quarters. The state may then allow annual monitoring if the results are satisfactory. After three consecutive samples that comply with the MCLs, a waiver for reduced monitoring may be applied for again. WSH is not required to monitor for soil fumigants at the Farm Well. The Farm Well currently has a 9-year waiver for herbicides and pesticides with the next samples due in March 2030.

Radionuclides

A minimum of one sample shall be taken after treatment at the entry point to the distribution system for each permanent source. Initial monitoring for gross alpha particle radioactivity, radium-226, and radium-228 requires four consecutive quarterly samples. Monitoring thereafter requires 4 consecutive quarterly samples at least once every 48 months. The analysis for radium-226 and radium-228 may be omitted if the results from the gross alpha particle radioactivity analysis are less than 5 picocuries per liter. In addition, if the results of the initial analysis are less than half of the established MCL, the required monitoring may be reduced to a single sample collected every 48 months. The initial radionuclide samples collected in 1988 resulted in levels much less than the MCL, if detectable at all, and WSH may now monitor for radionuclides once every 6 years.

Per- and Polyfluoroalkyl Substances

In 2016, the EPA established a combined health advisory level for two per- and polyfluoroalkyl substances (PFAS) at 70 parts per trillion (ppt). DOH proposed a regulation for PFAS in 2017, and state action levels (SALs) for these substances are now in effect as of August 2024. The SALs are 10 ppt for perfluorooctanoic acid (PFOA), 15 ppt for perfluorooctanesulfonic acid (PFOS), 9 ppt for perfluorononanoic acid (PFNA), 65 ppt for perfluorohexanesulphonic acid (PFHxS), and 345 ppt for perfluorobutanesulfonic acid (PFBS). All water systems in Washington State are required to sample their sources for PFAS by December 2025. Water systems that find PFAS in their supply are required to complete additional monitoring, and systems that exceed a SAL are required to notify all customers. The primary source of PFAS contamination was the historical use of PFAS based firefighting foam used by the US military, local fire departments, and airports.

In April 2024, the EPA finalized MCLs for PFOS and PFOA each at 4 ppt; PFHxS, PFNA, and hexafluoropropylene oxide dimer acid (HFPO-DA, commonly known as GenX) at 10 ppt each; and mixtures containing two or more of PFBS, PFHxS, PFNA, and GenX through a combined Hazard Index (HI). The HI normalizes each of the four compound levels to a Health-Based Water Concentration of 2,000 ppt for PFBS and 10 ppt for PFNA, PFHxS, and GenX . The sum of normalized values must be less than 1. Compliance with MCLs will be determined based on a running annual average. PFAS MCLs will supersede DOH SALs when they take effect in 2029. All community and non-transient non community public water systems must test for PFAS under the final rule. WSH collected water samples from both sources and analyzed them for PFAS compounds in May 2023. No PFAS compounds were detected in the Farm Well but PFAS compounds were detected in East Campus Well. A follow up sample was collected from East Campus Well in July 2023 to confirm PFAS contamination. Since then, the East Campus Well was designated for emergency usage only, a change from its previous permanent usage designation.

DISTRIBUTION SYSTEM WATER QUALITY MONITORING

WSH is required to perform water quality monitoring within the distribution system for coliform bacteria, disinfectant (chlorine) residual concentration, disinfection byproducts, lead and copper, and asbestos in accordance with Chapter 246-290 WAC.

Monitoring Requirements and Procedures

Coliform Bacteria Routine Sampling

Specific requirements are contained in WAC 246-290-300. WSH has been collecting a minimum of three samples each month from different locations throughout the system based on estimates of the population served.

Table 5 lists the addresses and schedule of WSH's routine sampling locations, including the upstream and downstream sampling locations in the event that repeat sampling is necessary. A total of three samples will be collected each month in accordance with the schedule shown in the table. The sampling sites are different than the previous month's sampling sites and are rotated throughout the system to achieve a thorough sampling of the system. The sample sites also are shown in **Figure L-1** and correspond to the assigned numbers in the table.

Table 5

Coliform Monitoring Sampling Locations and Schedule

Number	Routine, Repeat, or GWR	Location	
January, April, July, October			
1A	**Routine & Repeat Site 1**	**Building 29 Break Room**	**Sink**
	Repeat Site 2	Building 28	Sink
	Repeat Site 3	Building 50	Sink
	GWR	S05 Sample Tap	ST
2A	**Routine & Repeat Site 1**	**Building 27**	**Sink**
	Repeat Site 2	Building 35	Sink
	Repeat Site 3	Building 20	Sink
	GWR	S05 Sample Tap	ST
3A	**Routine & Repeat Site 1**	**Building 18**	**Sink**
	Repeat Site 2	Building 17	Sink
	Repeat Site 3	Building 20	Sink
	GWR	S05 Sample Tap	ST
February, May, August, November			
1B	**Routine & Repeat Site 1**	**Building 3**	**Sink**
	Repeat Site 2	Building 35	Sink
	Repeat Site 3	Building 34	Sink
	GWR	S05 Sample Tap	ST
2B	**Routine & Repeat Site 1**	**Building 5**	**Sink**
	Repeat Site 2	Building 9	Sink
	Repeat Site 3	Building 33	OHB
	GWR	S05 Sample Tap	ST
3B	**Routine & Repeat Site 1**	**Building 17**	**Sink**
	Repeat Site 2	Building 8	Sink
	Repeat Site 3	Building 18	Sink
	GWR	S05 Sample Tap	ST
March, June, September, December			
1C	**Routine & Repeat Site 1**	**Building 50**	**Sink**
	Repeat Site 2	Building 51	Sink
	Repeat Site 3	Building 54	Sink
	GWR	S05 Sample Tap	ST
2C	**Routine & Repeat Site 1**	**Building 54**	**Sink**
	Repeat Site 2	Building 53	Sink
	Repeat Site 3	Building 50	Sink
	GWR	S05 Sample Tap	ST
3C	**Routine & Repeat Site 1**	**Building 35**	**Sink**
	Repeat Site 2	Building 27	Sink
	Repeat Site 3	Building 3	Sink
	GWR	S05 Sample Tap	ST

GWR = Groundwater Rule
ST = Sample tap
OHB = Outside hose bib

Coliform Bacteria Repeat Sampling

In the event that a sample tests positive for coliform, a repeat sample shall be taken at the same location as the suspect sample and two additional samples shall be taken within five service connections upstream and downstream of the suspect sample. Source of supply samples also must be collected at each source (prior to treatment) that was in operation when the positive sample was collected. These repeat and source samples shall be taken by the end of the next business day after receiving the unsatisfactory results. If the results conclude that an MCL is exceeded (i.e., coliform are present in two or more samples for the month, including repeat samples), WSH shall proceed with public notification in accordance with WAC 246-290-495.

Disinfectant Residual Concentration

Specific requirements are contained in WAC 246-290-451 for systems using groundwater that is not under the influence of surface water. WSH's chlorination goal is to maintain a residual disinfectant concentration of at least 0.5 mg/L throughout the distribution system. Samples collected and submitted for coliform testing also shall be tested for disinfectant residual concentration to ensure the disinfectant residual meets the regulatory requirements and achieves the target levels planned by WSH.

Lead and Copper

Specific requirements are contained in Title 40, Parts 141.86, 141.87, and 141.88 of the Code of Federal Regulations (CFR). Initial monitoring, beginning July 1, 1993, required 20 samples for each 6-month monitoring period for WSH's population. After 2 consecutive 6-month monitoring periods of meeting the lead and copper action levels, 10 samples taken during June, July, August, or September were required once per year. After 3 consecutive years of monitoring and meeting the lead and copper action levels, 10 samples taken during June, July, August, or September are required every 3 years.

WSH completed the sampling requirements for the 2 consecutive 6-month monitoring periods during 1996 and 1997. The samples tested well below the action levels and qualified WSH for accelerated reduced monitoring, which allowed a 3-year monitoring schedule.

Sample sites shall be selected based on the known existence of lead pipes, copper pipes, and copper pipes with lead solder in accordance with 40 CFR 141.86(a). The samples, except for lead service line samples, shall be "first draw tap samples" taken at a cold water tap in which water has not been drawn from the tap for at least 6 hours. Lead service line samples shall be collected in one of three ways in accordance with 40 CFR 141.86(b). The locations of future sample sites shall be the same as past sample sites, unless unavoidable conditions prevent sampling at the same locations.

In accordance with the Lead and Copper Rule Revisions (LCRR), starting October 16, 2024, exceedance of a lead action level requires Tier 1 public notification provided to all persons served by the water system, as well as DOH, no later than 24 hours after the system learns of the exceedance.

Asbestos

Monitoring for asbestos within the distribution system is required once every 9 years. Systems not vulnerable to asbestos contamination at the source or in the distribution system (due to asbestos

cement pipe) may apply to the state for a waiver of the monitoring requirements. A sample must be taken at a tap served by an asbestos cement pipe where asbestos contamination is most likely to occur. If the MCL is exceeded, quarterly sampling is required for at least two quarters. WSH currently has a 9-year asbestos waiver for distribution monitoring.

Fluoride Concentration

Specific requirements are contained in WAC 246-290-460 for systems that are fluoridating drinking water. WSH does not currently fluoridate its water. However, if WSH decides to fluoridate its water supply in the future, the concentration of fluoride shall be maintained at 0.7 mg/L. Determinations of fluoride concentrations shall be made daily and reports of the analyses shall be submitted to DOH within 10 days of the end of the reporting month. Monthly check samples shall be taken downstream of each fluoride injection point at the first sample tap where adequate mixing has occurred.

Disinfection Byproducts

Specific requirements are contained in WAC 246-290-300. Under the Stage 2 Disinfectants and Disinfection Byproducts Rule, WSH is required to monitor for total trihalomethanes (TTHM) and five haloacetic acids (HAA5) at one location every year.

E. COLI RESPONSE PLAN

The following checklist includes elements that were considered by WSH in developing a response plan in the event that *E. coli* is present in the distribution system or source water. The *E. coli* response plan includes operational changes or emergency procedures to reduce the effect of *E. coli* bacteria on water system customers.

Distribution System E. Coli Response Checklist

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.	☒	☐	☐	☐
We document all water main breaks, construction & repair activities, and low pressure and outage incidents.	☒	☐	☐	☐
We can easily access and review documentation on water main breaks, construction & repair activities, and low pressure and outage incidents.	☒	☐	☐	☐
Our Cross-Connection Control Program is up-to-date.	☒	☐	☐	☐
We test all cross-connection control devices annually as required, with easy access to the proper documentation.	☒	☐	☐	☐
We routinely inspect all treatment facilities for proper operation.	☒	☐	☐	☐
We identified one or more qualified individuals who are able to conduct a Level 2 assessment of our water system.	☒	☐	☐	☐
We have procedures in place for disinfecting and flushing the water system if it becomes necessary.	☒	☐	☐	☐
We can activate an emergency intertie with an adjacent water system in an emergency.	☒	☐	☐	☐
We have a map of our service area boundaries.	☒	☐	☐	☐
We have consumers who may not have access to bottled or boiled water.	☐	☒	☐	☐
There is a sufficient supply of bottled water immediately available to our customers who are unable to boil their water.	☒	☐	☐	☐
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.	☒	☐	☐	☐
We have messages prepared and translated into different languages to ensure our consumers will understand them.	☐	☐	☐	☒
We have the capacity to print and distribute the required number of notices in a short time period.	☒	☐	☐	☐

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

Distribution System *E. coli* Response Plan

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

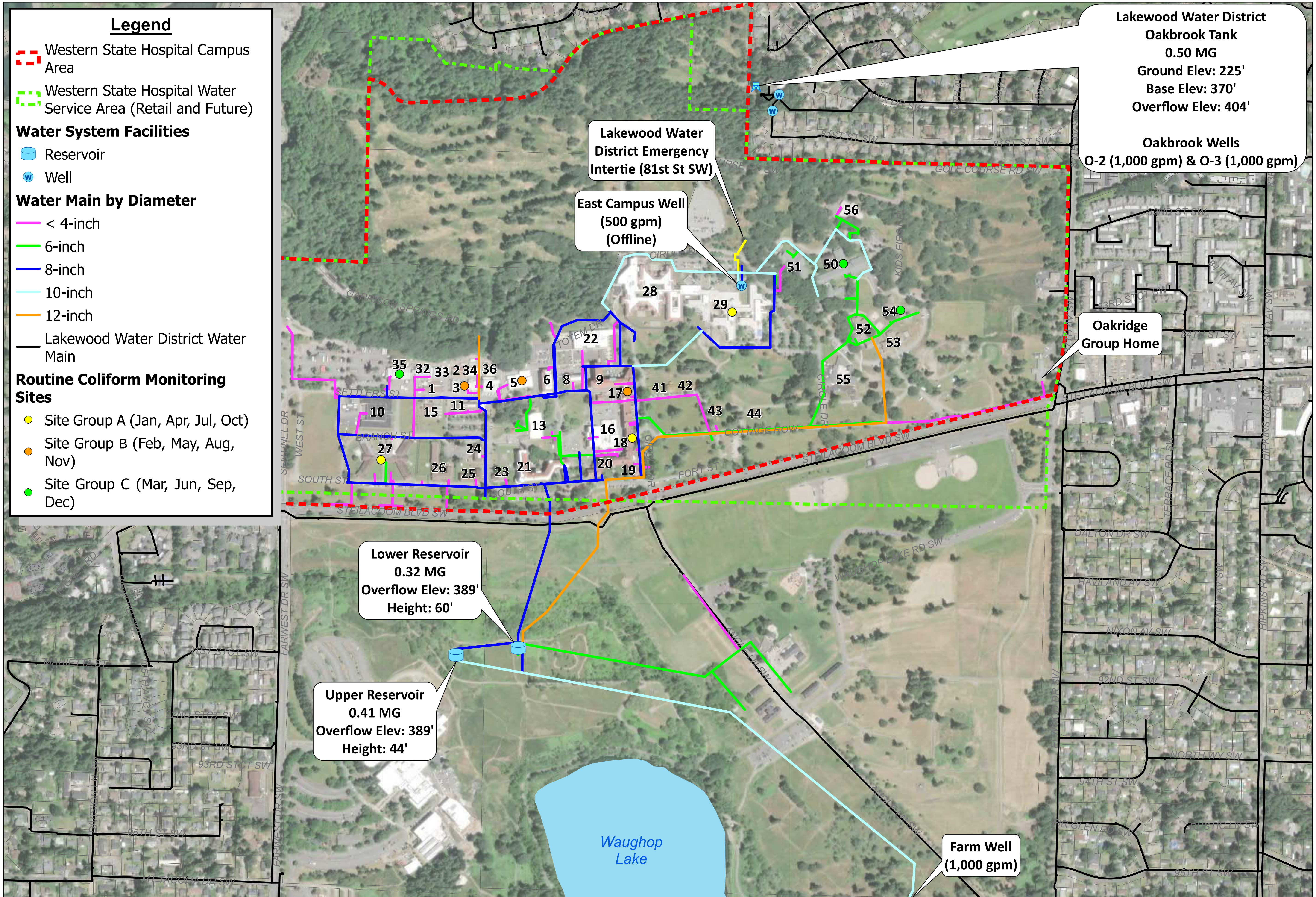
1. Call DOH.
2. Collect repeat and triggered source samples per Part D. Collect additional investigative samples as necessary.
3. Inspect water system facilities, reservoirs, and WTP.
4. Review new construction activities, water main breaks, and low pressure events.
5. Inspect vaults and airvacs.
6. Review CCC Program status.
7. Discuss with DOH whether to issue a Health Advisory based on the findings of steps 3-6.

E. coli-Present Triggered Source Sample Response Checklist

***E. coli*-Present Triggered Source Sample Response Checklist – All Sources**				
Background Information	**Yes**	**No**	**N/A**	**To Do List**
We review our sanitary survey results and respond to any recommendations affecting the microbial quality of our water supply.	☒	☐	☐	☐
We address any significant deficiencies identified during a sanitary survey.	☒	☐	☐	☐
There are contaminant sources within our Wellhead Protection Area that could affect the microbial quality of our source water, and If yes, we can eliminate them.	☐ ☐	☒ ☐	☐ ☒	☐ ☐
We routinely inspect our well site(s).	☒	☐	☐	☐
We have a good raw water sample tap installed at each source.	☒	☐	☐	☐
After we complete work on a source, we disinfect the source, flush, and collect an investigative sample.	☒	☐	☐	☐
Public Notice	**Yes**	**No**	**N/A**	**To Do List**
We discussed the requirement for immediate public notice of an *E. coli*-present source sample result with our water system's governing body (board of directors or commissioners) and received direction from them on our response plan.	☒	☐	☐	☐
We discussed the requirement for immediate public notice of an *E. coli*-present source sample result with our wholesale customers and encouraged them to develop a response plan.	☐	☐	☒	☐
We have prepared templates and a communications plan that will help us quickly distribute our messages.	☒	☐	☐	☐

***E. coli*-Present Triggered Source Sample Response Checklist – Source S05 (Farm Well)**				
Alternate Sources	**Yes**	**No**	**N/A**	**To Do List**
We can stop using this source and still provide reliable water service to our customers.	☒	☐	☐	☐
We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for several months).	☒	☐	☐	☐
We can provide bottled water to all or part of the distribution system for an indefinite period.	☒	☐	☐	☐
We can quickly replace our existing source of supply with a more protected new source.	☐	☒	☐	☐
Temporary Treatment	**Yes**	**No**	**N/A**	**To Do List**
This source is continuously chlorinated, and our existing facilities can provide 4-log virus treatment (CT = 6) before the first customer. If yes, at what concentration? 1.3 mg/L	☒	☐	☐	☐
We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system.	☒	☐	☐	☐
We can reduce the production capacity of our pumps or alter the configuration of our storage quantities (operational storage) to increase the amount of time the water stays in the system before the first customer to achieve CT = 6.	☒	☐	☐	☐
We can alter the demand for drinking water (maximum day or peak hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus treatment with chlorine.	☒	☐	☐	☐

***E. coli*-Present Triggered Source Sample Response Plan – Source S05 (Farm Well)**
If we have *E. coli* in Source S05 (Farm Well) water, we will immediately: 1. Call DOH. 2. Distribute notice. 3. Take repeat sample and shut off source. 4. Wait for results of repeat then determine next steps.



Legend
Western State Hospital Campus Area
Western State Hospital Water Service Area (Retail and Future)
Water System Facilities
Reservoir
Well
Water Main by Diameter
< 4-inch
6-inch
8-inch
10-inch
12-inch
Lakewood Water District Water Main
Routine Coliform Monitoring Sites
Site Group A (Jan, Apr, Jul, Oct)
Site Group B (Feb, May, Aug, Nov)
Site Group C (Mar, Jun, Sep, Dec)
Lakewood Water District Oakbrook Tank 0.50 MG Ground Elev: 225' Base Elev: 370' Overflow Elev: 404'
Oakbrook Wells O-2 (1,000 gpm) & O-3 (1,000 gpm)
Lakewood Water District Emergency Intertie (81st St SW)
East Campus Well (500 gpm) (Offline)
Oakridge Group Home
Lower Reservoir 0.32 MG Overflow Elev: 389' Height: 60'
Upper Reservoir 0.41 MG Overflow Elev: 389' Height: 44'
Farm Well (1,000 gpm)
Waughop Lake

Figure L-1
Routine Coliform Monitoring Sites
Dept. of Social and Health Services Western State Hospital Water System Plan

Vicinity Map

This map is a graphic representation derived from the Dept. of Social and Health Services (DSHS) Geographic Information System. It was designed and intended for DSHS staff use only; it is not guaranteed to survey accuracy. This map is based on the best information available on the date shown on this map.

Washington State Department of Social & Health Services
Transforming lives

1 inch : 300 Feet
0 150 300 600 Feet
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

RH2

NORTH

J:\DATA\DSHS\24-0068\PHASE 3 - WATER SYSTEM PLAN\GIS\DSHS_WSH_2024WSP\DSHS_WSH_2024WSP.APRX BY: LMOJARAB PLOT DATE: SEP 17, 2024 COORDINATE SYSTEM: NAD 1983 HARN STATEPLANE WASHINGTON SOUTH FIPS 4602 FEET

Appendix M
Public Notifications

Public Notification Form

Notice to Water System Users: Coliform Monitoring Violation

331-163-F • Revised 3/25/2022

Water System: _____ ID # _____ County:_____

is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring indicate whether your drinking water meets health standards. During the month of _____ we either did not monitor or test for coliform bacteria or collected fewer samples than we were required to collect. Therefore, we cannot be sure of the quality of your drinking water during that time.

At this time:

☐ No action is required by the users.

☐ We collected the routine coliform sample required for the month of _____ and the lab found no coliform bacteria.

☐ We will collect samples in the future as required.

☐ Other information for customers:

For more information, contact _____ at (___) ___-____ or at_____.
(owner or operator) (phone number) (address)

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses.) You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is sent to you by _____ Water System on _____

Coliform Monitoring Public Notice Certification Form

By completing the information below, we certify to the state Department of Health that we distributed public notice to our customers.

Please check the appropriate box and fill in the date you distributed the notice:

☐ Notice was mailed to all water customers on _____

☐ Notice was hand delivered to all water customers on _____.

☐ Notice was posted *with Department of Health approval* at:

_____ on _____

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

Sign below and send this completed notification and certification form to us at the address checked below.

_____ _____ _____

_____

Signature of owner or operator Position Date

☐ **Northwest Region**
Department of Health
20425 72nd Ave S, Suite 310
Kent, WA 98032-2388
brandon.katz@doh.wa.gov
Fax: 253-395-6760

☐ **Southwest Region**
Department of Health
PO Box 47823
Olympia, WA 98504-7823
SWRO.Coli@doh.wa.gov
Fax: 360-236-3029

☐ **Eastern Region**
Department of Health
16201 E Indiana Ave, Suite 1500
Spokane Valley, WA 99216
joseph.perkins@doh.wa.gov
Fax: 509-329-2104

Washington State Department of Health

To request this document in another format, call 1-800-525-0127. Deaf or hard of hearing customers, please call 711 (Washington Relay) or email civil.rights@doh.wa.gov.

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

PUBLIC NOTICE CERTIFICATION FORM
NITRATE MCL VIOLATION

Within 10 days of notifying your customers, you are required to send this completed form and a copy of each type of notice you distributed (hand-delivered notices, press releases, newspaper articles, etc.) to the appropriate Office of Drinking Water Regional Office (see address below). This form certifies that you have met all public notification requirements. If chemical contamination remains for more than three months, you must notify your water users again and provide another Public Notice Certification Form to the Department of Health.

With this certification, you are also stating that you will meet future requirements for notifying new billing units of the violation or situation.

Water System: _____ID #: _____County:_____

Violation Date:_____ / _____ / _____ Violation Type:_____

This public water system certifies that public notice has been given to water users following state and federal requirements for delivery, content, and deadlines.

Complete the following items:

Yes No

☐ ☐ Distribution was completed on ___ / ___ /____. Check all that apply:
- ☐ Hand delivery,
- ☐ Press release (TV, radio, newspaper, etc.),
- ☐ Posting at_____ (by DOH approval only),
- ☐ Other _____ (by DOH approval only).

☐ ☐ Were the water users notified within 24 hours?

_____ _____ _____
Signature of owner or operator | Position | Date

Northwest Regional Office:
PO Box 47800
Olympia WA 98504
Main Office: 253-395-6750
Fax: 253-395-6760

Area of Coverage: Island, King, Pierce, San Juan, Skagit, Snohomish, and Whatcom Counties

Southwest Regional Office:
243 Israel Road SE, Tumwater
PO Box 47823, Olympia WA 98504
Main Office: 360-236-3030
Fax: 360-664-8058

Area of Coverage: Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Kitsap, Lewis, Mason, Pacific, Skamania, Thurston, and Wahkiakum Counties.

Eastern Regional Office:
16201 East Indiana Ave., Suite 1500,
Spokane Valley WA 99216
Main Office: 509-329-2100
Fax: 509-329-2104

Area of Coverage: Adams, Asotin, Benton, Chelan, Columbia, Douglas, Ferry, Franklin, Garfield, Grant, Kittitas, Klickitat, Lincoln, Okanogan, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman, and Yakima Counties.

For people with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TDD/TTY call 711).

Public Notification Form

Public Notice Certification *E. coli*-MCL Violation

331-264-F • Updated 3/25/2022

Within ten days after notifying your customers about an *E. coli*-MCL violation, you must complete this form and send it to our regional office. You must also send a copy of each type of notice you distributed to your customers (hand-delivered notices, news releases, newspaper articles, and so on).

By completing this form, you certify that:

- You met all of the public notification requirements.
- You will meet future requirements for notifying new billing units of the violation or situation.

If the boil water advisory remains in effect more than three months, you must re-notify your water users and send another completed copy of this *Public Notice Certification* to us.

Complete the following items, sign the form and mail it to the nearest regional office, addresses below.

Water System:_____ ID #_____ County:_____

Violation Date:____ / _____ / _____ Violation Type_____

This public water system certifies that it gave this public notice to water users, following state and federal requirements for delivery, content, and deadlines.

☐ **Yes**
☐ **No**

Distribution was completed Yes ☐ **No** ☐ **on _____ / ____ /_____.**

Check all that apply:

☐ Hand delivery,
☐ News release (TV, radio, newspaper)
☐ Posting at_____ (by DOH approval only),
☐ Other _____ (by DOH approval only).

Were the water users notified within 24 hours? Yes ☐ **No** ☐

_____ _____ _____

Signature of owner or operator | Position | Date

Northwest Regional Office
PO Box 47800
Olympia WA 98504 (253) 395-6775
Fax: (253) 395-6760
Email: ingrid.salmon@doh.wa.gov

Southwest Regional Office
PO Box 47823
Olympia WA 98504-7823
(360) 236-3030
Fax (360) 236-3029
Email: swro.coli@doh.wa.gov

Eastern Regional Office
16201 E Indiana Ave Suite 1500
Spokane Valley WA 99216
(509) 329-2100
Fax: (509) 329-2104
Email: joseph.perkins@doh.wa.gov

NOTICE TO WATER SYSTEM USERS
LEAD AND COPPER INITIAL MONITORING VIOLATION

We, _____ Water System, I.D. _____, located in _____ County are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. In the initial monitoring period of _____ to _____ _____, we did not meet our monitoring requirements for lead and copper, and therefore cannot be sure of the quality of your drinking water at that time. At this time:

☐ No action is required by the users.

☐ Our required lead and copper samples have currently been collected.

☐ Samples will be collected in the future as required.

☐ Other information for customers:

For more information, please contact _____ at ( )_____-_____ or at _____.
(Owner or operator) (Phone number) (Address)

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is sent to you by _____ Water System on ____/____/____

Lead and Copper Initial Monitoring Public Notice Certification Form
This section must be completed by Water System. Signature below indicates notice contained all required elements.

Complete the following items (check all that apply):

☐ Notice mailed to all water customers on ____/____/____.

☐ Notice hand delivered to all water customers on ____/____/____.

☐ Notice published in newspaper (attach copy)

☐ Notice posted at _____ on ____/____/____.
(***By Department Approval Only***)

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

_____ _____ _____
Signature of owner or operator Position Date

Send copy of completed notification and certification to:

David Sternberg, Water Quality Compliance Programs Coordinator
Office of Drinking Water
Water Quality Section
PO Box 47822
Olympia, WA 98504-7822
FAX 360-236-2522

For people with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TDD/TTY call 711).

NOTICE TO WATER SYSTEM USERS
ANNUAL NITRATE MONITORING VIOLATION FORM

We, _____ Water System, I.D. _____, located in _____County are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During _____, we did not monitor or test for nitrate, and therefore cannot be sure of the quality of your drinking water during that time.

At this time:

☐ No action is required by the users.

☐ Our routine nitrate sample required for _____ *(current year)* has been collected.

☐ Samples will be collected in the future as required.

☐ Other information for customers:

For more information, please contact _____ at ( )___-____ or at _____.
Owner or operator Phone number Address

Please share this information with all people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is sent to you by _____ Water System on ____/____/____

Annual Nitrate Monitoring Public Notice Certification Form

This section must be completed by Water System. Signature below indicates notice contained all required elements.

Complete the following items (check all that apply):

☐ Notice mailed to all water customers on ____/____/____.

☐ Notice hand delivered to all water customers on ____/____/____.

☐ Notice published in newspaper (attach copy)

☐ Notice posted at _____ on ____/____/____.

(***By Department Approval Only***)

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

_____ _____ _____
Signature of owner or operator Position Date

Send copy of completed notification and certification to:

David Sternberg, Water Quality Compliance Programs Coordinator
Office of Drinking Water
Water Quality Section
PO Box 47822
Olympia, WA 98504-7822
FAX 360-236-2522

For people with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TDD/TTY call 711).

AVISO A LOS USUARIOS DEL SISTEMA DE AGUA

FORMULARIO DE VIOLACIÓN DEL MONITOREO ANUAL DE NITRATO

Nosotros, el sistema de agua _____, con número de identificación (ID) _____, situado en el condado de _____, estamos obligados a monitorear regularmente su agua potable por contaminantes específicos. Los resultados del monitoreo indican si su agua potable cumple o no con las normas de salud. Durante el año _____, no realizamos monitoreo ni pruebas del agua para el nitrato, y por lo tanto no podemos asegurar la calidad de su agua potable durante ese tiempo.

En este momento:

☐ No se requiere ninguna acción de los usuarios.

☐ Hemos colectado la muestra rutinaria de nitrato para el _____ (el año actual).

☐ Colectaremos las muestras en el futuro según la norma.

☐ Otra información para los usuarios:

Para más información, por favor contacte a _____ al (_____) _____ - _____ o en _____.
(El dueño / operador) (El número de teléfono) (La dirección)

Por favor comparte esta información con otras personas que pudieran tomar agua de este sistema, especialmente con aquellos que no hayan recibido este aviso directamente (por ejemplo, las personas que viven en apartamentos, residencias para ancianos, escuelas y negocios). Puede hacerlo colocando este aviso en un lugar público o entregando copias en persona o por correo.

Este aviso le fue enviado por el sistema de agua _____ la fecha ____/____/____.

Formulario de certificación de la notificación al público del monitoreo anual de nitrato

(Esta sección debe ser llenada por el sistema de agua. La firma abajo indica que la notificación contiene todos los elementos requeridos.)

Complete los siguientes puntos (marque todo lo que aplica)

☐ El aviso fue enviado por correo a todos los usuarios del sistema de agua el ____/____/

☐ El aviso fue distribuido a mano a todos usuarios del sistema de agua el ____/____/

☐ El aviso fue publicado en el periódico (adjunta la copia)

☐ Se colocó el aviso en _____ el ____/____/

(**Solo con permiso del departamento**)

_____ _____ ____/____/____.
(Firma del dueño u operador) (Posición) (Fecha)

Envíe una copia de la notificación completa y la certificación a:

David Sternberg, Water Quality Compliance Programs Coordinator
Office of Drinking Water
Water Quality Section
PO Box 47822
Olympia, WA 98504-7822
FAX 360-236-2252

Para personas discapacitadas, este document está disponible a su pedido en otros formatos. Para hacer su pedido, llame al 1-800-525-0127 (TDD/TTY llame al 711).

NOTICE TO WATER SYSTEM USERS

DISINFECTION BYPRODUCTS MONITORING VIOLATION

We, _____ Water System, I.D. _____, located in _____ County are required to monitor your drinking water for specific contaminants on a regular basis Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During the ☐ month(s) of _____ _____ or ☐ quarter(s) _____ in the year of _____ we did not monitor or test for ☐ Total Trihalomethanes, ☐ Haloacetic Acids, or ☐ Bromate and therefore cannot be sure of the quality of your drinking water during that time.

At this time:

☐ No action is required by the users.

☐ Samples will be collected in the future as required.

☐ Other information for customers:

For more information, contact _____ at ( )_____ or at _____.
(owner or operator) (phone number) (address)

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses.) You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is sent to you by _____ Water System on ____/____/____

Disinfection Byproducts Monitoring Public Notice Certification Form
The purpose of this form (below) is to provide documentation to the department that public notice was distributed. Please check the appropriate box and fill in the date that the notice was distributed:

☐ Notice was mailed to all water customers on ____ / ____/____.

☐ Notice was hand delivered to all water customers on ___ / ___ /___.

☐ Notice was posted (*with department approval*) at:
_____ on ___ / ___ /____.

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

_____ _____ _____
Signature of owner or operator Position Date

If you need this publication in an alternate format, call (800) 525-0127. For TTY/TDD call (800) 833-6388.

Send copy of completed notification and certification to:

☐ Northwest Drinking Water
Department of Health
20425 72nd Ave S, Suite 310
Kent, WA 98032-2358
Phone: (253) 395-6750
Fax: (253) 395-6760

☐ Southwest Drinking Water
Department of Health
PO Box 47823
Olympia, WA 98504-7823
Phone: (360) 236-3030
Fax: (360) 664-8058

☐ Eastern Drinking Water
Department of Health
16201 E Indiana Ave, Suite 1500
Spokane Valley, WA 99216
Phone: (509) 329-2100
Fax: (509) 329-2104

NOTICE TO WATER SYSTEM USERS

MONTHLY BROMATE MONITORING VIOLATION FORM

We, _____ Water System, I.D. _____, located in _____County are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During the month(s) of _____, we did not monitor or test for the disinfection by-product bromate, and therefore cannot be sure of the quality of your drinking water during that time.

At this time:

☐ No action is required by the users.

☐ Our routine monthly bromate sample(s) have been taken for _____ *(time period)*.

☐ Samples will be collected in the future as required.

☐ Other information for customers:

For more information, please contact _____ at ( )___-_____ or at _____.
(owner or operator) (phone number) (address)

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses.) You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is sent to you by _____ Water System on __/__/__

Monthly Bromate Monitoring Public Notice Certification Form

(This section must be completed by Water System. Signature below indicates notice contained all required elements.)

Complete the following items (check all that apply):

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

☐ Notice mailed to all water customers on ____ / ____/____.

☐ Notice hand delivered to all water customers on ___ / ___ /___.

☐ Notice published in newspaper (attach copy)

☐ Notice posted at _____ on ___ / ___ / ____.

(***By Department Approval Only***)

_____ _____ _____
Signature of owner or operator Position Date

The Department of Health is an equal opportunity agency. For persons with disabilities, this form is available on request in other formats. To submit a request, please call 1-800-525-0127 (TTY 1-800-833-6388).

Send copy of completed notification and certification to:
Office of Drinking Water, Water System Support Section, PO Box 47822, Olympia WA 985047822 fax (360) 236-2252

DOH Form #331-394 (02/08)

NOTICE TO WATER SYSTEM USERS

QUARTERLY TOTAL TRIHALOMETHANE (TTHM)/HALOACETIC ACIDS (HAA5) MONITORING VIOLATION FORM

We, _____ Water System, I.D. _____, located in _____County are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During the following quarters: _____, we did not monitor or test for the disinfection by-products TTHM and HAA5, and therefore cannot be sure of the quality of your drinking water during that time.

At this time:

☐ No action is required by the users.

☐ Our routine quarterly TTHM/HAA5 samples have been taken for _____ *(time period)*.

☐ Samples will be collected in the future as required.

☐ Other information for customers:

For more information, please contact _____ at ( )___-_____ or at _____.
(owner or operator) (phone number) (address)

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses.) You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is sent to you by _____ Water System on __/__/__

Quarterly TTHM/HAA5 Monitoring Public Notice Certification Form

(This section must be completed by Water System. Signature below indicates notice contained all required elements.)

Complete the following items (check all that apply):

☐ Notice mailed to all water customers on ____ / ____/____.

☐ Notice hand delivered to all water customers on ___ / ___ /___.

☐ Notice published in newspaper (attach copy)

☐ Notice posted at _____ on ___ / ___ / ____.

(***By Department Approval Only***)

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

_____ _____ _____
Signature of owner or operator Position Date

The Department of Health is an equal opportunity agency. For persons with disabilities, this form is available on request in other formats. To submit a request, please call 1-800-525-0127 (TTY 1-800-833-6388).

Send copy of completed notification and certification to:
Office of Drinking Water, Water System Support Section, PO Box 47822, Olympia WA 985047822 fax (360) 236-2252

DOH Form #331-395 (02/08)

NOTICE TO WATER SYSTEM USERS
QUARTERLY NITRATE MONITORING VIOLATION FORM

We, _____Water System, I.D. _____, located in _____ County are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. We are required to monitor for nitrates on a quarterly basis. We have failed to meet the monitoring requirements for nitrate for the _____ quarter(s) of _____ (year). We cannot be sure of the quality of your drinking water during that time. At this time:

☐ No action is required by the users.

☐ Our current quarterly nitrate samples have been collected.

☐ Samples will be collected in the future as required.

☐ Other information for customers:

For more information, please contact _____ at ( )___-_____ or at _____.
(owner or operator) (phone number) (address)

Please share this information with people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses.) You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is sent to you by _____ Water System on __/__/__

Quarterly Nitrate Monitoring Public Notice Certification Form
(This section to be completed by the Water System. Signature below indicates notice contained all required elements.)

Complete the following items (check all that apply):

☐ Notice mailed to all water customers on ____ / ____/____

☐ Notice hand-delivered to all water customers on ___ / ___ /___

☐ Notice published in newspaper (attach copy)

☐ Notice posted at _____ on ___ / ___ /____
(***By Department Approval Only***)

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

_____ _____ _____
Signature of owner or operator Position Date

Send copy of completed notification and certification to:

David Sternberg, Water Quality Compliance Programs Coordinator
Office of Drinking Water
PO Box 47822
Olympia, WA 98504-7822
FAX 360-236-2252

For people with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TDD/TTY call 711).

NOTICE TO WATER SYSTEM USERS
Reliably and Consistently Under the Maximum Contaminant Level (MCL)
ANNUAL NITRATE MONITORING VIOLATION FORM

We, _____ Water System, I.D. _____, located in _____County are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. We are required to collect a nitrate sample for Source #____ each year, between the months of _____ and _____. During _____, we did not monitor or test for nitrate and therefore cannot be sure of the quality of your drinking water during that time. At this time:

- ☐ No action is required by the users.
- ☐ Our routine nitrate sample required to be collected between _____ *and* _____ *(current year)* has been collected.
- ☐ Samples will be collected in the future as required.
- ☐ Other information for customers:

For more information, please contact _____ at ( )___-_____ or at _____.
(owner or operator) (phone number) (address)

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses.) You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is sent to you by _____ Water System on __/__/__

R & C Under the MCL Annual Nitrate Monitoring Public Notice Certification Form

(This section must be completed by the Water System. A signature below indicates the notice contained all required elements.)

Complete the following items (check all that apply):

☐ Notice mailed to all water customers on ____ / ____/____

☐ Notice hand-delivered to all water customers on ___ / ___ /___

☐ Notice published in newspaper (attach copy)

☐ Notice posted at _____ on ___ / ___ / ____

(***By Department Approval Only***)

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

_____ _____ _____
Signature of owner or operator Position Date

Send a copy of completed notification and certification to:

David Sternberg, Water Quality Compliance Programs Coordinator
Office of Drinking Water
PO Box 47822
Olympia, WA 98504-7822
FAX 360-236-2252

If you need this publication in an alternate format, call (800) 525-0127. For TTY/TDD, call (800) 833-6388.

NOTICE TO WATER SYSTEM USERS

LEAD AND COPPER MONITORING VIOLATION

We, _____ Water System, I.D. _____, located in _____ County are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. In _____ we did not meet our monitoring requirements for lead and copper, and therefore cannot be sure of the quality of your drinking water at that time.

At this time:

- ☐ No action is required by the users.
- ☐ Samples will be collected in the future as required.
- ☐ Other information for customers:

For more information, please contact _____ at ( )____-_____ or at _____.
Owner or Operator Phone Number Address

Please share this information with people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses.) You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is sent to you by _____ Water System on __/__/__

Lead and Copper Monitoring Public Notice Certification Form
This section must be completed by the water system. Signature below indicates notice contained all required elements.

Complete the following items (check all that apply).

- ❑ Notice mailed to all water customers on ____/____/____.
- ❑ Notice hand delivered to all water customers on ____/____/___.
- ❑ Notice published in newspaper (attach copy)
- ❑ Notice posted at _____ on ____/____/____.

(***By Department Approval Only***)

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

_____ _____ _____
Signature of owner or operator Position Date

Send copy of completed notification and certification to

Lead and Copper Program
Office of Drinking Water
PO Box 47822
Olympia, WA 98504-7822
FAX 360-236-2252

DOH Form 331-461 (Updated 9/19)

AVISO PARA LOS USUARIOS DEL SISTEMA DE AGUA

VIOLACIÓN DEL MONITOREO DE PLOMO Y COBRE

Nosotros, el sistema de agua _____ , con número de identificación (I.D#) , ubicado en el condado de _____, regularmente debemos monitorear contaminantes específicos en el agua que usted toma. Los resultados del monitoreo son un indicador para comprobar si el agua que usted toma cumple con los estándares de salud. En _____ no cumplimos con el requisito de monitorear el plomo y el cobre, y por lo tanto no podemos estar seguros de la calidad del agua que usted tomó en esa fecha.

En este momento:

☐ Ninguna acción se requiere de parte de los usuarios.

☐ Las muestras serán tomadas en el futuro como se requiere.

☐ Otra información para los usuarios:

Para mayor información comuníquese con _____ al teléfono ( ) _____-__ _____ o con

_____ _____ _____
(dueño u operador) (teléfono) (dirección)

Pase esta información a todas las personas que pudieran tomar agua de este suministro, especialmente aquellas personas que no hayan recibido este aviso (por ejemplo, personas que vivan en apartamentos, asilos de ancianos, escuelas y negocios.) Usted puede hacerlo colocando este aviso en un lugar público donde se pueda leer claramente o distribuyendo copias en persona o enviándolas por correo.

Este aviso es enviado a usted por el Sistema de Suministro de Agua_____ fecha ___/___/____.

Lead and Copper Consumer Notice and Sample Site Verification Form

All Group A water systems that conduct lead and copper monitoring must provide individual sampling results to the persons at each sample location (40 CFR 141.85 (d)) and verify samples were collected from appropriate sites (40 CFR 141.86 and 141.90).

Community water systems: Provide individual sampling results to all residences for which you received lead and copper samples within 30 days after receiving the results. In multi-unit structures, only notify each unit tested.

Nontransient noncommunity water systems (NTNCs): Notify all consumers who use water, even if they do not receive a water bill, within 30 days after receiving the results. With prior approval from DOH, you may post the notice in public areas.

To meet this reporting requirement, you may:

1. Use the DOH Consumer Notice Template,
2. Use the applicable EPA Consumer Notice template, or
3. Prepare your own Consumer Notice form. Your own consumer notice form must include all of the following:
   a. The sample results of the tap tested.
   b. An explanation of the health effects of lead.
   c. Steps consumers can take to reduce exposure to lead in drinking water.
   d. The water system's contact information.
   e. The maximum contaminant level goal (MCLG) and action level for lead, and the definitions of these two terms.

Send to DOH: Send a sample copy of one completed consumer notice plus the signed verification (below) within 90 days after the end of the monitoring period to: **Department of Health, Office of Drinking Water, Water Quality Section, PO Box 47822, Olympia WA 98504-7822 or fax to (360) 236-2252. Call 360-236-3099 for technical assistance.**

Verification

☐ I mailed/delivered consumer notices to the water users at all of the lead and copper sampling locations within 30 days of receiving the lead and copper sampling results.

☐ **Notification Option for NTNC Systems Only:** I posted the Consumer Notice at _____ within 30 days of receiving the lead and copper sampling results (posting requires prior DOH approval).

☐ To the best of my knowledge these lead and copper tap samples were collected from locations consistent with the sample site criteria described in 40 CFR 141.86(a). See DOH publication 331-111 for guidance on lead and copper sample site selection criteria.

Per the sampling site criteria defined in DOH Publication 331-111, list by type (tier) the number of sites sampled:

No. of Tier 1 sites sampled: _____
No. of Tier 2 sites sampled: _____
No. of Tier 3 sites sampled: _____
No. of other sites sampled: _____

_____ _____
Water System Name PWS ID

_____ _____ _____
Signature of owner or operator Position Date

DOH Form 331-462-F

Washington State Department of Health

If you need this publication in an alternative format, call 800.525.0127 (TDD/TTY call 711). This and other publications are available at www.doh.wa.gov/drinkingwater.

NOTICE TO WATER SYSTEM USERS

CHEMICAL MONITORING VIOLATION

We, _____ Water System, I.D. _____, located in _____ County are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. In _____ we did not meet our monitoring requirements for the chemicals listed below, and therefore cannot be sure of the quality of your drinking water at that time.

- ☐ *Volatile Organic Contaminants (VOCs).*
- ☐ *Complete Inorganic Contaminants (IOCs).*
- ☐ *Pesticides.*
- ☐ *Herbicides.*
- ☐ _____ *Other (List Test Panel or Specific IOC Analyte)*

At this time:

- ☐ Our required _____ samples have been collected for this monitoring period.
- ☐ Samples will be collected in the future as required.
- ☐ Other information for customers:

For more information, please contact _____ at ( )____-_____ or at _____.
Owner or Operator Phone Number Address

This notice is sent to you by _____ Water System on __ / __ / __

Chemical Monitoring Public Notice Certification Form
This section must be completed by the water system. Signature below indicates notice contained all required elements.

Complete the following items (check all that apply):

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

- ❑ Notice mailed to all water customers on ____ / ____ / ____.
- ❑ Notice hand delivered to all water customers on ___ / ___ / ___.
- ❑ Notice included in annual Consumer Confidence Report (attach copy).
- ❑ Notice posted at _____ on ___ / ___ / ____.
  (***By Department Approval Only***)

_____ _____ _____
Signature of owner or operator Position Date

Send copy of completed notification and certification to:

Office of Drinking Water, Water Quality Section
PO Box 47822
Olympia, WA 98504-7822
FAX 360-236-2252

DOH Form 331-465 (10/13)

For people with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TDD/TTY call 711).

DRINKING WATER WARNING: LOSS OF PRESSURE

Public Notification

The _____ Water System, ID_____, located in _____County may be contaminated because of a loss of pressure in the water system. Even if you didn't lose water pressure, your tap water may still be contaminated.

Until Further Notice, Boil Your Tap Water Before Drinking. Bring all water to a roiling boil for one minute. Let it cool before using. You should use boiled or purchased bottled water for drinking, making ice, brushing teeth, washing dishes, and food preparation. Boiling kills bacteria and other organisms in the water.

When pressure loss occurs, contamination from the environment or from human or animal waste can be drawn into the water system. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems. These symptoms are not only caused by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice. People at increased risk should seek advice about drinking water from their health care provider.

What caused the pressure loss?

What is the affected area?

What are we doing to correct the problem?

What should you do when we restore pressure to the water system?

We will notify you when you no longer need to boil the water.

For more information, please call _____ at ( ) ___-_____ or email _____.

Please share this notice with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments and businesses). You can post it in a public place, share copies by hand, or mail it.

The _____ Water System sent this notice to you on ___/___/____

For Water Utility Use Only:

Pressure Loss Public Notice Certification Form

Within 10 days of notifying your customers, please complete this certification form and return a copy of each type of notice you distributed (hand-delivered notice, news release, email, phone transcript, etc.) to our regional office. Call 1-800-521-0323 for the regional office address.

Distribution was completed on ___ / ___ /____. Were the water users notified within 24 hours? ☐ Yes ☐ No	Check all that apply: ☐ Hand delivery, ☐ News release (TV, radio, newspaper, etc.), ☐ Posting at_____ ☐ Other _____

_____ Signature of owner or operator	_____ Position	_____ Date

Drinking Water Warning: Backflow Incident

Public Notification

The _____ Water System, ID_____, located in _____County may be contaminated because of a backflow incident in which _____ (describe the substance) flowed back into the drinking water system. You are located in the service area potentially affected by this backflow incident.

Do Not Use Tap Water for Drinking, Laundry, or Bathing Until Further Notice. Use only purchased bottled water for drinking, making ice, brushing teeth, washing dishes, food preparation, and hand washing.

When backflow occurs, microbial or chemical contamination can be drawn into the water system. These contaminants can cause severe injury or illness.

What caused the backflow incident?

What is the affected area?

What are we doing to correct the problem?

Where can customers get bottled water?

What should you do before you begin using your tap water?

We will notify you when the water is safe to use.

For more information, please call _____ at ( ) ___-_____ or email _____.

Please share this notice with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments and businesses). You can post it in a public place, share copies by hand, or mail it.

The _____ Water System sent this notice to you on ___/___/____

For Water Utility Use Only:

Backflow Incident Public Notice Certification Form
Within 10 days of notifying your customers, please complete this certification form and send a copy of each type of notice you distributed (hand-delivered notices, new releases, email, phone transcript, etc.) to our regional office. Call 1-800-521-0323 for the regional office address.

Distribution was completed on ___ / ___ /____. Were the water users notified within 24 hours? ☐ Yes ☐ No	Check all that apply: ☐ Hand delivery, ☐ News release (TV, radio, newspaper, etc.), ☐ Posting at_____ ☐ Other _____+_____

Signature of owner or operator	Position	Date

DOH Form (331-495) 6/14

For people with disabilities, this form is available on request in other formats. To submit a request, please call 800-525-0127 (TDD/TTY 711).

Universal Chemical Monitoring Form

Chemical Monitoring Violation

331-691 • June 2022

Notice to Water System Users

We, _____Water System, I.D. _____, located in _____ County, are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring indicate whether or not your drinking water meets health standards. We did not meet our monitoring requirements for the chemicals listed below for the specified time period, and therefore cannot be sure of the quality of your drinking water at that time.

Chemical Contaminant	Required From	Required To
☐ Nitrate		
☐ Lead and Copper		
☐ Total Trihalomethanes		
☐ Haloacetic Acids		
☐ Bromate		
☐ Arsenic		
☐ Complete Inorganic Contaminants (IOCs)		
☐ Volatile Organic Contaminants (VOCs)		
☐ Per- and Polyfluoroalkyl Substances (PFAS)		
☐ Pesticides		
☐ Herbicides		
☐ Other		

At this time:

- ☐ Our required samples for each contaminant listed above have been collected for this monitoring period.
- ☐ We will collect samples in the future as required.
- ☐ Other information for customers.

For more information, contact _____ at ( )____-_____ or _____.
(Owner or Operator) (Phone Number) (Address)

This notice is sent to you by _____ Water System on ___/___/___.

Chemical Monitoring Public Notice Certification Form

This section must be completed by the water system. Signature below indicates notice contained all required elements.

Complete the following items (check all that apply):

- ❑ Notice mailed to all water customers on ___/___/___.
- ❑ Notice hand delivered to all water customers on ___/___/___.
- ❑ Notice included in annual Consumer Confidence Report (attach copy).
- ❑ Notice posted at _____ on ___/___/___.

(***By Department Approval Only***)

Washington State Department of Health

_____ _____ ___/___/___

Signature of owner or operator | Position | Date

Send copy of completed notification and certification to

Office of Drinking Water, Water Quality Section
PO Box 47822
Olympia, WA 98504-7822
FAX (360)236-2252

Washington State Department of Health

To request this document in another format, call 1-800-525-0127. Deaf or hard of hearing customers, please call 711 (Washington Relay) or email civil.rights@doh.wa.gov.

Public Notification Form

Manganese Health Advisory Above 1.0 mg/L

331-735 • 10/31/2023

Drinking Water Health Advisory

The _____ public water system, ID _____, located in _____ County has high levels of manganese.

DO NOT DRINK THE WATER, DO NOT USE IT TO MAKE INFANT FORMULA, DO NOT USE IT IN COOKING.

Sample results received on Click or tap to enter a date. showed manganese levels of _____ mg/L. This level is above the Environmental Protection Agency's (EPA's) health advisory of 1 mg/L for adults and children seven months and older. This health advisory is EPA's recommended limit for manganese in drinking water consumed for one to ten days.

Manganese naturally occurs in soil, water, and air. It is commonly found in the food we eat, including nuts, legumes, seeds, grains, and green leafy vegetables, and in drinking water. Our bodies require small amounts of manganese to stay healthy. Adults and children get enough manganese from the foods we eat. Infants get enough manganese from breast milk, food, or formula.

Too much manganese can increase the risk of health problems. Adults drinking water with high levels of manganese for many years may experience neurological effects, resulting in behavioral changes and impaired coordination, including slow and clumsy movements. Some studies have shown that too much manganese during childhood may also have effects on the brain, which may affect learning and behavior.

Infants are more at risk than older children and adults because they absorb and hold onto manganese more easily. Formula-fed infants get enough manganese from formula to meet their dietary needs. However, they may get too much manganese (above the recommended amount for nutrition) in their bodies when formula is mixed with water that contains manganese. To protect this more sensitive group EPA recommends no more than 0.3 mg/L of manganese in water fed to infants who are 6 months old or younger.

This health advisory is being provided because EPA identified health risks from short-term exposure to manganese above this level in the general population.

What should I do?

DO NOT GIVE TAP WATER TO INFANTS. Formula and other food preparations for infants should not be prepared with tap water. Use bottled water or alternative sources of water for infants. Making formula or foods with water containing manganese levels above the health advisory can increase an infant's risk of health problems.

DO NOT GIVE TAP WATER TO CHILDREN OR ADULTS. Use bottled water or an alternative source of water for drinking and food preparation for children and adults. Water containing manganese levels above the health advisory may cause possible neurological effects.

DO NOT BOIL THE WATER. Boiling, freezing, or letting water stand does not reduce manganese. Boiling can increase levels of manganese because manganese remains behind when the water evaporates.

Adults and children of all ages can continue to bathe and shower, brush their teeth, and wash clothes, food, and dishes in tap water.

If you have specific health concerns or concerns about your child's health, discuss your concerns with your healthcare provider.

What happened? What is being done?

Describe corrective actions being taken.

Click here to enter text

We anticipate resolving this problem by _____. We will notify you when the manganese levels are again below the health advisory level.

For more information, please contact _____ at _____ or _____.

Please share this information with anyone who drinks this water, especially those who may not have received this notice directly (for example people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by _____. State Water System ID# _____.

Date distributed: _____.

Public Notification Form

Manganese Health Advisory Above 0.3 mg/L

331-736 • 10/31/2023

Drinking Water Health Advisory

The public water system, ID , located in County has high levels of manganese.

DO NOT GIVE WATER TO INFANTS UNDER SIX MONTHS OLD OR USE IT TO MAKE INFANT FORMULA

Sample results received on Click or tap to enter a date. showed manganese levels of _____ mg/L. This level is above the Environmental Protection Agency's (EPA) short term health advisory of 0.3 mg/L for infants under six months old.

Manganese naturally occurs in soil, water, and air. It is commonly found in the food we eat, including nuts, legumes, seeds, grains, and green leafy vegetables, and in drinking water. Our bodies require small amounts of manganese to stay healthy. Adults and children get enough manganese from the foods we eat. Infants get enough manganese from breastmilk, food, or formula.

Too much manganese can increase the risk of health problems, particularly for infants under six months old. Infants are more at risk than older children and adults because their bodies absorb and hold onto manganese more easily. Formula-fed infants get enough manganese from formula to meet their dietary needs. However, they may get too much manganese in their bodies when formula is mixed with water that contains manganese. Infants exposed to manganese over 0.3 mg/L may experience learning or behavioral problems.

Adults drinking water with high levels of manganese for many years may experience impacts to their nervous system. EPA established a lifetime health advisory level of 0.3 mg/L, which means adverse health effects are not expected below this level.

This health advisory is being provided because EPA identified health risks from short-term exposure to manganese above this level in infants.

What should I do?

DO NOT GIVE TAP WATER TO INFANTS. Do not prepare formula and other food preparations for infants under six months old with tap water. Use bottled water or alternative sources of water for infants. Making formula or foods with water containing manganese levels above the health advisory can increase an infant's risk of health problems.

DO NOT BOIL THE WATER. Boiling, freezing, or letting water stand does not reduce manganese. Boiling can increase levels of manganese because manganese remains behind when the water evaporates.

Adults and children of all ages can continue to bathe and shower, brush their teeth, and wash clothes, food, and dishes in tap water.

If you have specific health concerns or concerns about your child's health, discuss your concerns with your healthcare provider.

What happened? What is being done?

Describe corrective actions being taken.

Click here to enter text

We anticipate resolving this problem by _____. You will be notified when the manganese levels are below the health advisory level.

For more information, please contact _____ at _____ or _____.

Please share this information with anyone who drinks this water, especially those who may not have received this notice directly (for example people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by _____. State Water System ID# _____.

Date distributed: _____.

Appendix N
Agency Correspondence

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

Email

June 1, 2021

Jeanne Rodriguez, Capital Assets Manager
Washington State Department of Social and Health Services
Re: Western State Hospital
1115 Washington St SE
Olympia WA 98504-5848

Email: jeanne.rodriguez@dshs.wa.gov

Subject: Western State Hospital, ID #95150 1, Pierce County
Directive 2021-DIR-0044 replaced with Formal Compliance Agreement (FCA), drinking water reference number: 2021-FCA-0001

Dear Jeanne Rodriguez:

The Washington State Department of Social and Health Services (DSHS) owns and operates the water system serving the Western State Hospital (WSH) campus. The Washington State Department of Health (Department), Office of Drinking Water, provides regulatory oversight and technical assistance to ensure that the water served is safe and reliable now and into the future.

DSHS, as the purveyor of the Western State Hospital water system, continues to struggle to maintain minimum water quality and pressure requirements at the 100+-year-old facility: the water system design capacity has never been well documented, the system experienced a *Legionella* outbreak in 2016, multiple confirmed-coliform-presence events occurred in 2020, and recently distribution system pressure problems have become apparent. The Department appreciates the positive and ongoing relationship with DSHS to address these issues. It is clear that a significant investment in capital facilities is needed. This is in addition to short-term improvements currently underway.

It is our understanding that, in the long term, DSHS intends to "get out of the water business" by obtaining completely treated water from the Lakewood Water District (LWD) and properly abandoning existing wells and storage facilities.

The attached Formal Compliance Agreement (FCA), reference number 2021-FCA-0001, is intended to supersede the current directive, reference number 2021-DIR-0044, and outlines an agreed-upon framework and timeline to complete the connection to the Lakewood Water District. It is

understood that this agreement is helpful in order to secure the necessary funding to implement the project.

The water system's violation is listed under "Statements of Regulatory Violation" in the enclosed FCA. If you believe this information is incorrect, please deliver information demonstrating the water system complies with drinking water regulations within fifteen (15) days of receipt of this letter. Please submit your information to Carol Stuckey at Carol.Stuckey@doh.wa.gov.

To enter into the enclosed FCA, **an authorized representative of the water system must sign and deliver the enclosed FCA to the Department no later than June 30, 2021**.

The Department may grant one thirty (30) day extension of time for you to sign and deliver the enclosed FCA. To request an extension, please deliver information demonstrating good cause for an extension to Carol.Stuckey@doh.wa.gov. We must receive your request no later than June 15, 2021. We will review the request, including whether there is a good cause, and will respond within fifteen (15) days of our receipt.

If the Department does not receive the signed FCA and the water system remains out of compliance, the Department may direct that the system returns to compliance through a non-negotiated enforcement document, under Washington Administrative Code 246-290- 050(1).

If you have any questions about the enclosed FCA, please call me at 360-236-3165. For technical assistance, please contact Carol Stuckey, Regional Engineer at 253-395-6763.

Sincerely,

Derek Pell, Deputy Director of Field Operations and Interim Regional Manager
Northwest Regional Office - Drinking Water
Washington State Department of Health
Derek.Pell@doh.wa.gov

Enclosure: Formal Compliance Agreement

cc: Tacoma Pierce County Health Department
Aniela S. Sidorska, Department, Compliance Program Manager
Carol Stuckey, Department, Regional Engineer
Brandon Katz – Department, Coliform Program Manager

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

FORMAL COMPLIANCE AGREEMENT

Between Western State Hospital and
Washington State Department of Health, Office of Drinking Water
Drinking Water Reference Number 2021-FCA-0001

The following Formal Compliance Agreement **(FCA or Agreement)** is hereby entered into between the Washington State Department of Health, Office of Drinking Water **(Department) and** Western State Hospital **-** Public Water System Identification Number**:** 95150 1 owned by Washington State Department of Social and Health Services (DSHS), collectively, **the Parties**.

I. PROCEDURAL STIPULATIONS

Western State Hospital is a public water system located in Pierce County.

II. STIPULATIONS OF REGULATORY VIOLATION

The Parties stipulate that the Water System must address the following violation and treatment technique triggers:

1. *Escherichia coli* (*E. Coli*) bacteria maximum contamination level (MCL) violation in July 2020 and two treatment technique triggers caused by the reoccurring total coliform bacteria contamination in August and November 2020 as in Washington Administrative Code (WAC) 246-290-310.

III. ACTIONS REQUIRED FOR REGULATORY COMPLIANCE AND DEADLINES

The Parties stipulate that the Department directs the Water System to take the following actions to return to regulatory compliance.

1. Ongoing: maintain services of the certified operator as in WAC 246-292.
2. Ongoing: monitor residual disinfectant concentration in the distribution system and report the results to the Department as in WAC 246-290-451.
3. By **September 15, 2021,** submit engineering report and construction documents as in WAC 246-290-110 and -120 with the short-term solution for the current water quality challenges.
4. By **November 30, 2021,** begin full time operation of the short-term solution approved by the Department.
5. By **October 31, 2021**, submit an emergency response plan as in WAC 246-290-420.
6. By **October 1, 2021,** begin the assessment for an engineering report with alternative analysis for the selected long-term configuration for Lakewood Water District (LWD) becoming the permanent source of water supply for the Western State Hospital water system.
7. By **January 1, 2022,** submit to the Department an assessment of the existing water system including a phased plan of recommended system repairs and improvements.
8. By **September 30, 2022**, submit a decision package in the DSHS 2023-33 Capital Plan for a phased approach for the design and construction of water system improvements at the WSH campus. The complete transfer and operation of the water system to LWD will be determined by the amount and timing of funding appropriated by the Legislature.

IV. AGREED ORDER

Based on the above stipulations, the Parties agree to as follows.

The Water System agrees:

1. The above STATEMENTS OF REGULATORY VIOLATION are true and it will take the ACTIONS TO RETURN TO REGULATORY COMPLIANCE directed by the Department in Section III of this Agreement by a date no later than the stated deadlines.

The Department agrees:

1. Deferred Enforcement. As long as the Water System follows the terms of this Agreement, the Department will initiate no further enforcement actions for the above-stated violations. The Department retains its right and obligations to take any action needed for public health protection.

2. Compliance with Federal Law. As long as the Water System follows the terms of this Agreement, insofar as the above-stated violations are violations of the National Primary Drinking Water Regulations (Title 40 Code of Federal Regulations, Part 141, 142, and 143) that the Department enforces through its ongoing primacy agreement with the United States Environmental Protection Agency (EPA), the Department will represent to EPA that those violations are addressed under EPA's 2009 Enforcement Response Policy.
3. Termination. If the Water System fails to comply with the terms of this Agreement, the Department may and will unilaterally terminate this Agreement and undertake any formal enforcement activities against the Water System that the Department finds are to bring the Water System back into regulatory compliance. When the Water System meets all of the Department's DIRECTIVES outlined in this Agreement, the Department will acknowledge the Water System has satisfied the Agreement and will terminate this Agreement.

The Water System and the Department agree:

1. Previous Notification of Violations. The Department previously notified the Water System of the violations detailed in this Agreement.
2. Modification. This Agreement may be modified by the Parties to allow for reasonable extensions of time or as needed, based on changing circumstances, to protect public health.

   This Agreement will be updated by the Parties when the DSHS Office of Capital Programs receives Legislative funding for the design and construction of water system improvements laid out in the DSHS 2023-2033 Capital Plan.

3. Extension of Time. The Water System may request an extension of time to achieve compliance with any DIRECTIVE outlined in this Agreement for good cause by delivering a written request to:

   Carol.Stuckey@doh.wa.gov or write to:

   Carol Stuckey
   Washington State Department of Health
   Northwest Regional Office
   20425 72nd Ave South, Suite 310
   Kent Washington 98032-2388

The Department will review any such request and respond within fifteen (15) days of its receipt. The Department has no obligation to grant any extension.

4. Final Agency Order. This Agreement applies to the Water System and all its purveyors as defined in the Revised Code of Washington (RCW) 70A.125.010(13). This Agreement serves as a Final Agency Order under chapter 34.05 RCW and is effective immediately when signed by both Parties. Any appeal right is waived and neither the Water System, nor its purveyors, nor its agents may appeal this Agreement/Final Agency Order. As such, the Department may issue civil penalties for any failure to follow the directed ACTIONS TO RETURN TO REGULATORY COMPLIANCE outlined in this Agreement.

5. Consequences of Failing to Fully Comply with the Terms of this Agreement. Public water systems and purveyors have a legal duty to follow Departmental regulations and the Departmental directives and ACTIONS TO RETURN TO REGULATORY COMPLIANCE in this Agreement; failure to meet this duty may violate RCW 70A.125.060(1)(a) and (1)(b)(iv) and (vi) and chapter 246-290 WAC sections 415(6), 300(2)(d)(ii), 320(1)(b)(iv), or 416(2)(d). If the Water System fails to fully follow the ACTIONS TO RETURN TO REGULATORY COMPLIANCE outlined in this Agreement, the Department will escalate enforcement actions against the Water System. These actions may include any legally authorized activity including, but are not limited to, the following:

   a. Status as a State Significant Non-Complier. The Department will classify the Water System as a state significant non-complier (SSNC) under WAC 246-294-040.

   b. Operating Permit Categorized as Red. The Department will also categorize the system's operating permit as red. Under WAC 246-294-040, the Department must evaluate and place each system in one of four categories of permits. Category red systems are substantially out of compliance with drinking water regulations. One of the reasons for the Department to place a drinking water system in the red category is when the system becomes an SSNC. A system categorized as red may have loans, building permits, and on-site sewage disposal permits denied for properties connected or to be connected to the system. If the Water System's operating permit turns red, it will remain in that category until the system has returned to compliance.

c. Duty to Retain a Certified Waterworks Operator or a Satellite Management Agency. The Water System must, under RCW 70A.120.030, retain a certified waterworks operator in responsible charge of the Water System or retain the services of a satellite management agency (SMA).

d. Civil Penalties. The Department may issue civil penalties in an amount up to five thousand dollars ($5,000) per violation per day, or, in the case of a public health emergency, a penalty of not more than ten thousand dollars ($10,000) per violation per day under the authority of chapter 70A.125 RCW. If a civil penalty is issued, the Department will calculate the amount using each violation and each day of the violation as a separate and distinct offense.

e. Specific Performance. The Department also may seek a court order requiring that your water system specifically perform the directives and ACTIONS TO RETURN TO REGULATORY COMPLIANCE in this Agreement, under RCW 34.05.578.

IN WITNESS WHEREOF:

Derek Pell, Deputy Director of Field Operations and Interim Regional Manager
Northwest Regional Office - Drinking Water
Washington State Department of Health

Date: June 1, 2021

By signing below, I represent that I have read and understood the terms of this Agreement and warrant that I have authority and am duly authorized to sign and bind the Water System to this Agreement.

Jeanne Rodriguez _____ June 3, 2021
Signature Date

Jeanne Rodriguez, Capital Assets Manager Western State Hospital, Water System Representative: print name and title on line above

STATE OF WASHINGTON
DEPARTMENT OF HEALTH
OFFICE OF DRINKING WATER
PO Box 47822 • Olympia, Washington 98504-7822
Tel: (360) 236-3100 • Fax: (360) 236-2253 • *711 Washington Relay Service*

May 22, 2023

Department of Social and Health Services
1115 Washington St SE
Olympia WA 98504-5848
Attention: Larry Covey, LEED AP
Chief, Office of Capital Programs

Subject: Western State Hospital, ID # 95150, Pierce County Water Service to Planned New Hospital

Dear Larry Covey:

I am writing in follow-up to my April 19, 2023 letter to lay out details related to water service to the planned new forensic hospital.

A project such as the planned hospital is an expansion of your Group A public water system that serves the Western State Hospital campus. Our records do not currently include an approved design showing that the existing water system has the capacity to grow.

To expand, a public water system must have an approved Water System Plan (WSP). *WAC 246-290-100*. As soon as possible, please contact Jennifer Kropack jennifer.kropack@doh.wa.gov to schedule a pre-WSP meeting. The last plan DOH received was dated 1979 and was not approved.

WSP content includes but is not limited to:

- A wellhead protection plan. *WAC 246-290-135*.
- A written Operations and Maintenance program including an update to the October 2021 Emergency Response Program focused on risks and risk communication to a vulnerable population. *WAC 246-290-415*.
- A fully documented Cross Connection Control program. *WAC 246-290-490*.
- Following WSP approval, submit project reports and construction documents for all drinking water infrastructure modifications needed to serve the new hospital. *WAC 246-290-110 and -120*.

If Washington State Department of Social Health Services enters into an agreement with another utility that has the technical and managerial capacity to supply drinking water for the entire hospital campus without reliance on the existing campus water system, DSHS will not need to submit a WSP.

Without an agreement as referenced above, the following actions are required of the existing Western State Hospital water system to maintain compliance and ensure safe and reliable drinking water for the staff and residents of the hospital.

- Operate disinfection treatment at each well to provide a minimum free chlorine residual of 0.2 mg/L throughout the distribution system. Monitor distribution residual at least 5 days per week and submit the distribution residual report monthly. *WAC 246-290-451 (5) and (7)*.
- Following approval of a design submittal, install contact time facilities at the East Campus well to provide CT6 disinfection as mitigation for the lack of a sanitary control area around this well. Monitor residual at the CT compliance point five days per week or each day that water is supplied by the treatment plant if it operates less than daily. Submit the treatment plant report monthly. *WAC 246-290-451(4) and (6)*.
- Meet certified operator requirements, including cross connection control specialist. *WAC 246-292*.
    - An operator-in-responsible-charge must have decision-making authority and daily knowledge of water system operations.
- Meet all on-going source and distribution system water quality monitoring including new PFAS requirements. *WAC 246-290-300*.
- Provide at a minimum an annual update to DOH regarding the Water Facilities Inventory (WFI). *WAC 246-290-480*.
    - DSHS needs to document that a portion of Fort Steilacoom Park is served by the WSH water system.
- The current green operating permit is being changed to yellow due to the lack of a water system plan.
- Continue to report annually on water use efficiency and include the status of meter installation along with a description of all actions taken to minimize leakage. *WAC 246-290-800*.
- Submit a lead service line inventory to either the state or EPA, due October 2024. Lead Service Line Inventory—EPA's Lead and Copper Rule Revisions | Washington State Department of Health.

I appreciate the communication and open discussion related to the possibility of a future agreement with a nearby water utility able to provide technical, managerial, and financial capacity to serve this existing and future campus. Until such time that an agreement is provided to our office, we will move forward to support and ensure the residents of the hospital and hospital staff receive safe and reliable drinking water by following the compliance path identified above. Moving forward, my regional staff, primarily Derek Pell, Jennifer Kropack, and Carol Stuckey, will continue to communicate directly with you on all matters regarding existing and future water supply for facilities located on the Western State Hospital campus. Our normal practice is to communicate with management and a certified operator who directly works on the water system; if you wish to name a person in that role for our regional communications, please let us know.

Sincerely,

Holly Myers
Director, Office of Drinking Water
Environmental Public Health
Washington State Department of Health

cc: Jeanne Rodriguez, Capital Asset Manager, Washington State Department of Social and Health Services
Aaron Martinez, Construction Project Coordinator 4, Washington State Department of Social and Health Services
Bartek Tarnowski, Facilities Manager, Washington State Department of Social and Health Services
Aniela Sidorska, Regional Compliance Program Manager, Washington State Department of Health
Jennifer Kropack, Regional Planner, Washington State Department of Health
Derek Pell, Regional Manager, Washington State Department of Health
Carol Stuckey, Regional Engineer, Washington State Department of Health