

APPENDICES

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Appendix A

Retail Water Service Area Agreement

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**INTERLOCAL AGREEMENT
FOR ESTABLISHING WATER UTILITY SERVICE AREA BOUNDARIES
AS IDENTIFIED BY THE KITSAP COUNTY
COORDINATED WATER SYSTEM PLAN**

PREAMBLE

The Interlocal Agreement for the water utility planning area boundary identifies the external boundary of the area for which the designated water purveyor has assumed retail water service responsibility. The responsibilities accepted by the water purveyor area outlined in the Kitsap County Coordinated Water System Plan (CWSP), and as defined by the adopted rules and regulations of the Department of Health (DOH). This agreement does not create a new government entity nor does it give new authorities or responsibilities to the water purveyor or to the county or state regulatory agencies, but rather acknowledges the geographical area for these designated service responsibilities. This agreement is in effect so long as the water utility remains as a public water system purveyor or until an agreement amendment is required.

The terms used within this agreement shall be as defined in the implementing regulations of Chapter 70.116 RCW, except as identified below:

1. Kitsap County Water Planning Area Map shall mean the map referenced in the Interlocal Agreement as Attachment A for the retail service area, except as amended in accordance with the CWSP procedures and with the concurrence of the affected water purveyors.
2. Retail Service Area shall mean the designated geographical area in which a purveyor is responsible for the planning and provision of water service to its customers. A wholesale water supplier shall not provide water to individual customers in another purveyor's retail service area except with the concurrence of the purveyor responsible for the geographical area in question.
3. Lead Agency for administering the Kitsap County Water Utility Service Area Agreements and planning area maps shall be the Bremerton-Kitsap County Health District unless otherwise established by amendment to the CWSP.

The authority for the agreement is granted by the Public Water System Coordination Act of 1977, Chapter 70.116 RCW, having been properly initiated through the provision of RCW 70.116.040.

WHEREAS, Such an agreement is required in WAC 248-56-730, Service Area Agreements-Requirements, of the Public Water System Coordination Act; and

WHEREAS, Designation of retail water service planning areas, together with the cooperation of utilities, will help assure that time, effort, and money are best used by avoiding unnecessary duplication of service; and

WHEREAS, Definite future planning areas will facilitate efficient planning for, and provision of, water system improvements within Kitsap County as growth occurs; and

WHEREAS, Definite retail and wholesale utility planning areas will help assure that water reserved for public water supply purposes within Kitsap County will be utilized in the future in an efficiently planned manner; and

WHEREAS, no separate legal or administrative entity will be created by this agreement;

NOW, THEREFORE, the undersigned party, having entered into this agreement by their signature, concurs with and will abide by the following provisions:

Section 1 Planning Area Boundaries. The undersigned utility acknowledges that the Kitsap County Water Utility Future Planing Area Maps, included as Attachment A to this agreement, identify the utility's future area of water service and planning responsibilities. The undersigned further acknowledges that there are no service area conflicts with adjacent water utilities, or, where such conflict exists, agrees that no new water service will be extended within disputed areas until such conflicts are resolved.

Section 2 Common Service Area Transfer. It is understood that utilities may initially continue existing water service within the boundaries of neighboring utilities, as defined in Section 1 hereof. Such common service areas, if they exist, are described in Attachment B to this agreement. Also included in Attachment B are copies of, or a list of, all resolutions, ordinances, or agreements enabling these uncontested overlays. The undersigned utility agrees that any water line for retail service extending outside of the retail service area boundary, as set forth in Section 1, shall be phased out and service transferred to the designated adjacent utility on an economic basis or by mutual agreement.

Economic basis consideration may include, but are not limited to:

- a) A determination by the present owner of service lines that maintenance, repair, and/or replacement costs exceed attributable income.
- b) Planned or imminent major street improvements or major improvements to either or both water systems which include an opportunity to transfer service.

The terms of the transfer of planning areas described in this Section shall be established in a separate agreement among the adjacent utilities whose boundaries area affected.

Section 3 Boundary Streets. Unless separate agreements exist with adjacent utilities, this party agrees that the utility which is located to the north and/or east of boundary streets between this party and adjacent utilities will be entitled to provide future water service on both sides of those streets. Depth of service on boundary streets shall be limited to one platted lot or as otherwise agreed by the utilities. Existing services on boundary streets shall remain as connected unless transfer of service is agreed to by both parties, as per Section 2. These provisions do not disallow the placement of mains in the same street by adjacent utilities where geographic or economic constraints require such placement for the hydraulic benefit of both utilities.

Section 4

Boundary Adjustments. If, at some time in the future it is in the best interest of the undersigned party to make service area boundary adjustments, such modification must be by written concurrence of all involved utilities and the proper legislative authority(ies). These written modifications must be noted and filed with the designated Kitsap County lead agency and DOH. It is understood by the undersigned utility that it may decline to provide service within its designated planning area boundary, but in that case, an applicant may be referred to other adjacent utilities, to a prequalified Satellite System Management Agency (SSMA), or a new utility may be created and the original planning area boundary will be adjusted accordingly.

Section 5

Service Extension Policies. The undersigned utility agrees that in order to expand its water service area, other than by addition of retail customers to existing water mains, or to serve in the capacity of a pre-qualified SSMA, it shall have adopted design standards and Utility Service extension policies. The design standards shall meet or exceed the Kitsap County Coordinated Water System Plan Minimum Standards and Specifications.

This agreement by reference includes the following attachments:

Attachment A: Kitsap County Utility Future Service Area Map (See Section 1)

Attachment B: Common Service Area Agreement - Optional - Utility may attach copies or list such agreements if relevant (See Section 2)

IN WITNESS WHEREOF, the undersigned party has acknowledged having the authority to, and has executed this Agreement as of September 9, 1997.

Manenester Water District
Water Utility

William F. Payne
Representative

Chairman, Board of Commissioners
Title

Receipt Acknowledged:

Date

mun/water1/policy/interloc196

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INTERLOCAL AGREEMENT

ANNAPOLIS WATER DISTRICT AND MANCHESTER WATER DISTRICT MODIFYING THE WATER UTILITY RETAIL SERVICE AREA BOUNDARIES IN ACCORDANCE WITH THE KITSAP COUNTY COORDINATED WATER SYSTEM PLAN

PREAMBLE

This Interlocal Agreement modifies the water utility retail service area between Annapolis Water District and Manchester Water District. The following properties are being transferred to the Manchester Water District retail service area.

WHEREAS, The Kitsap County Coordinated Water System Plan applies to both Annapolis Water District and Manchester Water District; and

WHEREAS, Designation of retail water utility service areas, together with the cooperation of adjacent water utilities, will help assure that time, effort, and money are best used by avoiding unnecessary duplication of service; and

WHEREAS, Annapolis Water District and Manchester Water District have determined that it is in the public's best interest to make the following adjustment to their retail service boundaries;

NOW, THEREFORE, the undersigned parties, having authority by their Board of Commissioners entered into this Agreement by their signature.

Boundary Adjustments. It is in the best interest of Annapolis Water District and Manchester Water District to make the following retail service area boundary adjustments. The below listed tax parcels are hereby transferred from Annapolis Water District to the retail service area of Manchester Water District.

Blocks 4581-008, 4581-009

South ½ S16 T24N R2E

Kitsap County WA

Service Continuity The following property is currently served by Annapolis Water District and would continue being served by this District until (1) the customer asked to transfer to Manchester Water District; (2) the property is redeveloped; or (3) both Districts agree to change the water service for the specific properties:

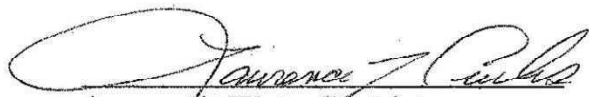
3884 Nevada Ave E Port Orchard WA 98366

Tax Lot No: 4581-008-005-0007

This agreement by reference includes the following attachments:

Attachment A: Map of Modification to Kitsap County Water Utility Retail Service Area Map.

IN WITNESS WHEREOF, the undersigned parties acknowledge having the authority to, and have executed this Agreement as of 15 Aug 07.


Annapolis Water District

Lawrence J. Cutler
Representative

General Manager
Title


Manchester Water District

Kyle D. Galpin
Representative

Chairman
Title

Receipt Acknowledged and adjacent purveyor concurrence certified:


(KCHD)

8/27/07
Date

Copies to Department of Health and Kitsap County PUD #1.

INTERLOCAL AGREEMENT

WEST SOUND UTILITY DISTRICT AND THE MANCHESTER WATER DISTRICT MODIFYING THE WATER UTILITY RETAIL SERVICE AREA BOUNDARIES IN ACCORDANCE WITH THE KITSAP COUNTY COORDINATED WATER SYSTEM PLAN

PREAMBLE

This interlocal agreement modifies the water utility retail service area between West Sound Utility District and Manchester Water District. The following property is being transferred to West Sound Utility District's retail service area:

1304, 1534 and 1546 Bulman Rd SE; 5672 and 672 SE Bulman Ave.; and 5637 SE Mile Hill Drive, Port Orchard, WA. Tax Account Numbers: 4514-000-004-0007, 4514-000-003-0503, 4514-000-003-0107, 4514-000-003-0008, 4514-000-003-0206, 4514-000-014-0302, 4514-000-014-0005, and 4514-000-013-0006.

WHEREAS, the Kitsap County Coordinated Water System Plan applies to both Manchester Water District and West Sound Utility District (formerly known as Annapolis Water District); and

WHEREAS, designation of retail service areas, together with the cooperation of adjacent water utilities, will help assure that time, effort, and money are best used by avoiding unnecessary duplication of service; and

WHEREAS, Manchester Water District and West Sound Utility District have determined that it is in the public's best interest to make the following adjustment to their retail service boundaries; Now, **THEREFORE**,

The undersigned parties, having authority by their Board of Commissioners, hereby enter into this Agreement by their signature on behalf of the represented Districts.

Section 1. Boundary Adjustment. It is in the best interest of Manchester Water District and West Sound Utility District to make the following retail service boundary adjustments. The below tax parcels are hereby transferred from the retail service area of Manchester Water District to the retail service area of West Sound Utility District.

Address: 1304, 1534 and 1546 Bulman Rd SE; 5672 and 672 SE Bulman Ave.; and 5637 SE Mile Hill Drive, Port Orchard, WA

Tax Account Numbers: 4514-000-004-0007, 4514-000-003-0503, 4514-000-003-0107, 4514-000-003-0008, 4514-000-003-0206, 4514-000-014-0302, 4514-000-014-0005, and 4514-000-013-0006.

Area: 17.92 acres

Section 2. **Service Continuity.** This property to be transferred is currently undeveloped. Therefore water service continuity will not be affected.

Section 3. **Attachments.** This Agreement by reference includes the following attachments:

Attachment A: Map of Modification of Kitsap County Water Utility Retail Service Area, and

Attachment B: Kitsap County Assessor's Map (Parcel Search)

IN WITNESS WHEREOF, the undersigned parties acknowledge having the authority to, and have executed this Agreement as of SEPT. 6, 2012.



West Sound Utility District
Michael R. Wilson
General Manager



Manchester Water District
Dennis O'Connell
General Manager

Receipt Acknowledged and adjacent purveyor concurrence certified:

Kitsap County Health District

Printed Name

Date of Acknowledgment: _____

Copies to Kitsap County Department of Health and Kitsap PUD#1

Legend

WSUD_Corporate Boundary

Water_District

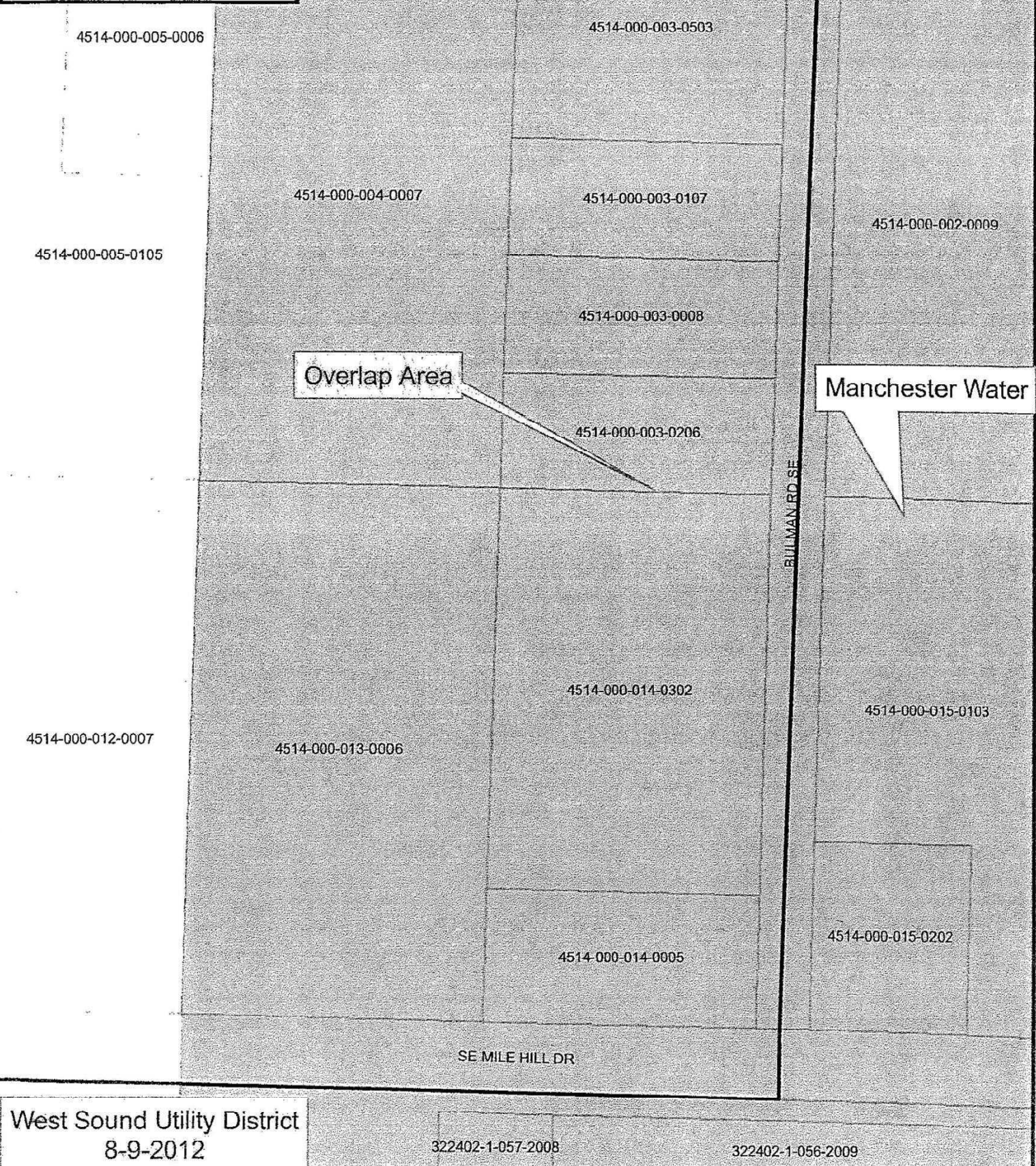
City of Port Orchard

Manchester Retail Service Area

WSUD Retail Service Area

West Sound
UTILITY DISTRICT

Attachment B



Appendix B

Water Facilities Inventory (WFI) Form

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WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter: 1
Updated: 01/21/2025

Printed: 1/31/2025
WFI Printed For: On-Demand
Submission Reason: Source Update

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

1. SYSTEM ID NO. 50700 2	2. SYSTEM NAME MANCHESTER WATER DISTRICT	3. COUNTY KITSAP	4. GROUP A	5. TYPE Comm
6. PRIMARY CONTACT NAME & MAILING ADDRESS TONY LANG [GENERAL MANAGER] PO BOX 98 MANCHESTER, WA 98353		7. OWNER NAME & MAILING ADDRESS MANCHESTER WATER DISTRICT GENERAL MANAGER TONY LANG PO BOX 98 MANCHESTER, WA 98353		
STREET ADDRESS IF DIFFERENT FROM ABOVE ATTN MANCHESTER WATER DISTRICT ADDRESS 2081 SPRING ST CITY PORT ORCHARD STATE WA ZIP 98366		STREET ADDRESS IF DIFFERENT FROM ABOVE ATTN MANCHESTER WATER DISTRICT ADDRESS 2081 SPRING ST CITY PORT ORCHARD STATE WA ZIP 98366		
9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION		
Primary Contact Daytime Phone: (360) 871-0500		Owner Daytime Phone: (360) 871-0500		
Primary Contact Mobile/Cell Phone: (360) 900-6472		Owner Mobile/Cell Phone: (360) 900-6472		
Primary Contact Evening Phone:		Owner Evening Phone: (xxx)-xxx-xxxx		
Fax:	E-mail: txxxg@manchesterwater.org	Fax: (360) 871-0455	E-mail: txxxg@manchesterwater.org	
11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)				
☐ Not applicable (Skip to #12) ☒ Owned and Managed SMA NAME: <u>MANCHESTER WATER DISTRICT</u> SMA Number: 132 ☐ Managed Only ☐ Owned Only				
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)				14. STORAGE CAPACITY (gallons)
☐ Association ☐ County ☐ Investor ☒ Special District ☐ City / Town ☐ Federal ☐ Private ☐ State				3,300,000

- SEE NEXT PAGE FOR A COMPLETE LIST OF SOURCES -

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO. 50700 2	2. SYSTEM NAME MANCHESTER WATER DISTRICT	3. COUNTY KITSAP	4. GROUP A	5. TYPE Comm
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15	16 SOURCE NAME	17 INTERTIE	18 SOURCE CATEGORY												19 USE	20	21 TREATMENT						22 DEPTH	23	24 SOURCE LOCATION			
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. 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 INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	WELL #1 APO507		X										X			Y		X	X				114	250	NW SW	22	24N	02E
S02	WELL # 2 AAB484		X										X			Y		X	X				95	180	NW SW	22	24N	02E
S03	InAct 05/04/2004 WELL #3 AAB485		X										X			Y		X	X				185	100	SE NE	33	24N	02E
S04	WELL #4 AAB486		X											X		Y		X					436	50	SE SW	29	24N	02E
S06	WELL #6 WW AAB488			X									X			Y	X						479	350	SW NE	33	24N	02E
S07	WELL #7 WW AAB489			X									X			Y	X						476	250	SW NE	33	24N	02E
S09	WELL #9 AAB491		X										X			Y		X	X				303	650	NE NW	10	23N	02E
S10	WELL #10 AAC743		X										X			Y		X	X				359	280	NE NW	21	24N	02E
S11	WELL #11 AAB493		X										X			Y		X	X				277	70	NW NE	21	24N	02E
S12	InAct 09/20/2017 WF (S01,S02) - Inac			X									X			Y		X	X				95	430	NW SW	22	24N	02E
S14	Garfield WF (S06,S07)			X									X			Y		X	X				476	600	SW NE	33	24N	02E
S15	WELL #5R BCS880		X										X			Y		X	X				236	250	NE NW	10	23N	02E

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
50700 2	MANCHESTER WATER DISTRICT	KITSAP	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?)		3452	Unspecified
A. Full Time Single Family Residences (Occupied 180 days or more per year)	3417		
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	4		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	35		
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	
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	21	21	
28. TOTAL SERVICE CONNECTIONS		3473	

29. FULL-TIME RESIDENTIAL POPULATION													
A. How many residents are served by this system 180 or more days per year? 8630													

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

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students, daycare children and/or employees are present each month that are NOT already included in the residential population?	1807	1807	1807	1807	1807	1807			1807	1807	1807	1807
B. How many days per month are they present?	23	20	23	22	23	13			19	23	22	23

33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	10	10	10	10	10	10	10	10	10	10	10	10

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: _____

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<u>WS ID</u>	<u>WS Name</u>
50700	MANCHESTER WATER DISTRICT

Total WFI Printed: 1



Water Facilities Inventory (WFI)

Report Create Date: 1/31/2025

Water System Id(s): 507002

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

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Appendix C

Consistency Statement Checklist

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Local Government Consistency Determination Form

331-568 • 8/10/2023

Water System Name: [Click/tap here to enter text](#) PWS ID: [Click/tap here to enter text](#)

Planning/Engineering Document Title: [Click/tap here to enter text](#) Plan Date: [Click/tap here to enter text](#)

Local Government with Jurisdiction Conducting Review: [Click/tap here to enter text](#)

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.

	For Use by Water System	For Use by Local Government
Local Government Consistency Statement	Identify page(s) in submittal	Yes or Not Applicable
a) The water system service area is consistent with the adopted land use and zoning within the service area.	Enter here	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.	Enter here	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.	Enter here	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.	Enter here	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.	Enter here	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.

Signature

[Enter date](#)
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.



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.

Appendix D

SEPA Checklist

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DETERMINATION OF NON-SIGNIFICANCE

COMPREHENSIVE WATER SYSTEM PLAN WAC 197-11-970

Description of Proposal: The proposal is to adopt the District's Comprehensive Water System Plan (CWSP) that outlines a series of capital improvements necessary to implement adopted Growth Management Plans and Policies and comply with Washington State Department of Health Requirements.

Proponent: Manchester Water District

Location of Proposal: The proposal addresses water system operations and improvements for the Manchester Water District's service area. The District is located within the unincorporated area of Kitsap County, within and surrounding the communities of Manchester, Southworth, South Colby, and Harper. The service boundaries are generally south of Bainbridge Island, west of Puget Sound and Blake Island, east of Long Lake Road and north of Sedgwick Road.

Lead Agency: Manchester Water District

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after a review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public upon request.

This Determination of Non-Significance (Determination) is issued under WAC 197-11-340(2) and relevant Manchester Water District Resolutions. There is a 14-day comment period for this Determination. Written comments may be submitted to the address listed below within 14-days of the date of this Determination.

This Determination is part of a Phased Review under the provisions of SEPA (WAC 197-11-060(5)). Subsequent project-specific environmental reviews will be conducted as individual capital improvements contemplated in the plan are pursued.

SEPA CHECKLIST

A. BACKGROUND

1. Name of proposed project, if applicable:

Manchester Water District
Water System Plan 2025

2. Name of applicant:

Manchester Water District

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

Tony Lang, General Manager
Manchester Water District
PO Box 98
Manchester WA 98353-0098
Phone: 360-871-0500
Email: tlang@manchesterwater.org

4. Date checklist prepared:

February 13th 2025

5. Agency requesting checklist:

Manchester Water District

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

The intent is to adopt Water System Plan 2025 as soon as possible. WSP 2025 will be updated in 10-years as required by state regulation.

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

Yes, each year the capital improvement plan is evaluated and prioritized based on funding. This plan will be updated in 2035 as required by state regulation

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

Additional environmental investigations may be required for capital improvements on a project-by project basis. Environmental documentation including threshold determination and other documents will be completed on specific projects in accordance with the State Environmental Policy Act.

9. **Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**

None known.

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

Washington State Department of Health

11. **Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)**

WSP 2025 provides capital improvement and financial planning for the next 10-years. The Plan details the service area, as well as the construction, operation, and maintenance requirements for the water system.

12. **Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

WSP 2025 addresses water system operations and improvements for the Manchester Water District's service area. The District is located within the unincorporated area of Kitsap County, within and surrounding the communities of Manchester, Southworth, South Colby, and Harper. The service boundaries are generally south of Bainbridge Island, west of Puget Sound and Blake Island, east of Long Lake Road and north of Sedgwick Road.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site:

Hilly.

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

This issue will be addressed for each capital improvement.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

This issue will be addressed for each capital improvement.

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

This issue will be addressed for each capital improvement.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

This issue will be addressed for each capital improvement.

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

This issue will be addressed for each capital improvement.

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

This issue will be addressed for each capital improvement.

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

This issue will be addressed for each capital improvement.

2. **Air**

- a. **What types of emissions to the air would result from the proposal (i.e., dust, automobile odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities.**

This issue will be addressed for each capital improvement.

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

This issue will be addressed for each capital improvement.

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

This issue will be addressed for each capital improvement.

3. **Water**

- a. **Surface:**

- 1) **Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river into which it flows.**

Yes, Puget Sound, Clam Bay, Curley Creek, Duncan Creek, Beaver Creek, and Salmonberry Creek.

- 2) **Will the project require any work over, in or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

This issue will be addressed for each capital improvement.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

This issue will be addressed for each capital improvement.

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

No.

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

Clam Bay, Curley Creek, Duncan Creek, Beaver Creek, and Salmonberry Creek
100-year flood plains are located within the District's service area.

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

None Proposed.

b. Ground

- 1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities, if known.

Yes, groundwater will be withdrawn from wells to serve District customers.

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

None.

c. **Water Runoff (including storm water):**

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (including quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

This issue will be addressed for each capital improvement.

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

No.

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

This issue will be addressed for each capital improvement.

4. **Plants**

a. **Check or circle types of vegetation found on the site:**

X deciduous tree: alder, maple, aspen, other

X evergreen tree: fir, cedar, pine, other

X shrubs

X grass

X pasture

— crop or grain

— wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other

— water plants: water lily, eelgrass, milfoil, other

X other types of vegetation

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

This issue will be addressed for each capital improvement.

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

This issue will be addressed for each capital improvement.

- d. List threatened or endangered species known to be on or near the site. This

This issue will be addressed for each capital improvement.

5. Animals

- a. List any birds and animals which have been observed on or near the site or are known to be on or near the site:

birds: hawk, heron, eagle, songbirds

mammals: deer, bear, elk, beaver

fish: bass, salmon, trout, herring, shellfish

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

Bald Eagle.

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

Entire region is part of the Pacific flyway for migratory birds.

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

This issue will be addressed for each capital improvement.

6. **Energy and Natural Resources**

- a. **What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.**

Electrical power is used to operated pumps and other activities, e.g. lights and heat.

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

No.

- c. **What kind of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:**

This issue will be addressed for each capital improvement.

7) **Environmental Health**

- a. **Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.**

No.

- 1) **Describe special emergency services that might be required.**

None known.

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

The District has Operational & Maintenance plans in place to prevent hazards from occurring and Emergency Response plans in the event of a hazard.

b) Noise

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

None.

- 2) What types of levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.**

Noise associated with construction projects and the operation of equipment for pump stations.

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

Insulated enclosures and exhaust mufflers.

8. Land and Shoreline Use

- a. What is the current use of the site and adjacent properties?**

Primarily rural residential, some commercial, and open spaces throughout the District.

- b. Has the site been used for agriculture? If so, describe. No.**

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

All types, see 8.a., above.

- d. Will any structure be demolished? If so, what?**

This issue will be addressed for each capital improvement.

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

Generally rural, rural residential, and some commercial, see Figure 3-1, Land Use Map.

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

Varies, see Chapter 3, Land Use & Population.

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

Rural.

- h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.**

Yes, sensitive areas may be found throughout the District. This issue will be addressed for each capital improvement.

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

None.

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

None.

- k. Proposed measures to avoid or reduce displacement impacts, if any: Not**

applicable.

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

CWSP-06 is consistent with and implements the Kitsap County Comprehensive Plan.

9. Housing

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

Not applicable.

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

Not applicable.

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

Not applicable.

10. Aesthetics

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

This issue will be addressed for each capital improvement.

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

This issue will be addressed for each capital improvement.

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

This issue will be addressed for each capital improvement.

11. Light and Glare

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

None.

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

No.

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

None.

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

None.

12. Recreation

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

Manchester Boat Ramp and Park, Harper Dock, Puget Sound, Blake Island, Manchester State Park.

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

No.

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

Not applicable.

13. Historic and Cultural Preservation

- a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.**

No. This issue will be addressed for each capital improvement.

- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.**

Not applicable.

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

Not applicable.

14. Transportation

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any:**

This is a non-project action. Not applicable.

- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

Yes, this is a non-project action.

- c. How many spaces would the completed project have? How many would the project eliminate?

None.

- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

This will be addressed for each capital improvement.

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

Not applicable.

- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

None.

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

This issue will be addressed for each capital improvement.

15. Public Services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No.

- b. Proposed measures to reduce or control direct impact on public services, if any:

Not applicable.

16. Utilities

a. List utilities currently available at the site:

Electricity, natural gas, water, refuse, telephone, sanitary sewer, septic

other:

b. Describe the utilities that are proposed for the project, the utility providing the services, and the general construction activities on the site or in the immediate vicinity which might be needed.

WSP 2025 identifies water capital improvements; see Chapter 9, Water System Improvements.

C. SIGNATURE

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

Signature: S. J. C. 00

Date Prepared: 12-26-18

D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS

1. **How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?**

Capital improvement projects noted in the plan will result in temporary construction equipment exhaust, dust, and noise.

Proposed measures to avoid or reduce such increases are:

Projects will require compliance with local and state air quality, noise regulations, and best management practices.

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

This issue will be addressed for each capital improvement.

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

This issue will be addressed for each capital improvement.

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

None anticipated.

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

This issue will be addressed for each capital improvement.

4. **How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historical or cultural sites, wetlands, floodplains, or prime farmlands?**

None of these areas will be impacted.

Proposed measures to protect such resources ore to avoid or reduce impacts are:

Not applicable.

5. **How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plan?**

WSP 2025 is consistent with and supports all adopted and applicable Growth Management Act Plans.

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

Not applicable.

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

WSP 2025 is consistent with and supports all adopted and applicable Growth Management Act Plans.

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

Not applicable.

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

No known conflicts.

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Appendix E

Water Use Efficiency Program

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Manchester Water District
PO Box 98
Manchester WA 98353-0098
(360) 871-0500

MANCHESTER WATER DISTRICT

Resolution No. 2025-01

A RESOLUTION UPDATING DISTRICT WATER USE EFFICIENCY (WUE) GOALS

WHEREAS, in 2003, Washington State legislature passed the Municipal Water Law which requires municipal water suppliers to develop water use efficiency goals in accordance with the Water Use Efficiency (WUE) Rule; and

WHEREAS, the WUE Rule intends to reduce the demand growing communities, agriculture, and industry have placed on our state's water resources, and better manage these resources for fish and wildlife; and

WHEREAS, municipal water suppliers are obligated under the WUE Rule to enhance the efficient use of water by the system and/or its consumers; and

WHEREAS, on March 12, 2019, the District Board updated its WUE Goals with an emphasis to reduce average per capita consumption by 5-percent over a 10-year period using 2015 as the beginning year; and

WHEREAS, WAC 246-290-830 requires WUE Goals to be evaluated and established at least every 6-years through a public process; and

WHEREAS, a public forum was scheduled for February 11, 2025, providing an opportunity for consumers and the public to participate in establishing the District's new WUE goals; and

WHEREAS, on January 27, 2025, public notice was issued at least two weeks in advance of the public meeting utilizing the District website, physically posted meeting notices, and through the Department of Health website; and

WHEREAS, public notice included the purpose of the meeting, date, time and place, including where materials supporting the rationale for the proposed goals can be reviewed; and

WHEREAS, the Board reviewed and considered all comments received from the public prior to adopting the District's new goals; and

WHEREAS, on February 11, 2025, after discussion and evaluation of public comments and the results from the previously established goals, the Board has determined the new WUE Goals shall be as follows:

1. Reduce per capita consumption by 5% over 10-years, utilizing 2022 as the base year (64gpd).
2. Continue to educate residents about water conservation practices through outreach programs, advocacy groups, bill stuffers, and local events.
3. Maintain a 3-year Distribution System Leakage (DSL) average below 9% through improved leak detection audits and improved record keeping.
4. Improve indoor conservation kit messaging and distribution.

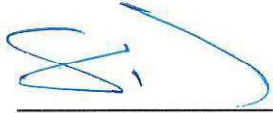
NOW THEREFORE BE IT RESOLVED that the Board of Commissioners of the Manchester Water District hereby adopts the following Water Use Efficiency Goals for the next 6-years or when goals have not been met and need to be reevaluated.

THIS RESOLUTION was duly considered and approved by the Manchester Water District Board of Commissioners in a regularly scheduled open public meeting on February 11, 2025.

1. **Ratification.** Any act consistent with the authority granted pursuant to this Resolution occurring prior to the effective date of this Resolution is hereby ratified and affirmed; and
2. **Severability.** The provisions of this Resolution are declared separate and severable. The invalidity of any clause, sentence, paragraph, subdivision, section or portion of this resolution or the invalidity of the application thereof to any person or circumstances, shall not affect the validity of the remainder of the resolution, or the validity of its application to other persons or circumstances; and
3. **Effective Date.** This resolution shall become effective immediately upon

adoption and signature as provided by law.

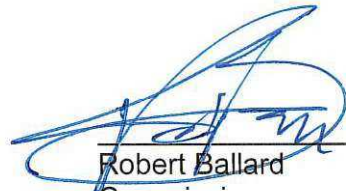
ADOPTED by the Manchester Water District Board of Commissioners on
February 11, 2025.



Steve Pedersen
Board Chair



James E. Strode
Secretary



Robert Ballard
Commissioner

Appendix E - Water Use Efficiency Program

Introduction

Manchester Water District (District) 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 the District's water service area.

Background

The Water Use Efficiency Rule

In September 2003, the Washington State Legislature passed the [Municipal Water Supply – Efficiency Requirements Act](#)¹, also known as the Municipal Water Law. The Municipal Water Law requires the state to implement the WUE Rule. The intent of this rule is to help reduce the demand that growing communities, agriculture, and industry have placed on our state's water resources, and 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](#)² Washington Administrative Code (WAC), Part 8.

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

The [Water Use Efficiency Guidebook](#)³, originally published by the Washington State Department of Health (DOH) 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 to obtain water right permits from the Washington State Department of Ecology (Ecology). The *Water Use Efficiency Guidebook* defines four fundamental elements of a WUE program:

1. Planning that includes collecting data, forecasting demand, evaluating WUE measures, calculating DSL, and implementing a WUE program to meet goals.
2. A DSL standard of 10 percent or less based on a 3-year rolling average.

¹ State of Washington, 58th Legislature. 2003. *Municipal Water Supply - Efficiency Requirements*. House Bill, House of Representatives. 2003.

² Washington State. 2024. WAC 246-290: *Water System Plans—Requirements*. Washington Administrative Code. Accessed December 3, 2024. <https://app.leg.wa.gov/WAC/default.aspx?cite=246-290>.

³ *Water Use Efficiency*. Washington State Department of Health. 2017.

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.

Regional Water Use Efficiency Planning

The District coordinates and participates with the three primary groups promoting WUE on a regional basis in Kitsap County (County). The Partnership for Water Conservation promotes efficient water use by emphasizing water's value as a natural resource and encouraging customers to conserve water through public education and distributed materials such as summer lawn watering calendars. The partnership's members include cities, water districts, regional water associations, and others from Olympia, Washington, to the Canadian border. The Kitsap Public Utility District (KPUD) has also implemented a WUE Program, which encourages customers to conserve water through public awareness and education programs. KPUD promotes WUE at public festivals and includes WUE tips and worksheets on its website. The District also follows, promotes, and displays KPUD recommended WUE measures. Another major WUE group in the County is the Water Purveyors Association of Kitsap County (WaterPAK). This group is an association of larger water purveyors in the County that promotes WUE through public awareness and education programs. The association has established a task force on WUE that plans, implements, and evaluates joint WUE measures between DOH and the individual regional water systems of the County.

Water Supply Characteristics

All water supply to the District's water system is provided by ten active groundwater wells. The supply sources are located within the boundaries of the District's water service area in the southeast portion of Kitsap County, Washington, along the western shores of the Puget Sound. The District has an additional well, Well 12, which is used for monitoring and not currently connected to the water system. The well does not have a water right for municipal supply. Several of the District's wells are located in well fields where they draw water from the same aquifer as another well. The current total capacity of the supply sources is 2,142 gallons per minute (gpm). A more detailed description of each source of supply is provided in Chapter 2.

The District currently holds water right certificates for its supply facilities. A summary of these water rights is presented in Table 1. The District has acquired water right certificates for all the sources shown in the table. The sources are municipal sources of supply being used for municipal water supply purposes. Additional water rights information for each source may be found in Chapter 6 and on the certificates and water rights self-assessment forms that are included in Appendix H.

DOH No.	Source Name	WRTS Record Number	Certificate Number	P
S12	Well Nos. 1 and 2	G1-*00372C and G1-*00373C	GWC 608-A	
S14	Garfield Well Field Well Nos. 6 and 7 Well Field	G1-*05640C	GWC 4458-A	
S13	Well Nos. 5 and 8 Well Field	G1-00529C	G1-00529C	
S04	Well No. 4	G1-20328C	G1-20328C	1
S13	Well Nos. 5 and 8 Well Field	G1-22787C	G1-22787C	
S14	Garfield Well Field Well Nos. 6 and 7 Well Field	G1-23372C	G1-22372C	
S09	Well No. 9	G1-25058C	G1-25058C	
S10	Well No. 10	G1-25331C	G1-25331C	1
S11	Well No. 11	G1-25591C	G1-25591C	1

Notes:

- 1) Supplemental in this case means that the annual volume for this water right is non-additive to existing rights.
- 2) DOH No. = Department of Health Source Number.
- 3) WRTS = Water Right Tracking System (Washington State Department of Ecology).
- 4) GWC = Groundwater Certificate.
- 5) gpm = gallons per minute.
- 6) afy = acre-feet per year.
- 7) NA = Non-additive.

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The District and its sources are located within the Kitsap Watershed, which is also known as Water Resource Inventory Area (WRIA) 15. Most rainfall for this region occurs during the winter months, when water demand is the lowest. During the summer, when precipitation decreases, low stream flows in the WRIA rely on groundwater inflow. Thus, water supply sources from both groundwater and surface water are the least available when water demand is greatest.

The demand for water increases as populations continue to grow, surface water supplies diminish, groundwater levels decline, and climate change puts water supply sources at risk. WRIA 15 has increasing difficulty meeting water demands during the summer months. The District has not yet experienced reduced well capacity due to dropping water levels, but environmental factors such as drought or climate change that affect precipitation and recharge could potentially impact water supply from the District's wells in the future. The water level of the wells should be monitored on a regular basis for fluctuations throughout the year and to see how the wells are impacted by lower than normal precipitation and increasing withdrawal.

In addition, saltwater intrusion into the aquifers that feed the wells could also impact water supply from the wells in the future. Saltwater intrusion has already affected the water supply from Well No. 3. Ecology requires any proposed water withdrawals in the coastal areas of Puget Sound be evaluated for the risk of seawater intrusion into groundwater supplies.

The Watershed Restoration and Enhancement Plan (WREP) was adopted for WRIA 15 in December 2024. Various water offset projects are described in the WREP, but none impact the District. The projects are designed to benefit stream flows and enhance the watershed.

The West Sound Watershed Council leads salmon recovery in the east portion of WRIA 15, where the District is located. Since the District is part of the larger Puget Sound watershed, salmon recovery is guided by implementation of the *Puget Sound Salmon Recovery Plan*, adopted by the National Oceanic and Atmospheric Administration in January 2007. In January 2008, The Puget Sound Partnership was established as the organization that assists with plan implementation, and the West Sound Watershed Council is a part of the Puget Sound Partnership. The West Sound Watershed Council identifies, prioritizes, and implements actions that result in the conservation and recovery of the Puget Sound ecosystem, recovery of salmon, and the protection, improvement, and conservation of water resources for people, fish, and wildlife. The West Sound Watershed Council has completed several projects in the District's area with these goals in mind. At this time the District's supply sources are not directly impacted by any conditions established by the salmon recovery process.

The District's sources of supply are not located in any of the 16 fish-critical basins established by Ecology. In addition, the sources of supply are not directly impacted by any specific conditions established under the Endangered Species Act. However, the District's goals to provide clean, safe drinking water to its customers while conserving its natural resources are consistent with general Endangered Species Act regulations.

In 1981, Ecology adopted an administrative rule titled, "Instream Resources Protection Program – Kitsap, Water Resource Inventory Area (WRIA) 15," which is Chapter 173-515 WAC. This rule established minimum instream flows at specific control stations on the larger rivers in the WRIA, in addition to finding that some water bodies have no additional water available and are therefore closed to future consumptive appropriation. The minimum instream flows are, in effect, a non-consumptive water right held by the state, on behalf of the public, for maintaining water in a river for in-stream uses. The priority date of these minimum instream flow rights is August 23, 1981, which is the effective date of Chapter 173-515 WAC. After the effective date of the rule,

Ecology was required to consider the potential for impact to the identified closed and minimum instream flow restricted water bodies before approving a new water right application and issuing a permit. None of the District's water rights contain provisions or limitations based on Chapter 173-515 WAC; therefore, its existing water rights are not subject to the limitations in Chapter 173-515 WAC.

If the District decides to apply for a new water right for additional water supply, that water right would be younger than (junior to) the minimum instream flow rule and would, therefore, be subject to the rule. In the vicinity of the District, Beaver Creek and Salmonberry Creek are closed year-round, while Curley Creek is seasonally closed and subject to minimum instream flows for the remainder of the year. If subject to a minimum instream flow, a water right holder cannot reduce the flow of the stream when the minimum instream flows are not being met. If subject to a surface water closure, there can be no impact from a requested water right on that surface water body during the closure period, whether it is seasonal or year-round. For groundwater in hydraulic continuity with a surface water body, impacts to the stream can only occur when the actual flow in the stream exceeds the minimum instream flows set in the rule for a particular day. If a proposed groundwater withdrawal is expected to have an impact on a surface water body with a minimum instream flow or closure, the applicant may propose mitigation for those impacts to Ecology and Ecology may issue a water right for that use subject to the implementation of the mitigation plan. Ecology POL-2035, Evaluating Mitigation Plans, addresses what constitutes acceptable mitigation and how such plans are to be evaluated.

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. The District's water use data, demand forecasts, and other planning requirements are contained in Chapter 4 of the Water System Plan (WSP). The District is committed to continuing to collect water use data beyond that presented in Chapter 4 for evaluation of its WUE Program and water use patterns, and forecasting demands for future facilities. The District's WUE Program, which follows, 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.

Water Use Efficiency Goals and the Public Process

Per [WAC 246-290-830](#)⁴, WUE goals must be set through a public process and evaluated and reestablished a minimum of every 10 years. In compliance with the WUE Rule, the District adopted WUE goals at a District Board of Commissioners meeting on February 11, 2025. The WUE goals and objectives adopted in 2025 consisted of:

- Reduce per capita consumption by 5% over 10-years, utilizing 2022 as the base year (64 gpcd).
- Continue to educate residents about water conservation practices through outreach programs, advocacy groups, bill stuffers, and local events.
- Maintain a 3-year Distribution System Leakage (DSL) average below 9% through improved leak detection audits and improved record keeping.
- Improve indoor conservation kit messaging and distribution.

Guidelines mandated that meters must be installed on all service connections by January 22, 2017.

⁴ Washington State. WAC 246-290-830 *Water use efficiency goal setting*. Washington State Administrative Code. Accessed December 3, 2024. <https://app.leg.wa.gov/WAC/default.aspx?cite=246-290-830>.

A fact sheet titled [Water Use Efficiency Changes](#)⁵ was published in 2021. The changes highlighted included the following additional requirements: water level measurement at the primary well, seasonal totals by month for systems pumping from the Columbia River Basin, and a water shortage multiple choice survey.

As documented in Chapter 4 of the WSP, the District successfully reduced the overall water system demand from 235 gallons per day (gpd) per equivalent residential unit (ERU) in 2004 to 163 gpd per ERU in 2015. The District achieved an overall cumulative water savings of approximately 517 million gallons from 2005 through 2015, far exceeding its WUE goal, which would have resulted in a cumulative savings of 128 million gallons from 2005 through 2015. The goal of increasing awareness among all water users was achieved as is evident by the reduction in overall water system demand. In addition, even though the District does not plan to implement the use of reclaimed water, the District did evaluate the use of reclaimed water.

As part of the water system planning process, a public hearing was held on February 12, 2013, to present and discuss WUE goals. At this hearing, the District elected to maintain the goal established in 2007 to achieve a system-wide average water use reduction of 1 percent per year through the year 2020, with 2004 as the base year.

In 2018, the District adopted a new WUE goal to reduce consumption per ERU by an additional 2 percent over the next 10 years and 4 percent over the next 20 years, using the 2010 to 2015 average as the base rate.

The most recent 2023 WUE report indicates the current WUE goal is to reduce average per capita consumption by 5-percent over a 10-year period.

The next forum will take place at 6 year intervals. Background information regarding the District's proposed 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 the District. The District will continue to evaluate and reestablish WUE goals in the future during the water system planning process, or at minimum of every 6 years.

The District will achieve these goals through the implementation of the WUE program that follows. Reducing DSL is a supply side goal that can be achieved through measures as described below that will be carried out mainly by the District. Reducing the demand per ERU is a demand side goal that can be achieved through carrying out measures that affect customers' water use.

Evaluation and Selection of Water Use Efficiency Measures

The District'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 the District that must be either evaluated or implemented.

⁵ Washington State Department of Health *Water Use Efficiency Changes*. January 14, 2021.

The District served 3,284 water service connections in 2015. Based on the number of connections, at least six WUE measures must be evaluated or implemented. Measures that are mandatory cannot be credited towards the system's WUE measures. Since the District implements the minimum number of required measures, a cost-effective evaluation is not required.

Mandatory Measures

Source Meters

The volume of water supplied to the system must be measured using a source meter or other meter installed upstream of the distribution system. Source meters are currently installed and operating at each of the District's wells. If any new sources or interties 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 are currently installed and operating at all connections throughout the distribution system. All future connections that are installed or activated will be equipped with service meters.

Meter Calibration

The District must calibrate and maintain meters based on generally accepted industry standards and manufacturer information. Compliance will be maintained by the District by performing maintenance on the source and service meters every 5 to 10 years at a minimum. Meter calibration is performed on an as-needed basis, typically when meter readings are inconsistent with customer consumption history.

Water Loss Control Action Plan

To control leakage, systems that do not meet the DSL standard must implement a Water Loss Control Action Plan (WLCAP). The District is not required to implement a WLCAP since its 3-year rolling average DSL was approximately 3.1 percent in 2015, as calculated in Chapter 4 of the WSP. However, the District will continue its recordkeeping and will continue estimating authorized but unmetered water consumption uses such as construction, flushing, and firefighting activities to reduce the amount of DSL in the system. It is anticipated that the 3-year rolling average DSL can be further reduced through improved recordkeeping practices, the completion of leak detection surveys, and the calibration of meters.

The District has performed leak detection surveys over the last 6 years and regularly replaces old distribution lines. By continuing these efforts, the District can continue to reduce DSL. The District also plans to calibrate or replace source meters and discourage water theft. By calibrating or replacing its source meters, the District will have more accurate data available to calculate how much water is being delivered to the distribution system. The District also believes construction contractors may have withdrawn unauthorized water from fire hydrants on multiple occasions throughout the last 6 years. Encouraging local contractors to contact the District prior to withdrawing water from unmetered connections will reduce calculated DSL in the water system.

The water loss control methods being implemented or selected for implementation by the District are summarized in Table 2 in the Water Use Efficiency Program Schedule and Budget section of this WUE Program, along with their corresponding schedule and budget. A description of how the District will pay for controlling leakage is provided in Chapter 10 of the WSP.

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 District's newsletters and includes information on the system's DSL, progress towards meeting WUE goals, and tips for customers on using water more efficiently. A copy of the District's 2023 Consumer Confidence Report (CCR) and newsletter is contained in Appendix K of the District's WSP.

In addition to the District's efforts to promote customer education on WUE programs, the District also coordinates and participates with the three primary groups promoting WUE on a regional basis in the County, as mentioned previously. These groups promote WUE within the District's service area in the following ways.

- KPUD currently sponsors the Jr. Water Watchers program in all elementary schools in the County. The program is part of the fourth grade science curriculum. Other materials, books, models, and curriculum are available for use from KPUD. Environmental clubs, day camps, and teacher training are also sponsored by KPUD.
- KPUD, WaterPAK, and the Partnership for Water Conservation provide WUE informational material to the District to distribute to customers.
- WaterPAK and KPUD display exhibits and provide educational materials regarding WUE measures at local fairs.

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. The District currently implements an inverted-block rate structure (charge per unit of water increases with higher use) that is designed to discourage excessive water use. The District's structure is separated into four increasing usage blocks. The water rate is constant until water usage reaches the next usage block and then the customer is charged the corresponding rate.

Reclamation Opportunities

Customers of the District are served by the Manchester Wastewater Treatment Plant, which is operated by Kitsap County Public Works. At this time, the wastewater treatment plant does not provide the level of treatment that would be necessary for water reuse purposes. Currently, the County does not have plans to upgrade the facility to provide the level of treatment that would be necessary for water reuse purposes. However, if it is upgraded in the future, it could be a potential source of reclaimed water for non-potable uses such as irrigation, commercial, government, and/or other beneficial uses for the District. A list of the District's largest water users is shown in Table 4-2 in Chapter 4 of the WSP. The use of reclaimed water by these customers may have the most impact on reducing overall water consumption; therefore, the District will pursue water reclamation activities that target these large water users when adequately treated water is available from the Manchester Wastewater Treatment Plant.

The District has evaluated reclamation opportunities, including reuse of water for irrigation at parks near the wastewater treatment plant and developing a reclaimed water reuse pipeline from the wastewater treatment plant, to identify potential opportunities the District may pursue in the future if reclaimed water is made available. Potential water reclamation opportunities include landscape irrigation for the South Kitsap School

District, operations and maintenance activities for Washington State Ferries, and operations and maintenance activities at the U.S. Environmental Protection Agency, U.S. Navy, and National Oceanic and Atmospheric Administration.

Selected Measures

The District implements four different WUE measures, all of which are existing measures, in addition to those that are mandatory or required to be evaluated. Each of the chosen measures is implemented for all customer classes (e.g., residential, commercial, and government), with the exception of the indoor conservation kits and rebate program that are only implemented for residential customers. Multiplying the four different WUE measures across the customer classes in which they will be implemented, the District implements a total of eight WUE measures. This exceeds the six WUE measures required based on the number of service connections.

Indoor Conservation Kits

The District offers free indoor conservation kits to residential customers. These kits may include low-flow showerheads, faucet aerators, leak detection dye tablets, shower timers, and informational brochures. Additional advertising efforts will be made to promote the availability of these kits, which include placing notices in utility bills, adding links on the District website, and displaying the kits at public events. Since this measure is implemented for residential customers, it counts as one WUE measure for the District's program.

Conservation Rate Structures

Evaluation of rate structures to increase water demand efficiency is required (WAC 246-290-100(4)(j)(iv)), but the implementation of a conservation rate structure is considered a WUE measure (WAC 246-290-810(4)(d)). The District is implementing an inverted-block rate structure for its customers. Since this measure is implemented for all customer classes, it is counted as three additional WUE measures for the District's program.

Rebate Program

The District offers high efficiency washing machine and dishwasher rebate programs for residential customers. The District plans to continue supporting and promoting these rebate programs. Since this measure is implemented for residential customers, it is counted as one WUE measure for the District's program.

Water Bill Showing Consumption History

The District includes consumption history charts and information on water bills. This allows customers to compare usage in the past and track their own progress on conservation efforts. Since this measure is implemented for all customer classes, it is counted as three WUE measures for the District's program.

Water Use Efficiency Program Schedule and Budget

The WUE measures described in the previous section and implemented by the District are summarized in Table 2 with their corresponding schedule and budget.

Table 2
WUE Program Schedule and Budget

Water Use Efficiency Measure	Schedule	Budget
Mandatory Measures		
Source Meters ¹	In Place	\$2,000/yr.
Service Meters	In Place	-
Meter Calibration	In Place	\$10,000/yr.
Water Loss Control Action Plan including Leak Detection Surveys	2025-2035	\$5,000/yr.
Customer Education (Newsletter)	In Place	\$2,500/yr.
Measures that Must be Evaluated		
Rate Structure	In Place	-
Reclamation Opportunities	Ongoing	\$500/yr.
Selected Measures		
Conservation Rate Structures	In Place	
Indoor Conservation Kits	In Place	\$1,500/yr.
Rebate Program	In Place	\$1,000/yr.
Water Bill Showing Consumption History	In Place	-
Note:		
1) Budgeted as part of the District's Operations and Maintenance Program.		

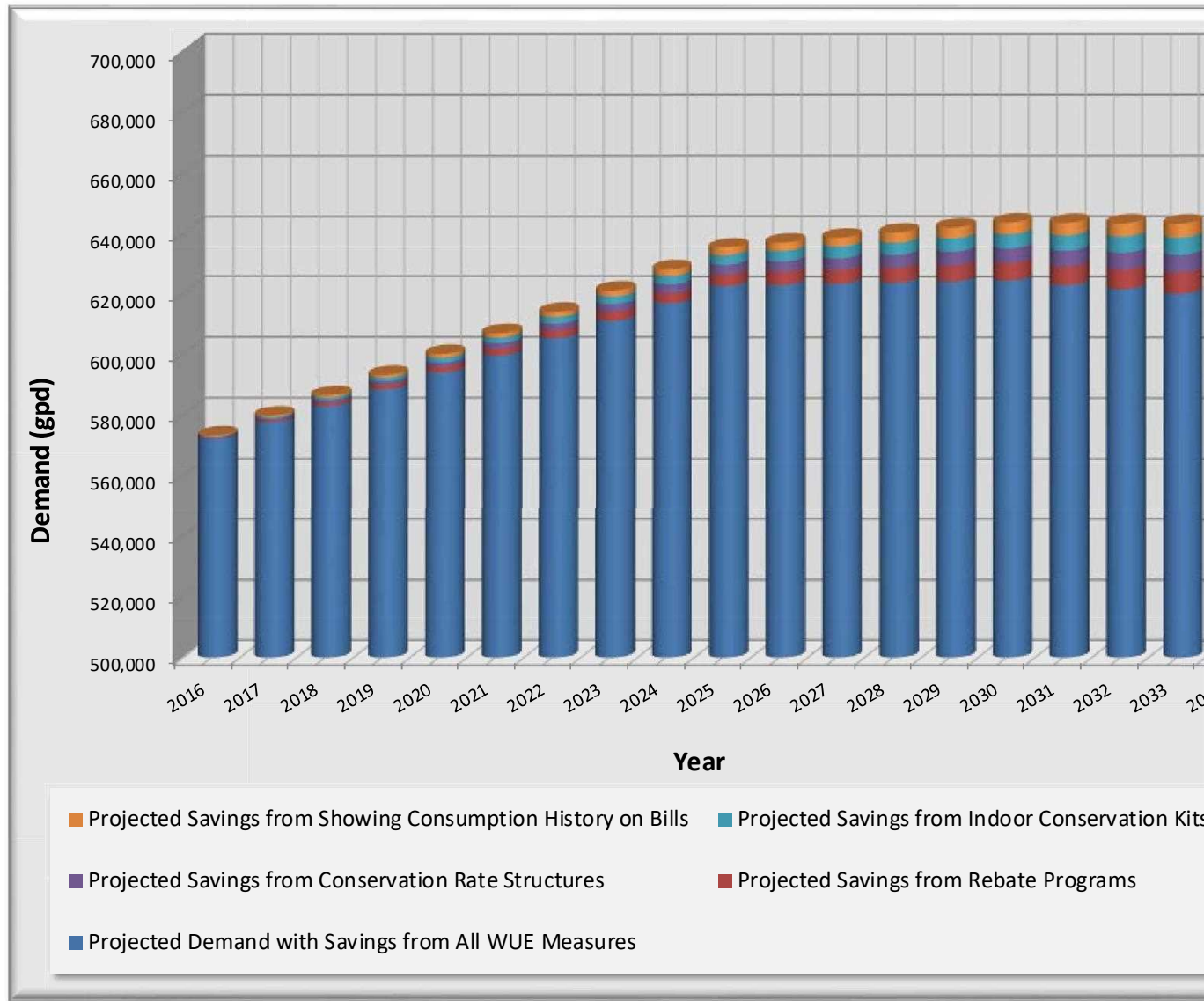


Figure 1 WUE Program Projected Water Savings

Water Use Efficiency Program Evaluation and Reporting

The District will continue to evaluate overall demand per capita and per ERU, water use, and DSL on an annual basis. The District will evaluate the performance of its WUE Program by analyzing demand data and determining the long-term trend of reducing water usage per ERU 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.

The District will continue to provide annual WUE performance reports to its consumers in newsletters and will detail the results of the water use monitoring and progress towards achieving the system's WUE goals. A copy of the District's CCR and newsletter is included in Appendix K of the District's WSP.

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Appendix F

Cross-Connection Control Program

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MANCHESTER WATER DISTRICT
Resolution No. 2025-04

**A RESOLUTION MODIFYING DISTRICT CROSS-CONNECTION CONTROL PROGRAM, POLICIES,
PROCEDURES AND REGULATIONS**

WHEREAS, the Federal Safe Drinking Water Act of 1974, and the statutes of the State of Washington Title 43 RCW and WAC 246-290-490, require that water purveyors protect public water systems from actual and potential contamination; and

WHEREAS, pursuant to WAC 246-290-490, it is the responsibility of the District to protect its water system by implementing and enforcing a Cross-Connection Control Program; and

WHEREAS, on February 12, 2013, the Board of Commissioners previously approved Resolution 2013-03 modifying the District's Cross-Connection Control Program regulations and procedures; and

WHEREAS, during February 2025, staff reviewed and determined modifications to the adopted Cross-Connection Control program, policies, procedures, and regulations are needed; and

WHEREAS, during review of the District's Cross-Control Program, staff confirmed the required minimum elements of a Cross-Connection Control Plan have been met;

- Element 1: Authority
- Element 2: Evaluation of new and existing connections
- Element 3: Procedures for elimination and control
- Element 4: Ensure that at least one CCS is available for plan development and implementation
- Element 5: Inspection and testing
- Element 6: Testing quality assurance program
- Element 7: Procedures for backflow incident response
- Element 8: Consumer Education
- Element 9: Record keeping
- Element 10: Reclaimed water requirements- Not Applicable

NOW, THEREFORE BE IT RESOLVED that the Board of Commissioners of the Manchester Water District hereby adopt the revised Cross-Connection Control Program, attached hereto as Exhibit A, repealing and replacing Resolution 2013-03.

THIS RESOLUTION was duly considered and approved by the Manchester Water District Board of Commissioners in a regularly scheduled open public meeting on March 11, 2025.

1. **Ratification.** Any act consistent with the authority granted pursuant to this Resolution occurring prior to the effective date of this Resolution is hereby ratified and affirmed; and
2. **Severability.** The provisions of this Resolution are declared separate and severable. The invalidity of any clause, sentence, paragraph, subdivision, section or portion of this resolution or the invalidity of the application thereof to any person or circumstances, shall not affect the validity of the remainder of the resolution, or the validity of its application to other persons or circumstances; and
3. **Effective Date.** This resolution shall become effective immediately upon adoption and signature as provided by law.

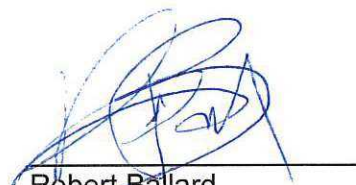
ADOPTED by the Manchester Water District Board of Commissioners on
March 11, 2025.



Steve Pedersen
Board Chair

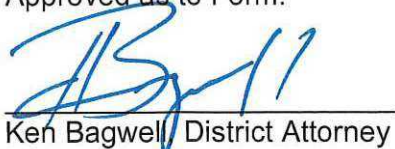


James E. Strode
Secretary



Robert Ballard
Commissioner

Approved as to Form:



Ken Bagwell, District Attorney

CROSS-CONNECTION CONTROL PROGRAM

INTRODUCTION

A cross-connection is any physical connection, actual or potential, between a water system and any source of a non-potable substance. A Cross-Connection Control (CCC) Program is a proactive and ongoing effort by a water purveyor to protect the health of its customers by preventing contamination and pollution of the municipal water supply. This is achieved by preventing backflow of contaminants or pollutants through cross-connections. All public water systems in Washington State are required to implement a CCC Program. The purpose of a purveyor's CCC Program shall be to protect the public water system from contamination via cross-connections. All required elements of a local CCC Program must be documented and included in either the Water System Plan (applicable to the District) or Small Water System Management Program document (not applicable to the District). Although general CCC rules have been in effect for over 20 years, the State mandate for a CCC Program and the required elements of a CCC Program are contained in Washington Administrative Code (WAC) 246-290-490, Cross-Connection Control. The following are the minimum required elements in a CCC Program.

- Adopt a local ordinance, resolution, code, bylaw, or other written legal instrument that establishes the purveyor's legal authority, describes operating policies, technical provisions, and the corrective actions required of consumers to comply with the CCC Program.
- Develop and implement procedures and schedules for evaluating new and existing service connections to assess the degree of hazard posed by the consumer's premises.
- Develop and implement procedures and schedules that eliminate or control cross-connections and ensure approved backflow preventers are properly installed.
- Ensure that personnel, including one certified Cross-Connection Control Specialist (CCS), are provided to develop and implement the CCC Program.
- Develop and implement procedures to ensure approved backflow preventers are properly inspected and tested.
- Develop and implement a backflow prevention assembly testing quality control assurance program.
- Develop and implement procedures for backflow incident response.
- Include CCC Program information in customer education materials.
- Develop and maintain CCC Program records.
- Meet any additional CCC requirements if reclaimed water is distributed or received in the water service area.

DEFINITIONS

Except where specifically designated herein, all “words” used shall carry their customary meaning. The word “shall” is always mandatory, while the word “may” denotes the use of discretion in making a decision. Any definition not found in this section will take its meaning from WAC 246-290.

(1) "Air gap (AG)" means a physical separation between the free-flowing end of a potable water supply pipeline and the overflow rim of an open or non-pressurized receiving vessel. To be an air gap approved by the department, the separation must be at least twice the diameter of the supply piping measured vertically from the overflow rim of the receiving vessel, and in no case be less than one inch, when unaffected by vertical surfaces (sidewalls); and three times the diameter of the supply piping, if the horizontal distance between the supply pipe and a vertical surface (sidewall) is less than or equal to three times the diameter of the supply pipe, or if the horizontal distance between the supply pipe and intersecting vertical surfaces (sidewalls) is less than or equal to four times the diameter of the supply pipe and in no case less than one and one-half inches.

(2) "Approved backflow preventer" means an approved air gap, an approved backflow prevention assembly, or an approved AVB. The terms "approved backflow preventer," "approved air gap," or "approved backflow prevention assembly" refer only to those approved backflow preventers relied upon by the purveyor for the protection of the public water system.

(3) "Approved backflow prevention assembly" means an RPBA, RPDA, DCVA, DCDA, PVBA, or SVBA of make, model, and size that is approved by the department. Assemblies that appear on the current approved backflow prevention assemblies list from the Department of Health.

(4) "Authority having jurisdiction" means the local official, board, department, or agency authorized to administer and enforce the provisions of the Uniform Plumbing Code.

(5) “Auxiliary supply” means any water source or system other than Manchester Water District. This includes, but is not limited to, irrigation systems, ponds, streams, rivers or wells.

(6) "Backflow" means the undesirable reversal of flow of water or other substances through a cross-connection into the public water system. The flow of water in the opposite direction of its intended flow.

(7) "Backflow assembly tester (BAT)" means a person holding a valid BAT certificate issued by the Department of Health.

(8) "Backpressure" means a pressure (caused by a pump, elevated tank or piping, boiler, or other means) on the consumer's side of the service connection that is greater than the pressure provided by the District and which may cause backflow.

(9) "Backsiphonage" means backflow due to a reduction in system pressure in the

purveyor's distribution system and/or consumer's water system.

(10) "Contaminant" means a substance present in drinking water that may adversely affect the health of the consumer or the aesthetic qualities of the water.

(11) "Cross-connection" means any actual or potential physical connection between the District's water system or the consumer's water system and any source of nonpotable liquid, solid, or gas that could contaminate the potable water supply by backflow.

(12) "Cross-connection control program" means the administrative and technical procedures the District implements to protect the public water system from contamination via cross-connections.

(13) "Cross-connection control specialist (CCS)" means a person holding a valid CCS certificate issued from the Department of Health.

(14) "Cross-connection control summary report" means the annual report that describes the status of the District's cross-connection control program.

(15) "DCDA" means a double check detector assembly.

(16) "DCVA" means a double check valve assembly.

(17) "Degree of Hazard" means the low or high classification that shall be attached to all actual or potential cross connections.

(18) "District" shall mean Manchester Water District.

(19) "DOH" means Department of Health.

(20) "Flow-through fire protection system" means a fire sprinkler system that is supplied only by the District's water, does not have a fire department pumper connection, is constructed of approved potable water piping and materials to which sprinkler heads are attached; and terminates at a connection to a toilet or other plumbing fixture to prevent stagnant water.

(21) "Health hazard" means an actual or potential threat of contamination of a physical, toxic, or biological nature that would be a danger to health.

(22) "High health cross-connection hazard" means a cross-connection involving any substance that could impair the quality of potable water and create an actual public health hazard through injury, poisoning, or spread of disease.

(23) "In-premises protection" means a method of protecting the health of consumers served by the consumer's potable water system, located within the property lines of the consumer's premises by the installation of an approved air gap or backflow prevention assembly at the point of hazard, which is generally a plumbing fixture.

(24) "Inspector" means District representative holding a valid CCS certificate in accordance with

the Washington Administrative Code.

(25) "Low cross-connection hazard" means a cross-connection that could impair the quality of potable water to a degree that does not create a hazard to the public health but does adversely and unreasonably affect the aesthetic qualities of potable waters for domestic use.

(26) "Plumbing hazard" means an internal plumbing cross connection in a consumer's potable water system that may be a hazard. Potential hazards include, but not limited to, toilets, sinks, lavatories, washing machines, and irrigation systems. Plumbing cross connections can be located in residential homes, apartments, hotels, and commercial or industrial establishments.

(27) "Point of connection" means the point where the private water main or service line is connected to the District's water system.

(28) "Point of delivery" means the point immediately downstream of the District's water meter.

(29) "Premises" means any piece of property to which water is provided including, but not limited to, all improvements, mobile structures, and structures located on it.

(30) "Premises isolation" means a method of protecting a public water system by installation of approved air gaps or approved backflow prevention assemblies at or near the service connection or alternative location acceptable to the purveyor to isolate the consumer's water system from the purveyor's distribution system.

(31) "PVBA" means a pressure vacuum breaker assembly.

(32) "Reclaimed water" means effluent derived in any part from sewage from a wastewater treatment system that has been adequately and reliably treated, so that as a result of that treatment, it is suitable for beneficial use or a controlled use that would not otherwise occur, and it is no longer considered wastewater.

(33) "RPBA" means reduced pressure backflow assembly.

(34) "RPDA" means reduced pressure detector assembly.

(35) "Service connection" means a connection to a public water system designed to provide potable water to a single-family residence, or other residential or nonresidential population.

(36) "Severe health cross-connection hazard" means a cross-connection which could impair the quality of potable water and create an immediate, severe public health hazard through poisoning or spread of disease by contaminants from radioactive material processing plants, nuclear reactors, or wastewater treatment plants.

(37) “WAC” means the most recent edition of the Washington Administrative Code.

(38) “Water System” shall mean Manchester Water District’s public water system.

PURPOSE AND SCOPE

This document establishes minimum standards for Manchester Water District (District) to protect the public water supply from possible contamination from backflow. This document also describes minimum CCC Program operating policies, and provides guidelines for installation, testing, and maintenance of approved backflow assemblies. In addition, permitting and inspection requirements for existing and new backflow prevention assemblies are described.

AUTHORITY

The Federal Safe Drinking Water Act of 1974 and the statutes of the State of Washington Title 43 Revised Code of Washington (RCW) require purveyors to protect the public water systems from contamination. In addition, WAC 246-290-490 establishes CCC Program requirements for the State. In Washington State, the Department of Health (DOH) is the lead agency for the development and administration of the State’s CCC Program. The District adopted a formal CCC Program with Resolution No. 506, dated September 8, 1992. Subsequent resolutions have been adopted revising and updating the CCC Program to meet DOH requirements. The most recent revision of the Cross-Connection Control Program was adopted March 11, 2025, with Resolution 2025-04.

RESPONSIBILITY

The District is responsible for protecting its public water supply from contamination due to backflow of pollutants through water service connections. If the District determines that a backflow prevention assembly is necessary at a customer’s premises, the District will notify the customer to install an approved backflow assembly on their service line. Installation of said backflow assembly shall be a condition of continued water service from the District. Upon installation, the customer shall arrange for inspection and testing of said assembly. The customer will be responsible for all applicable testing and inspection fees.

FAILURE TO COMPLY

Any person, firm, or corporation who violates any of the provisions of this document or future CCC resolutions may be punished in accordance with the District Code. Any person, firm, or corporation who violates any provisions and requirements of this document shall be subject to the discontinuance of District water to the premises. Discontinuance of the District’s potable supply to the premises shall remain in effect until corrective action, as required by the District, is completed, tested, and approved.

CROSS-CONNECTION CONTROL PROGRAM

The District has implemented the required elements of the CCC Program. This document will describe the District’s current CCC Program. The District is committed to protecting the public water supply from contamination by eliminating potential cross-connections. The District’s CCC

Program that follows includes a statement of its goals and objectives, the evaluation of CCC elements, the program implementation schedule, and recommendations.

CCC PROGRAM GOALS AND OBJECTIVES

The goals and objectives of the District's CCC Program consist of:

- Preventing contamination or pollution of the public water supply by eliminating or properly protecting actual or potential cross-connections; and
- Taking inventory of all potential cross-connections; and
- Maintaining the inspection and testing program for all backflow prevention assemblies. Inspection shall include backflow prevention assembly installations, annual inspection of air gaps, and annual survey of high-hazard facilities. The District will notify customers when testing is due.

The District will achieve these goals and objectives through the implementation of the CCC Program that follows.

EVALUATION OF CCC PROGRAM ELEMENTS

The District is required to develop and implement a CCC Program. All required elements of a local CCC Program must be documented and included in the District's Water System Plan. The evaluation of these CCC Program elements and current level of implementation are presented below.

Cross-Connection Control Resolution

On March 11, 2025, the District adopted Resolution 2025-04 adopting a revised Cross-Connection Control Program. This resolution supersedes all previous resolutions addressing the Cross-Connection Control Program and establishes the authority of the District to enforce policies and procedures defined in the program to protect the public water supply.

Evaluation of Service Connections

This CCC Program element requires that the purveyor develop and implement procedures for evaluating existing and new service connections to assess the risk of connecting the consumer's premises to the District's public water system. This element also requires that the purveyor notify the consumer within a reasonable time frame of the evaluation results. New connections are required to be evaluated prior to service. Existing connections shall be inspected on a schedule acceptable to DOH.

With the previous adoption of Resolution 2013-03, the District established procedures for evaluating new service connections for potential cross-connection. This risk assessment evaluation is performed during the building permit or utility service agreement application review process for new water service applicants. Existing customers are evaluated during the building permit review process for structure alterations or additions, during the business license review process, or upon observation of a modified plumbing system at the residence or business. If a backflow assembly is required as a result of this evaluation, the assembly, owner's name, property address, and other pertinent information is recorded in a database that is maintained by the District. The District has developed and implemented

an evaluation program that assesses the risk of existing water service connections. Potential high-risk cross-connection premises are evaluated first. The District then evaluates other premises, based on potential risk to the water system and budget availability. The evaluation program for existing connections was implemented in 2007.

Table 1 lists standard abbreviations for backflow prevention assemblies. These abbreviations will be used in the tables that follow.

Table 1
Abbreviations

Abbreviation	Description	Level of Protection
AG	Air Gap	1 - Highest
RPBA	Reduced Pressure Backflow Assembly	2
RPDA	Reduced Pressure Detector Assembly	2
DCVA	Double Check Valve Assembly	3
DCDA	Double Check Detector Assembly	3
PVBA	Pressure Vacuum Breaker Assembly	4
AVB	Atmospheric Vacuum Breaker	5
SVBA	Spill Resistant Vacuum Breaker	5 - Lowest

Table 2 lists the premises that are required to have isolation by an air gap or reduced pressure backflow assembly to prevent contamination of the public water system. **Table 3** shows various facilities that require or recommend some form of backflow prevention device.

Table 2
Premises Requiring Mandatory Service Isolation by AG or RPBA

Premises	Premises
Agricultural (farms and dairies)	Mortuaries
Beverage Bottling Plants	Nursing Homes
Car Washes	Petroleum Processing or Storage Plants
Chemical Plants	Piers and Docks
Commercial Laundries & Dry Cleaners	Radioactive Material Processing Plants
Premises with Potable and Reclaimed Water	Nuclear Reactors
Film Processing Facilities	Survey Access Denied or Restricted
Food Processing Plants	Wastewater Lift Stations
Hospitals and Medical Centers	Wastewater Treatment Plants
Irrigation Systems with chemical addition	Unapproved Auxiliary Supply
Laboratories	Dental Clinics
Blood Plasma Centers	Veterinary Facilities
Metal Plating Industries	

Currently, the District requires RPBA's at industrial facilities and any premise with an auxiliary water supply, DCVAs at commercial facilities, DCVAs at multi-family buildings greater than or equal to three stories, DCVAs or AVBs for irrigation, and DCVAs for fire sprinkler systems.

Table 3
Backflow Protection Requirements and Recommendations

Required Service Isolation
Premises with Approved Auxiliary Supply
Irrigation Premises with Fire Sprinkler Systems or Private Hydrants
Tall Buildings (Over 30 feet)
Recommended Service Isolation
Mobile Home Parks
Shopping Centers

Table 4 lists fixtures, equipment, and areas that have the potential to contaminate the public drinking water system. The table also shows the minimum protection required by the District to prevent such contamination.

Table 4
Fixtures, Equipment, and Areas with Backflow Potential

Fixtures, Equipment, and Areas	Protection	Fixtures, Equipment, and Areas	Protection
Air Compressors	DCVA	Janitor Sinks	AVB
Air Conditioning Systems	RPBA	Kitchen Equipment	AVB
Air Washers	RPBA	Laboratory Equipment	RPBA
Aquarium Make-Up Water	AG/RPBA	Laundry Machines, Commercial	RPBA
Aspirators, Medical	AVB	Lavatories	AVB
Aspirators, Vault Drain	RPBA	Livestock Drinking Tanks	DCVA
Aspirators, Weedicide/Herbicide/Pesticide	RPBA	Make-Up Tanks	AG/RPBA
Autoclaves	RPBA	Mobile Carpet Cleaners	RPBA
Autopsy Tables	RPBA	Mop Sinks	AVB
Baptismal Fountain	RPBA,AG/AVB	Outboard Motor Test Tanks	AG/RPBA
Bathtub, Below Rim Filler	Not Allowed	Perchlorethylene Reclaim	AG/RPBA
Bedpan Washers	RPBA	Pesticide Applicator Trucks	AG/RPBA
Beverage Dispensers using CO2	RPBA	Photo Developing Tanks and Sinks	RPBA
Bidets	AVB/AG-Internal	Photostat Equipment	RPBA
Boat Lifts	RPBA	Pipette Washers	AVB
Boiler Feed Lines	AG/RPBA	Potato Peelers	AVB
Bottle Washing Equipment	RPBA	Poultry Feeders	RPBA
Box Hydrants	DCVA	Private Hydrants	DCVA
Brine Tanks	AG/DCVA	Processing Tanks	AG/RPBA
Can Washing Equipment	RPBA	Pump Seal Water	AG/RPBA
Chemical Feeder Tanks	AG/RPBA	Pumps, Pneumatic Ejector	RPBA
Chilled Water Systems	RPBA	Pump Prime Lines	RPBA/DCVA

Continued on Next Page

Table 4 (Continued)
Fixtures, Equipment, and Areas with Backflow Potential

<i>Table Continued</i>			
Chlorinators	RPBA	Pumps, Water Operated Ejector	RPBA
Coffee Urns	AG/AVB	Radiator Flushing Equipment	RPBA
Computer Cooling Lines	AG/RPBA	Recreational Vehicle Dump Stations	RPBA
Condensate Tanks	AG/RPBA	Serrated Faucets	AVB
Cooking Kettles	AG/AVB	Service Sinks	AVB
Cooling Towers	AG/RPBA	Sewer Connected Equipment	AG
Decorative Ponds	AG/RPBA	Sewer Flushing	AG
Degreasing Equipment	RPBA	Shampoo Basins/Hose Rinse	AVB
Demineralized Water System	RPBA	Showers, Telephone	AVB
Dental Cuspidors	RPBA	Sitz Baths	AVB
Detergent Dispensers (Dishwasher)	AVB	Soap Mixing Tanks	AG/RPBA
Dialysis Equipment	RPBA	Solar Heating Systems	RPBA
Dishwashers	AVB	Solution Tanks	AG/RPBA
Drinking Fountains	AG	Spas	AG/RPBA
Dye Vats and Tanks	AG/RPBA	Specimen Tanks	AG/RPBA
Dynamometers	DCVA	Starch Tanks	AG/RPBA
Emergency Generators	RPBA	Stream-Air Sprays	RPBA
Etching Tanks	AG/RPBA	Steam Cleaners	RPBA
Fermenting Tanks	AG/RPBA	Steam Ejectors	RPBA
Fertilizer Injection Equipment	RPBA	Steam Generating Facilities	RPBA
Film Processors	RPBA	Sterilizers	RPBA
Fire Department Connections w/o Chemicals	DCVA/DCDA	Still	RPBA
Fire Department Connections with Chemicals	RPBA/RPDA	Sumps	AG
Fire Sprinkler Systems w/o Chemicals	DCVA/DCDA	Swimming Pools	AG/RPBA
Fire Sprinkler Systems with Chemicals	RPBA/RPDA	Toilets (Internal)	AG
Floor Drains	AG	Trap Primers	AG
Flushing Floor Drains	AVB	Ultrasonic Baths	AG
Foamite Systems	RPBA/RPDA	Urinals (Internal)	AG
Fountains, Ornamental	AG/RPBA	Used Water Systems	RPBA
Fume Hoods	RPBA	Vats	AG/RPBA
Garbage Can Washers	RPBA	Washing Pools	AG/RPBA
Garbage Disposals	RPBA	Wall Hydrants	AVB
Heat Exchangers	RPBA	Wash Basins	AG/AVB
Heat Pumps	RPBA	Wash-Up Sinks	AG/AVB
High Pressure Washers w/o Chemicals	DCVA	Wash Tanks	AG/RPBA
High Pressure Washers with Chemicals	RPBA	Wastewater Lines	AG
Hose Bibs	AVB	Water-Air Sprays	DCVA
Hoses, Kitchen Rinse	AVB	Water Closets (Internal)	AG
Hot Tubs	AG/RPBA	Water Cooled Equipment	RPBA
Hot Water Heating Systems	RPBA	Water Ejectors	RPBA
Hot Water Boilers	RPBA	Water Recirculating Systems	DCVA
Humidifier Tanks and Boxes	AG	Water Settling	RPBA
Hydraulically Operated Equipment	RPBA	Water Treatment Tanks	AG/RPBA
Hydrotherapy Baths	RPBA	Water Trucks	AG/DCVA
Ice Makers	RPBA	Wet Vacuum Systems	RPBA
Industrial Fluid Systems	RPBA	Whirlpool Baths	AVB/DCVA
Interties (Looped) Water Systems	DCVA	Windshield Washer Fluid Aspirators	RPBA
Irrigation Systems w/o Chemicals	DCVA	X-Ray Processors	RPBA
Irrigation Systems with Chemicals	RPBA		

Table 5 summarizes the number of each type of backflow prevention assembly protecting the distribution system as of December 2024.

Table 5
Summary of Backflow Prevention Assemblies

Type of Device	Quantity
AG	1
RPBA	58
DCVA	116
PVBA	0
SVB	0
AVB	0
DCDA	3

Cross-Connection Control and Elimination

This CCC Program element requires that the purveyor eliminate existing cross-connections wherever possible. If elimination is not possible, then approved backflow prevention assemblies should be installed properly by a certified CCS to reduce the risk of contamination in each of the following circumstances.

- If the nature and extent of any activity on the premises, or the material used in connection with any activity on the premises, or materials stored on the premises, could contaminate or pollute the drinking water supply in any way.
- On premises having one or more cross-connections.
- Internal cross-connections that are not correctable, or intricate plumbing arrangements that make it impractical to ascertain whether or not cross-connections exist.
- A repeated history of cross-connections being established or re-established.
- Unduly restricted entry so that inspections for cross-connections cannot be made with sufficient frequency or with sufficient notice to ensure that cross-connections do not exist.
- Materials of a toxic or hazardous nature being used such that, if back siphoning should occur, a health hazard could result.
- Any mobile apparatus that uses water from the system or water from any premises within the system service boundaries.
- Any irrigation system.
- Any fire service and/or fire sprinkler.
- All new construction, remodels, commercial, business, industrial, and private homes shall be evaluated to determine the necessity of an approved assembly.
- On any premise where installation of an approved assembly is deemed to be necessary to accomplish the purpose of these regulations in the District's judgment.

- On any premise where an appropriate cross-connection report has not been filed with the District.

The District will endeavor to eliminate cross-connection where possible. In addition, owners shall be responsible for the elimination or protection of all cross-connections on their premises. The District will continue to maintain an inventory of existing backflow assemblies that it currently operates, maintains, and inspects. A separate inventory will include all assemblies on customers' premises that are the responsibility of the customer to maintain. The District will keep these inventories on file at the District Office and shall update the inventory as necessary.

The District shall continue to eliminate potential cross-connections at existing facilities and require installation of backflow assemblies at all premises deemed to be "high-risk," such as water service connections at sewage facilities. Once potential "high-risk" cross-connections are eliminated, the District will concentrate its efforts on reducing potential medium- and low-risk cross-connections.

Installation Requirements

To ensure proper operation and accessibility of all approved assemblies, the following requirements shall apply to the installation of these devices.

- No part of the approved assembly shall be submerged under water or installed on a location subject to flooding. If installed in a vault or basement, adequate drainage shall be provided.
- Approved assemblies must be installed at the point of delivery. Alternate locations must be approved in writing by the District prior to installation.
- The approved assembly must be protected from freezing and other severe weather conditions.
- All approved assemblies shall be of a type and model pre-approved by DOH and listed on the University of Southern California's (USC) current list of Approved Backflow Prevention Assemblies.
- The approved assembly shall be readily accessible with adequate room for maintenance and testing. Approved assemblies 2 inches and smaller shall have a minimum clearance of 6 inches on all sides of the device. Approved assemblies larger than 2 inches shall have a minimum clearance of 12 inches on the back side, 24 inches on the test cock side, 12 inches plus the nominal size of the assembly below the device, and 36 inches above the assembly.
- If the approved assembly is installed inside a building, the assembly shall be readily accessible at all times and an emergency after-hours contact phone number and person shall be provided to the District.
- If the approved assembly is installed inside a building and it is installed 5 feet above the floor, it must be equipped with rigidly and permanently installed scaffolding acceptable to the District. This installation also must meet the requirements set forth by the U.S. Occupational Safety and Health Administration (OSHA) and the State of Washington Occupational Safety and Health Codes.

- Where an approved assembly is deemed necessary, the model of the assembly and installation plans shall be submitted to the District for approval prior to installation.
- Upon completion of the installation, the District shall be notified, and an inspection will occur for approval of the installation. All approved assemblies must be registered with the District. Registration shall consist of installation, make, model, and serial number of the assembly, and initial test report.
- If any user refuses access to a premise, or to the interior of a structure, at reasonable times and with reasonable notice for inspection by the District, an RPBA will be required to be installed at the service connection to that premise.

Any variances to these installation requirements shall be requested in writing by the owner and must be approved by the District prior to installation.

Personnel Certification

WAC 246-290-490 requires that personnel, including one certified CCS, are provided by the purveyor to develop and implement a CCC Program. **Table 6** shows the District's personnel certifications.

The District has the properly certified staff to implement and maintain a CCC Program as outlined by the State. The District will continue to provide properly certified personnel to implement its CCC Program.

Table 6
Personnel Certification

Name	Position	Certificate Number	Certification
Tony Lang	General Manager	13001	WDM 3, WTPO1, CCS
Cody Hodge	Operations Foreman	14940	WDM 3, WTPO1-OIT, CCS
Beau Watson	Lead Service Technician	14903	WDM 2, CCS
Trina Scholer	Lead Service Technician	15324	WDM 4, WTPO1-OIT, CCS
Sean Steele	Service Technician	16147	WDM 1
Allison Townsend	Service Technician	17076	WDM 1

Backflow Assembly Inspection and Testing

The District is responsible for inspecting and testing assemblies that are installed on the public water distribution system, not including those assemblies installed after a meter on private premises. For assemblies installed on customers' premises, the customer shall arrange for testing of said assemblies by a backflow prevention assembly tester approved by the District and licensed in the state of Washington by the Department of Health. Annually, the District will notify customers of required testing, and the testing must be completed before a corrective action date passes. The customer will be responsible for all applicable testing, maintenance, and repair fees. On new installations, the District will: 1) provide on-site evaluation and/or inspection of plans to determine the type of backflow assembly, if any, that will be required; and 2) perform inspection.

For existing premises, the District will perform evaluations and inspections of plans and/or premises and inform owners by letter of any corrective action deemed necessary, the method of achieving the correction, and the time allowed for the correction to be made. Ordinarily, corrections must be made within 60 days; however, the District may adjust this time period depending on the degree of hazard involved and the history of the assembly in question. Service may be discontinued immediately if necessary. The District will then inspect the premises on or after the expiration date of the required action to correct a cross-connection. If the premise is found not to be in compliance with the District's request, the owner shall receive written notice that water service to the premises will be discontinued. If the owner informs the District of extenuating circumstances as to why the correction has not been completed within 5 working days of receipt of the notice of termination, the District may grant a time extension.

Inspection and testing of assemblies shall be completed:

- during the initial installation;
- during on-site reviews of existing installations;
- after any repairs or maintenance;
- after any relocation; and
- on an annual basis but may be required more frequently for certain high hazard premises.

When an initial installation or annual test indicates that a backflow assembly is not functioning properly, the owner shall correct the malfunction within 5 working days as directed by the District. After correcting the problem, the owner shall arrange for re-testing and re-inspection of the assembly.

The owner shall be responsible for the payment of all fees: 1) for annual or semi-annual assembly inspection/testing; 2) for re-testing if the assembly fails to operate correctly; and 3) for any re-inspections for non-compliance with District requirements. The District will continue to maintain records of backflow assembly inspections.

Testing Quality Control Assurance Program

The District shall ensure that all testing procedures are completed in a consistent manner. Only licensed and certified personnel shall be utilized to test all backflow assemblies. The District has a list of approved backflow assembly testers and only approved testers appearing on the list may be used for testing and repair. Personnel shall be trained as outlined by the State, fulfilling all necessary requirements to comply with WAC 246-290-490.

Testing shall be recorded on the proper forms and maintained at the District Office. Examples of testing forms can be found on the Department of Health website under *Cross-Connection Control and Backflow Prevention: Sample Backflow Preventer Inspection and Field Test Report*. The District will provide forms to their customers with the annual testing notification.

Testing personnel shall adhere to the following requirements: 1) use only properly operating and calibrated gauge equipment; 2) follow proper field test procedure; 3) consult the manufacturer's repair and maintenance manual when disassembly is required; 4) use only original manufacturer spare parts; and 5) retest the backflow assembly immediately after repair or maintenance. Testers can only perform tests and repairs allowed by the Washington State Backflow Assembly Tester certification; all other repairs and installations require a Specialty Plumber's License. All persons

performing tests, repairs, or installations shall have all required certifications and licenses and shall furnish the District with copies upon request.

In addition to the above steps, testing procedures performed by certified test personnel shall be in compliance with current test procedures approved by DOH, the AWWA Yellow Manual, or the University of Southern California manual, which may include the following: 1) advise customer of an impending test/inspection so that the customer's staff may participate; 2) notify the fire department when shut down of a fire service is necessary; 3) flush residual dirt through test cocks before attaching test gauges; 4) ensure that the high and low pressure bypass hoses of the test kit are connected to the proper test cocks; open test cocks slowly when bleeding air through the bypass hoses; 5) test gauges shall be properly calibrated by a certified testing agency; and 6) assemblies should be tested before the warranty expiration date.

Incident Response

This CCC Program element requires that the purveyor develop a backflow incident response plan. The following paragraph outlines the District's response to a backflow incident. Other emergency response procedures are included in the *Manchester Water District Emergency Response Plan*.

Emergency Condition: Water System Contamination and Pollution Due to a Backflow Incident

Impact on System: Potentially major impact. Water not suitable for potable use – loss of supply. Potential irreversible damage to water mains and pipes.

Emergency Response:

1. Shut down the affected mains, if possible, to contain the affected contaminants.
2. Notify the General Manager.
3. Notify DOH of the backflow incident.
4. Notify all customers of the problem and instruct them to boil all water to be used for consumption and cooking or issue a no-drinking warning.
5. Flush affected water mains to remove contaminants.
6. Disinfect storage tanks and water mains, as necessary, to remove contaminated residuals.
7. Analyze water quality in other parts of the distribution system to ensure that all contaminants were contained.

This document (and the *Manchester Water District Emergency Response Plan*) outlines procedures to be followed if an emergency arises. When a CCC emergency is called into the Kitsap County Sheriff's Department, or other emergency responder during non-business hours, the responder will notify the District's on-call person. This person assesses the emergency and will notify District personnel as deemed necessary, depending on the severity of the emergency. All emergencies are reported to the District General Manager. This person will be responsible for coordinating with District personnel, as well as other emergency responders, if necessary.

Public Education

Another CCC Program requirement is that educational information of the CCC Program be included in existing water system materials that are distributed to customers. Educational

materials can be included in pamphlets, brochures, bill inserts, public service announcements, and consumer confidence reports.

The District has developed CCC Program education materials that are available to the public upon request. Information is also provided via the District's website at <http://www.manchesterwater.org/> and may be supplemented by bill messages and newsletters provided to each District account holder.

Record Keeping

Purveyors also must develop and maintain records of their CCC Program, as mandated by DOH. At a minimum, purveyors must maintain the following records:

- Master list of service connections and/or premises where backflow prevention assemblies are protecting the public water system or fixtures.
- Assessed hazard level of each backflow assembly.
- Inventory information on approved air gaps, including location, degree of hazard, installation date, inspection history, inspection results, and personnel conducting inspections.
- Backflow assembly inventory information, including location, assembly description, installation date, inspection history, test and repair history, test results, and inspecting personnel.
- Atmospheric Vacuum Breaker (AVB) and Spill Resistant Vacuum Beaker (SRVB) inventory, including location, description, installation date, inspection history, and inspecting personnel.
- Program summary and backflow incident reports.

The District will continue to keep records as required by the CCC Program. At a minimum, the District will maintain the following information: 1) installation date of assemblies; 2) location of backflow assemblies; 3) inspection and testing reports of backflow assemblies; 4) performances of backflow assemblies; and 5) performance of licensed testers. All records will be on file at the District Office to allow access by District personnel.

Reclaimed Water Requirements

The final CCC Program requirement is for systems that distribute or receive reclaimed water within their water service area. For these systems, additional CCC requirements may be imposed by DOH in any permits issued in accordance with Chapter 90.46 RCW.

The District currently does not distribute or receive reclaimed water within its service area; therefore, these requirements are not applicable. However, if reclaimed water is used in the future, the District will follow all requirements of the permits issued under Chapter 90.46 RCW.

PROGRAM IMPLEMENTATION AND RECOMMENDATIONS

The District's CCC Program is an ongoing effort that requires staffing and resources to ensure its effectiveness in protecting the quality of drinking water in the distribution system.

The District will continue its inspection practices of the installed approved backflow assemblies and will continue documenting inspections to comply with the regulatory requirements.

The District currently has three certified Cross-Connection Control Specialists meeting the regulatory requirement of having at least one CCS (cross-connection specialist) to administer its CCC Program. The District will continue its active training program to protect public health and to comply with evolving regulatory requirements.

Appendix G

Water System Construction Standards

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PART D

STANDARD SPECIFICATIONS FOR DEVELOPER WATER EXTENSIONS

PART D - STANDARD SPECIFICATIONS FOR DEVELOPER WATER EXTENSIONS

Section D1. Waterworks Materials

D1.a General

Except as otherwise noted herein, all work shall be accomplished as recommended in applicable American Waterworks Association (AWWA) specifications, THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, and according to the recommendations of the manufacturer of the material or equipment used.

All contractor-supplied materials shall be new and undamaged. Unless otherwise approved by the Inspector, the same manufacturer of each item shall be used throughout the Work. All reference specifications herein shall be of the latest revision.

D1.b Pipe

1. Ductile Iron Pipe (Preferred)

Exterior coating shall be bituminous per AWWA C104

2. Polyvinyl Chloride (PVC) Pipe (When Approved)

3. Water Polyethylene AWWA C901 Service Pipe

a) Type of Joint: Standard brass compression fittings (CTS size).

b) Working pressure: 200 psi at 73.4°F.

D1.c Fittings

1. Cast or Ductile Iron

a) Standard: USASI Specification A21.10 (for short body cast iron fittings 12" and less); AWWA C110 (for fittings 14" and larger)

b) Compact (Ductile Iron): Per USASI Spec. A21.53.

c) Class: At least equal to class of pipe.

d) Type of Joints: Compatible with pipe or with adapter or as specified in the Special Provisions/Contract Drawings

2. Special

Special fittings shall be as specified in the Special Provisions/Contract Drawings

D1.d Valves

1. Gate Valves (AWWA C509)

- a) Description: Gate valves shall be iron body, resilient seat valves. Stem nuts shall be identical with District's existing equipment. Valves installed above ground shall be equipped with handwheel. All valves shall open counter-clockwise and be of the non-rising stem type, unless otherwise specified.
- b) Working Pressure: 150 psi unless specified otherwise.
- c) Type of joint: Mechanical Joint X Flange, Mechanical Joint X Mechanical Joint or all flanged.

2. Appropriate Backflow Prevention Assembly (AWWA C510)

All back flow prevention assemblies shall meet Washington State Department of Health Approved Cross-Connection Control Devices Listings.

3. Air and Vacuum Release Valves

Air and vacuum release valves shall be Rennselear Figure 372, or equal, as approved by the District.

4. Control Valves

- a) Pressure Relief, Pump Control, and other controlling Globe Valves shall be CLA-VAL Automatic Valve or approved equal.
- b) Pressure reducing valves shall be CLA-VAL Model 690-01 ABKC (Auxiliary valve 90-01 ASKC) with stainless steel trim, epoxy coated, spring range 30 - 300 psi, unless otherwise specified.

5. Valve Boxes

Valve boxes and tops shall be cast iron body with cast iron lid. Bottom section length shall be 24" minimum adjusted to fit field condition for the particular project or as specified in the Special Provisions/Contract Drawings.

D1.e Fire Hydrant Assemblies

1. Description (See also Standard Plan 8)

Hydrants shall be Clow Medallion, Mueller, or Dresser, with MJ end. The hydrants shall be equipped with one (1) pumper nozzle. Operating nuts shall be identical with District's existing equipment. Threading on pumper ports shall match the standards of Fire District #7. Hydrant shall be so constructed that the direction of pumper connection may be rotated to face the roadway. All nozzles shall be equipped with bronze nipples screwed into the hydrant and locked in place. Minimum depth of clear cover over the pipe shall be three (3) feet. Hydrants shall have a minimum of (3) feet of clearance on all sides from any obstacle above ground. A Stortz adapter shall be installed on the pumper port. Hydrants above ground shall be painted with two coats of paint equal to Sherwin Williams Safety Yellow #B54Y37. The Contractor shall cover the fire hydrant with a plastic garbage bag until approved for service by the District.

2. Piping

- a) All hydrant laterals shall be thickness class 52 ductile iron (Or approved equal).
- b) Lateral pipelines to Hydrants under 50' in length shall be a minimum of 6" diameter. Laterals over 50' in length shall be a minimum of 8" in diameter. Size of the auxiliary valve shall match the size of the lateral used.
- c) Where shackle rods are to be used, the hydrant must have lugs and also the gate valves must have lugs. The tee on the main line shall not be considered as part of the assembly.

D1.f Service Connection

1. Water Meters

Meters shall be furnished by the District. Meters shall be either Rockwell SR22, Sensus, or Neptune.

2. Corporation Stops (AWWA C800)

Corporation stops shall be bronze alloy, ball valve type Ford, Jones, Mueller, or equal, as approved by the District (Ford FB-700 preferred).

3. Saddles (AWWA C800)

Pipe saddles shall be bronze or ductile iron, suitable for installation on the type and class of pipe being used. Bands shall be single strapped wide band stainless steel. Double bands shall be employed on pipe 10" and larger. Single wide flat bands shall be used on pipe 8" and smaller. Gaskets shall be good quality red rubber, or neoprene. (Ford 202 for 1" service preferred.)

4. Oversized Service Connections

Where the District deems it necessary; 2" schedule 40 PVC pipe, single service lines, and a 2" resilient seat gate valve with a valve box shall be utilized.

D1.g Gravel

All crossings of County right-of-ways shall be backfilled to County specifications. Currently, the County requires CDF on all roadway crossings.

D1.h Painting

All exposed metal above ground, including fire hydrants, shall be properly primed and painted with two coats of oil based paint equal to Sherwin Williams Safety Yellow #B54Y37.

SECTION D2. Waterworks Construction

D2.a Trench Excavation

1. Normal Conditions

Clearing and grubbing where required shall be performed within the easement or public right-of-way and as permitted by the property owner or governing agencies. Debris resulting from the clearing and grubbing shall be disposed of by the Contractor.

Trenches shall be excavated to the line and depth designated by the District to provide a minimum of 36 inches of cover over the pipe, unless otherwise shown on the contract drawings. No additional compensation will be made for deeper excavation made for localized grade change or installing water line under existing culverts or other utilities. Except for unusual circumstances where approved by the District, the trench sides shall be excavated vertically and the trench width shall be excavated only to such widths as are necessary for adequate working space. The minimum trench width at the top of the pipe shall normally be the outside diameter of the pipe barrel plus 16 inches. The trench shall be kept free from water until jointing is complete. Surface water shall be diverted so as not to enter the trench. The Contractor shall maintain sufficient pumping equipment on the job to insure that these provisions are carried out. Gravel required in the bottom of the trench due to action of weather or workmen shall be furnished by the Contractor without expense to the District.

The Contractor shall perform all excavation of every description and of whatever substance encountered and boulders, rocks, roots, and other obstructions shall be entirely removed or cut out to the width of the trench and to a depth of 6 inches below pipe and replaced with proper bedding material.

2. Removal of Pavement, Sidewalk, and Curbs

a) Pavement Cutting (per appropriate governmental agency standards):

In trenching through existing pavement, the open cut shall be a neat-line cut by saw cutting a continuous line.

1. Concrete - pavement shall be cut one foot outside the edge of the trench on each side. The concrete shall be cut on a straight line and shall be beveled so that the cut will be approximately 1 inch wider at the top than at the bottom.
2. Asphalt - pavement shall be cut one foot outside the edge of the trench on each side. Pavement shall be cut ahead of the trenching equipment to prevent excessive tearing up of the surface and to eliminate ragged edges.

3. Highway Crossing

The Developer may use any method, which provides satisfactory results and is acceptable to the Inspector and the governmental agency having control of the highway, provided that the Developer restores the roadway to a condition acceptable to the governmental agency having control of the road and the Inspector.

Normally, highway crossings require the placing of a steel, cast iron, or concrete pipe casing by jacking or tunneling and laying the water pipe within this casing.

Tunneling may be ordered by the District or other governmental agency having jurisdiction under pavements or otherwise. Tunnels shall be not less than 4 feet high and 2 feet wide

and not less than 1 foot wider than the outside diameter of the pipe. Tunnels shall be backfilled with materials acceptable to the District and backfill shall be mechanically compacted.

D2.b Installation of Pipe and Fittings

1. Unless otherwise specified, the location of the water mains, gate/check valves, hydrants and principal fittings, including modifications, will be staked by the Developer. Staking will be completed 48 hours prior to start of construction. It shall be the Developer's responsibility to maintain stakes and replace stakes lost or destroyed at the Developer's expense. Alignment shall be within 0.5 feet of the specified alignment.
2. Any installation, repair, or connection which involves Asbestos-Cement pipe shall be in accordance with Puget Sound Air Pollution Control Agency guidelines for handling, removal and disposal of asbestos materials. Any person handling asbestos-cement pipe must be certified in asbestos cement pipe practices and procedures.
3. Laying Ductile Iron Pipe - The bottom of the trench shall be finished to grade with hand tools in such a manner that the pipe will have bearing along the entire length of the barrel. The bell holes shall be excavated with hand tools to sufficient size to make up the joint. Bolts on mechanical pipe and fittings shall be tightened uniformly with a "Torque" wrench, which measures the torque applied. For 4" to 24" pipe the torque applied shall be 75 to 90 foot pounds. Installation of push-on joint (Tyton) pipe shall be in accordance with the manufacturer's instructions.
4. Installation of watermains and service lines shall include locator wire buried along the entire length of the pipe. Locator wire to be insulated copper wire, 14 gauge or larger. The wire shall be connected to a bolt on each above ground hydrant flange with 6 inches of slack at the end for connecting the locator device. Locator wire to be run to 12 inches above ground at each meter, blow off, and air/vacuum valve. All splices in the locator wire shall be made using a 3M direct bury splice kit, model DBY. The kit shall be installed per the manufacture's specifications. The wires shall be tied in a knot 6 – 8 inches from the splice.

D2.c Installation of Auxiliary Equipment

1. Valves
 - a) Air and vacuum relief valve assemblies

Installation shall be as shown in Standard Plan 1. The assembly shall be set at the high point of the line. A valve guard post shall be placed where there is danger of damage. The relief valve shall be suitable for installation by direct burial.

- b) Blow-off Valve Assemblies

Installation shall be as shown in Standard Plan 2. The valve shall be enclosed in a standard valve box. The blow-off shall be installed in such a position and location that water can be disposed of without damage to surrounding property unless written permission is granted by the District.

2. Service Connection Equipment

Care shall be exercised to assure that the main is not damaged by installation of the saddle. Service pipe shall be plastic water service as specified in Paragraph D1.b. The depth of trenching for service connection piping shall provide three (3) feet of cover over the top of the pipe for that portion of the service connection located in public right-of-ways. All connections to conform to the Uniform Plumbing Code, individual pressure reducing valves are recommended if supply pressure exceeds 80 psi.

D2.d Required Separation between Water Lines and Sanitary Sewer

General

The basic separation requirements apply to sewers of 24-inch diameter or less; larger sewers may create special hazards because of flow volumes and joint types. The construction requirements given are for the normal conditions found with water and sewage systems. More stringent requirements may be necessary in areas of high ground water, unstable soil conditions, etc.

Separation of sewer lines and water lines shall comply with the Washington Department of Ecology's current Criteria for Sewerage Works Design

1. Horizontal Separation (Parallel)

A minimum horizontal separation of ten (10) feet between water lines and gravity sewers shall be maintained, whenever possible. The distance shall be measured edge to edge.

2. Unusual Conditions (Parallel)

When local conditions prevent a horizontal separation as described in Horizontal Separation (above), a gravity sewer may be laid closer than 10 feet to a water line provided:

- a) It is laid in a separate trench; or, it is laid in the same trench with the water line that is located at one side on a bench of undisturbed earth; and
- b) In either case, the elevation of the crown of the gravity sewer must be at least 18 inches below the invert of the water line. When this vertical separation cannot be obtained, the gravity sewer shall be constructed of materials and joints that are equivalent to water main standards of construction and shall be pressure tested to assure water tightness prior to backfilling.

3. Vertical Separation (Perpendicular)

Sewer lines crossing water lines shall be laid below the water lines to provide a separation of at least 18 inches between the invert of the water pipe and the crown of the sewer, whenever possible.

4. Unusual Conditions (Perpendicular)

When local conditions prevent a vertical separation as described in vertical separation (above), the following construction shall be used:

- a) Gravity sewers passing over or under water lines shall be:

- 1) Constructed of materials and joints that are equivalent to water main standards of construction and shall be pressure tested to assure water tightness prior to backfilling. The maximum standard length of pipe, (but no less than 18 feet long) shall be used with the pipes centered to maximize joint separation; or
 - 2) Standard gravity sewer material encased in concrete or in a 1/4" thick continuous steel casing with all voids pressure-grouted with sand-cement grout.
- b) Water lines passing under gravity sewers, in addition, shall be protected by providing:
1. Vertical separation of at least 18 inches between the invert of the sewer and the crown of the water line;
 2. Adequate structural support for the sewers to prevent excessive deflection of joints and settling on and breaking of the water lines; and
 3. The length of sewer pipe shall be centered at the point of crossing so that the joints will be equal distant and as far as possible from the water line. The sewer pipe shall be the longest standard length available from the manufacturer.
- c) Pressure sewers shall only be constructed under water lines with ductile iron pipe or standard sewer pipe in a steel casing for a distance of at least ten (10) feet on each side of the crossing.

D2.e Connection to Existing System

General

The Developer shall notify the District a minimum of 48 hours prior to interruption of service. The Developer shall notify each of the affected water users in writing a minimum of 24 hours prior to interruption of service.

The Developer shall be responsible for repairing any damage to the existing water main incurred while making a connection. Repair of the water main shall be under the direction and approval of the District.

1. "Cut-in" Connection

The cut-in shall be as shown in Standard Plan 6, and shall be made only with the approval of and under direct inspection by the Inspector. The tee shall be cast or ductile iron with mechanical joint. The couplings shall be Romac, Smith and Blair or equal as approved by the District. The gate valve shall have a flange at one end, the other end shall be as required per AWWA specifications.

To cut a valve into an existing line, use the same detail but substitute a gate valve for the tee.

2. "Tapping" Connection

Connections may be made to existing pipes under pressure with the use of a tapping machine. The size and type of pipe must be determined. Then the appropriate sized stainless steel tapping sleeve complete with the tapping gate valve may be installed. A Full Circle Gasketed Tapping Sleeve shall be used. For 12" and larger main diameters a neoprene gasketed joint shall be used. The gate valve shall be resilient seat with 0 rings, non-rising stem, mechanical joint one end, other as required, per AWWA Specifications 7 F 1

(Tapping Valve). The Tapping Sleeve, connected and tested (normal main pressure), in place with valve connected to tee shall be completed before tap is started in existing main.

D2.f Backfilling

General

Compaction and restoration must be done as required by Kitsap County Road Department or WSDOT and immediately after the trench is backfilled, so as to cause least disruption to traffic. Backfilling and surface restoration shall closely follow installation of the pipe, so that not more than 500 feet of pipe is left exposed without express approval of the District. Backfilling of trenches shall be made with the same materials excavated from the trenches unless these materials are found to be unsuitable. Prior to the backfilling, all form of lumber and debris shall be removed from the trench. Care shall be exercised to see that large rock, stumps, logs, etc., are excluded from material used for backfill. Machine backfilling shall be carried on so that the trench is continually filled from the end. All backfill material shall be placed in layers not more than 8 inches thick and compacted to the density of **95%**.

If native material can not be used for bedding of pipe, then Pea Gravel or sand will be required. Pipe shall have a minimum of 2 inches of bedding above the top of the pipe.

1. Consolidation, Grading, and Compaction

Consolidation, grading, and compaction will be under the direction of the Kitsap County Road Department or WSDOT. The backfill shall be spread in layers and be compacted by mechanical tampers. In cases the backfill material shall be placed in successive layers, not exceeding 6 inches in thickness and each layer shall be compacted with mechanical tampers to a density equal to 95% of the theoretical maximum density (ASTM designation D-1557, Method D). The Road Agency may require the Developer to provide laboratory compaction tests.

2. On Proposed Traveled Roadways (e.g. new subdivisions)

Where governmental agencies other than the owner have jurisdiction over roadways, the backfill and compaction shall be done to the satisfaction of the agency having the jurisdiction. When working in areas of proposed traveled County roadways, backfill compaction shall be under the direction of the Kitsap County Road Department

3. Excess or Insufficient Material

In all cases where it is not necessary to re-establish original ground level, excess material shall be heaped over the trench as additional mounding. Where necessary, excess material shall be removed and disposed of at the Developer's expense and in a manner satisfactory to the District. Imported materials required to properly complete backfilling shall be hauled in and placed by the Developer at his own expense.

4. Unsuitable Material

Where in excavating the trench for water mains the bottom of the trench exposes peat, soft clay, quicksand or other material which is unsuitable, such material shall be removed and disposed of by the Contractor at the Contractor's expense. The material thus removed shall be replaced by suitable surplus material obtained from trench excavation within the limits of

the project or shall be 5/8 minus crushed rock, pea gravel, or pitrun, which shall be deposited and compacted in 8 inch layers by mechanical compaction.

5. Holding Backfill on Steep Slopes

The Contractor shall be required to provide sheeting or shoring during pipe construction where trench widths are excessive and will endanger existing property or improvements, or when the trenching operation does not comply with established safety standards.

Where there is a danger of backfill being washed away due to steepness of the slope in the direction of the trench, the Contractor may either use a shoring box or material shall be held in place as follows:

Backfill to eighteen (18) inches below the top of trench. Then, at intervals, as specified by the Inspector, two (2) 2 x 6 posts at least four (4) feet long, shall be driven into the backfill, one on either side of the pipe, at about right angles to the slope of the ground, and broadside facing in the direction of the trench. These posts shall be supported on the downhill side by 2 x 4 stakes at least three (3) feet long, driven at an angle of 45 degrees, about twelve (12) inches into undisturbed ground in the trench sides. Tops of posts and stakes shall be driven approximately flush with the ground surface. Three (3) 2 x 6 crosspieces, cut to fit tightly between the trench sides, shall then be laid against the uphill sides of the posts, to form an 18-inch bulkhead, and then crosspieces and stakes shall be securely spiked to the posts. Backfilling shall then be completed as previously described.

6. Erosion Control

Use of filter fabric fencing and straw bales to prevent excess silt from entering into the drainage system.

D2.g Cleanup

1. Flushing Mains

Upon completion of pipe laying, the pipe shall be thoroughly flushed through all hydrants, blow-offs or other approved means to assure that all disinfectants, and/or solids and contaminated materials have been removed. Flushing shall be accomplished as follows:

- a) The Developer shall schedule and organize his work so as to use flushing water during off-peak hours only.
- b) The District shall be notified a minimum of 48 hours prior to the time of water main flushing.
- c) Flushing shall be done only in the presence of a representative of the District.
- d) Each section of newly laid pipes between valves or dead ends shall be flushed independently.
- e) Clear, clean, uncontaminated water used in flushing shall be directed to approved storm water runoff conveyance systems. Developer shall use care to minimize erosion caused by flushing.
- f) Disposal of chlorinated water. The Developer shall be responsible for the proper disposal of chlorinated water.

2. Site Cleanup

- a) Final cleanup work shall be completed as closely behind the construction work as it is physically possible to do so. (Minimum of once a day)
- b) All excess unsuitable material, rocks, asphalt, concrete, logs, etc., shall be disposed of by the Developer to the satisfaction of the Inspector and at the contractors expense. No debris shall be disposed of by dumping on private property without permission.
- c) Drainage ditches affected by the construction operation shall be left in as good or better condition than what existed prior to beginning work.

SECTION D3. WATERWORKS TESTING

D3.a Filling and Disinfection of Water Mains

1. Procedure during Construction

- a) The interior of all pipe, fittings, and auxiliary equipment stockpiled on the project shall be kept free of dirt and other foreign matter at all times.
- b) Prior to lowering the pipe or auxiliary equipment into the trench each item shall be carefully inspected inside and thoroughly cleaned of any dirt or foreign matter. Cleaning shall consist of brushing or sweeping of fittings and the use of tight-fitting swabs for pipe cleaning.
- c) Water used for rinsing or lubricating during construction shall contain 50 ppm chlorine.
- d) A tight stopper or bulkhead shall be placed at the open end of the pipe at all times when pipe is not being inserted into the section already laid.
- e) The water main will be filled with water and relieved of air at the highest point, either through a hydrant or a saddle provided by the contractor. The District will provide water, at no charge, for testing if it is easily accessible through the District's system. Where water is not easily accessible, the contractor shall provide water from a testing source approved by the District at the contractor's expense.
- f) The water will be allowed to stand for 48 hours with super-chlorinated water.
- g) After 48 hours, the chlorinated water will be flushed into a container provided by the Developer. Chlorinated water will not be allowed to be flushed to the ground or into the storm or sewer system.
- h) The District will neutralize the super-chlorinated water and once dechlorinated, the contractor will be responsible for disposing of the dechlorinated water.
- i) Disposal of de-chlorinated water is the responsibility of the Contractor.

D3.b Hydrostatic Pressure Test

The water main will be pumped to a pressure of 150 PSI above static pressure. If service connections are being tested, the pressure will not exceed 200 PSI. In either case, the water main shall hold test pressure with no loss in pressure for fifteen (15) minutes. All inline gate valves shall be in the closed position and the water main will be tested in sections no longer than (1000) feet between each inline valve, unless otherwise specified. The auxiliary valve to the fire hydrant will be in the open position and all fire hydrants will be included in the test. Then each auxiliary valve will be closed, and it's hydrant opened to atmosphere, to test each valve.

D3.c Operational Test

After the Extension has been disinfected, passed the hydrostatic test and before final acceptance, the entire system shall be operated by the Developer at normal pressure for a period of not less than ten (10) days. Any leaks or defects discovered in the system shall be repaired and the

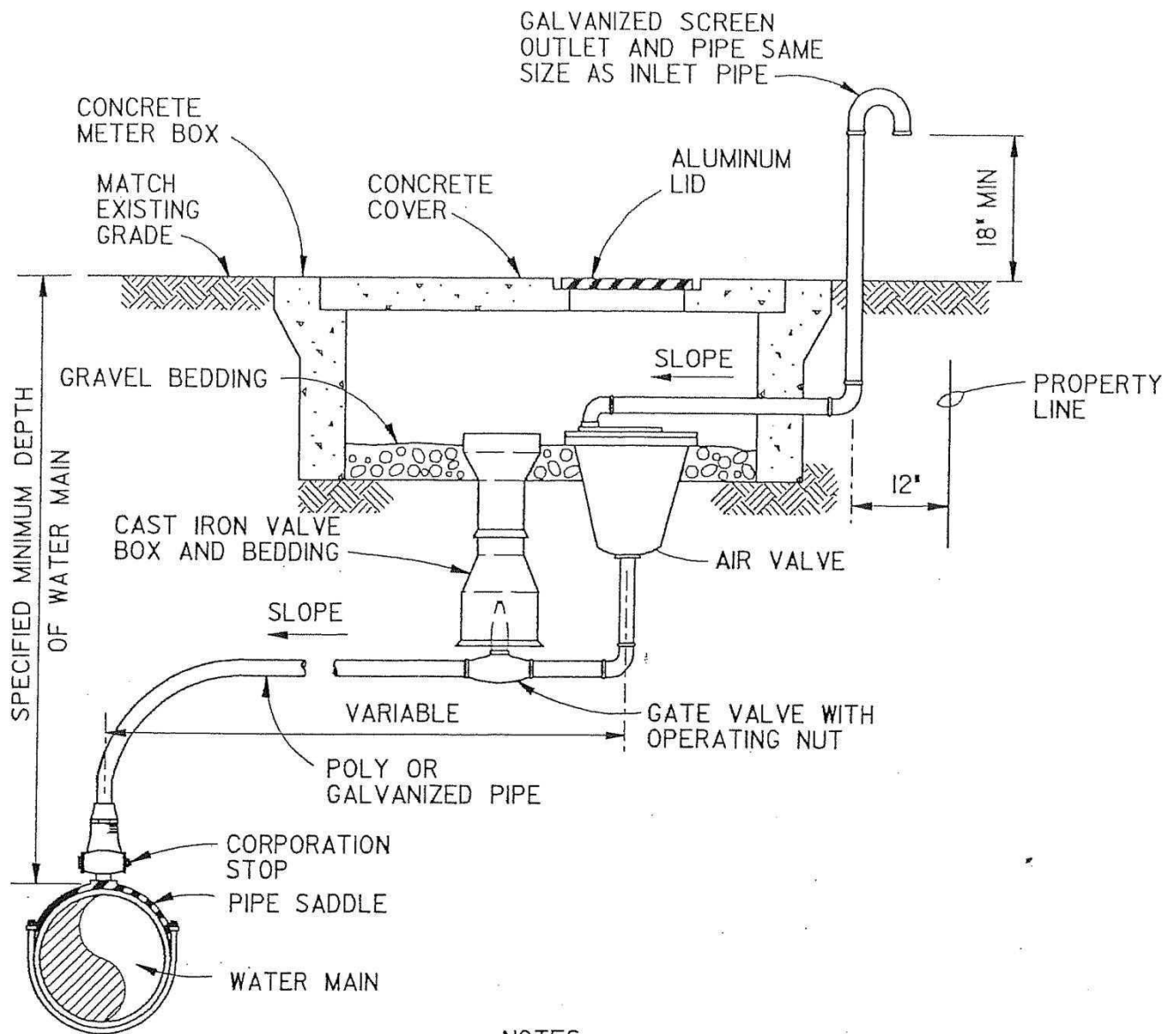
operational test continued until the system is satisfactory to the Inspector. Contractor shall verify that all service lines are active prior to final acceptance. No provision of this section shall be construed as waiving any provision of the Developer's guarantee.

D3.d Backflow Assemblies

All backflow assemblies will be tested prior to the District's acceptance of the water main at the Developer's expense, and on an annual basis thereafter at the owner's expense, or as required by the State Department of Health.

SECTION D4. WATER WORKS CONSTRUCTION STANDARD PLANS

PLAN 1- Air Release Valve Assembly
PLAN 2 - Blow Off Assembly
PLAN 3 - Cast Iron Valve Box Assembly
PLAN 4 - Cast Iron Valve Box Details
PLAN 5 - Concrete Thrust Blocking
PLAN 6 - Cut-In to Existing Lines
PLAN 7 - Double Detector Checkvalve Assembly
PLAN 8 - Fire Hydrant Assembly and Normal Installation
PLAN 9 - Service Connection
PLAN 10 - Sprinkler Connection to a Commercial Building
PLAN 11- Water & Sewer Clearance and Material Requirements

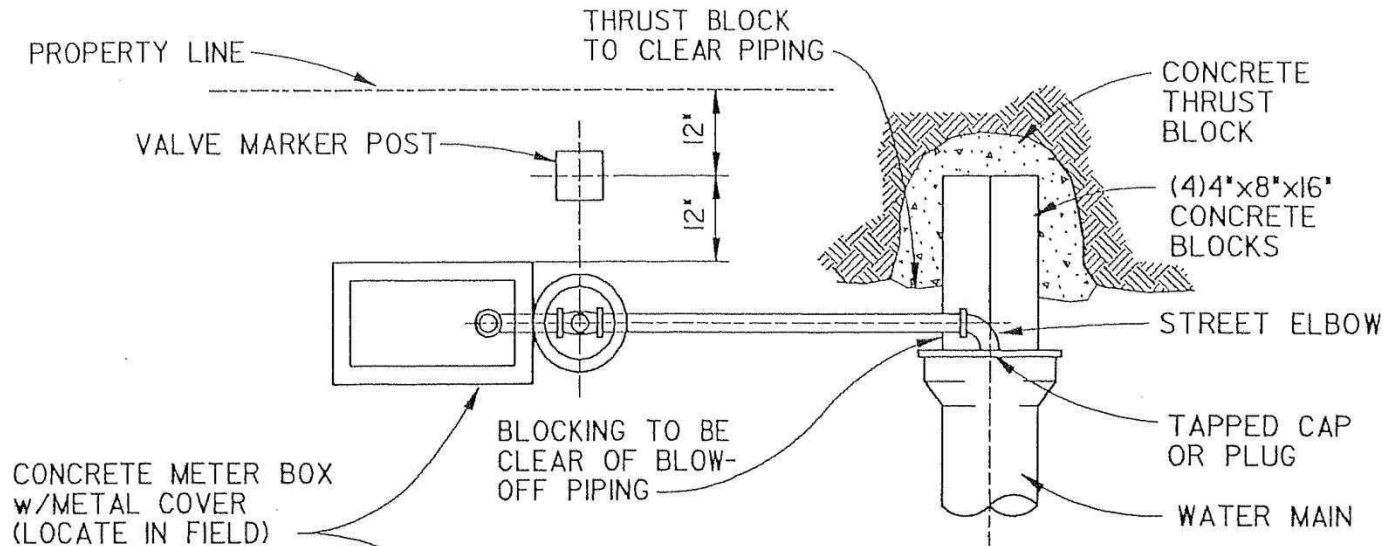


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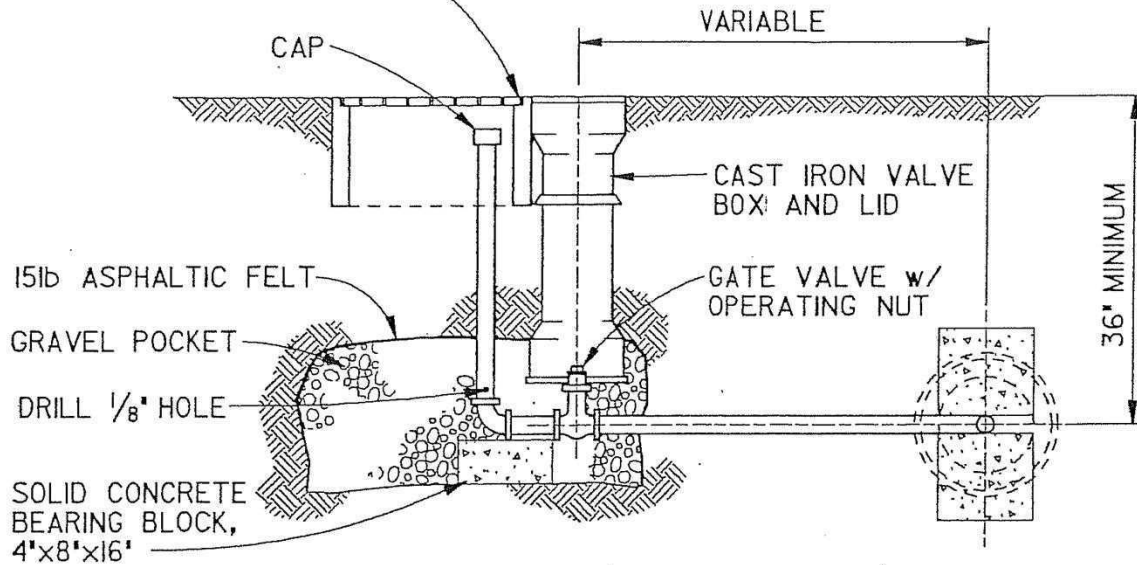
1. PIPING TO VALVE AND VALVE TO BE 2" UNLESS OTHERWISE NOTED ON PLAN.
2. LOCATE AT HIGH POINT OF MAIN.
3. TAP TOP OF MAIN.

AIR RELEASE VALVE ASSEMBLY

STANDARD PLAN I



PLAN



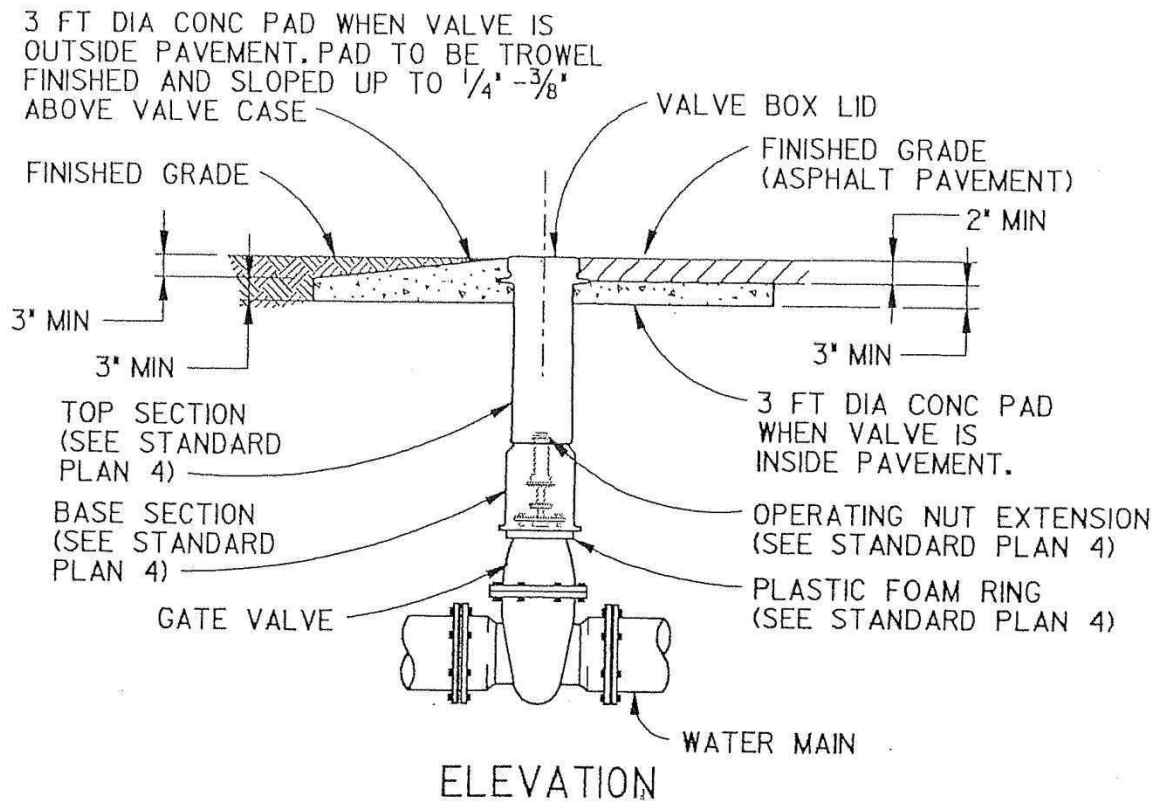
ELEVATION

NOTES:

1. PAINT PIPE THREADS WITH ASPHALT PAINT AFTER ASSEMBLY.
2. ALL PIPING TO BE GALVANIZED STEEL.
3. PIPING TO VALVE AND VALVE TO BE 2' UNLESS OTHERWISE NOTED ON PLAN.
4. LOCATE BLOW-OFF OUTLET NEAR PROPERTY CORNER IF POSSIBLE.

BLOW-OFF ASSEMBLY

STANDARD PLAN 2

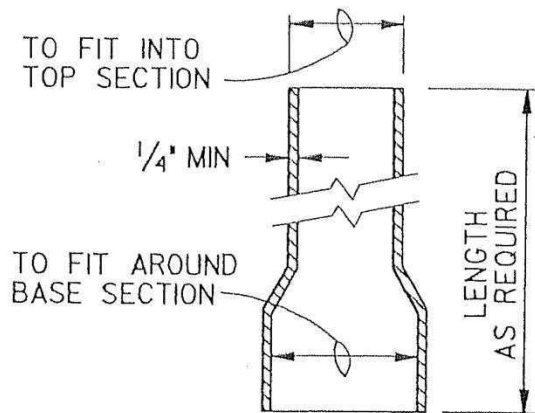
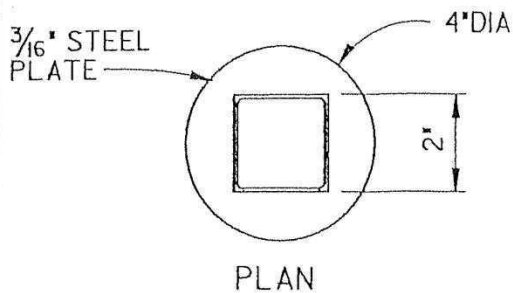


NOTES:

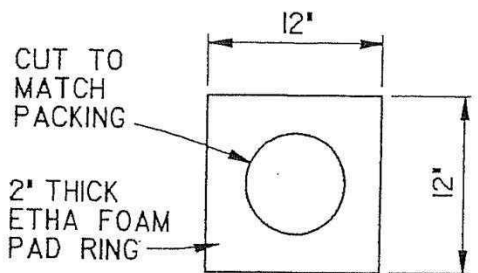
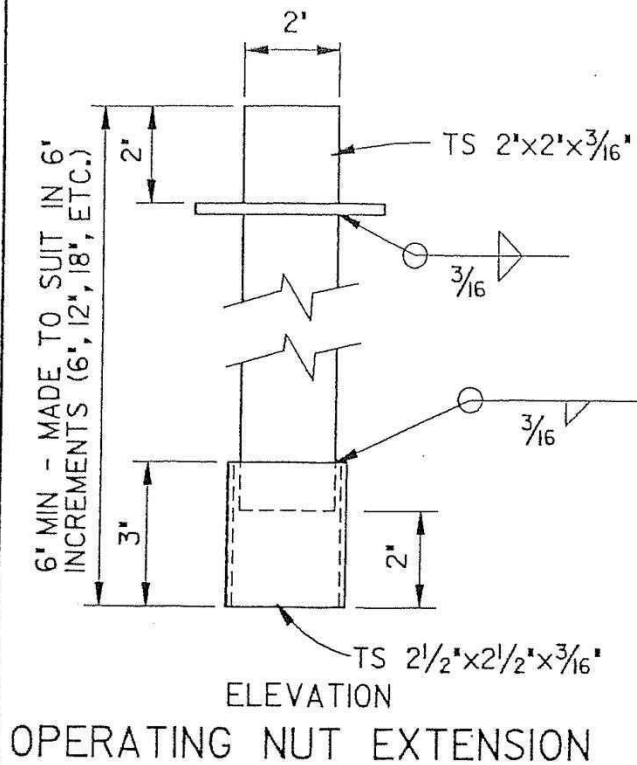
1. FRAME AND COVER SHALL BE TESTED FOR ACCURACY OF FIT AND SHALL BE MARKED IN SETS FOR DELIVERY.
2. CASTINGS AND EXTENSIONS SHALL BE HOT-DIPPED IN ASPHALTIC VARNISH, ROYSTON #612XM OR APPROVED EQUAL.
3. VALVE BOXES SHALL BE RICH #045, TOP SECTION, LID, AND BASE; OR OLYMPIC FOUNDRY LID #1908-33, TOP SECTION #1106-33, BASE SECTION #1301-33; OR APPROVED EQUAL.
4. ALL CASTINGS SHALL BE DUCTILE OR GRAY CAST IRON.
5. AN OPERATING NUT EXTENSION SHALL BE INSTALLED WHEN THE GROUND SURFACE IS MORE THAN 40' ABOVE THE VALVE OPERATING NUT. THE OPERATING EXTENSION SHALL EXTEND TO APPROXIMATELY 24' FROM FINISHED GRADE.
6. VALVE BOX EXTENSIONS (WHEN USED) SHALL CONFORM TO THE MINIMUM THICKNESS REQUIREMENTS AND SHALL FIT INTO THE TOP SECTION AND OVER THE BOTTOM SECTION. (SEE STANDARD PLAN 4)

CAST IRON VALVE BOX ASSEMBLY

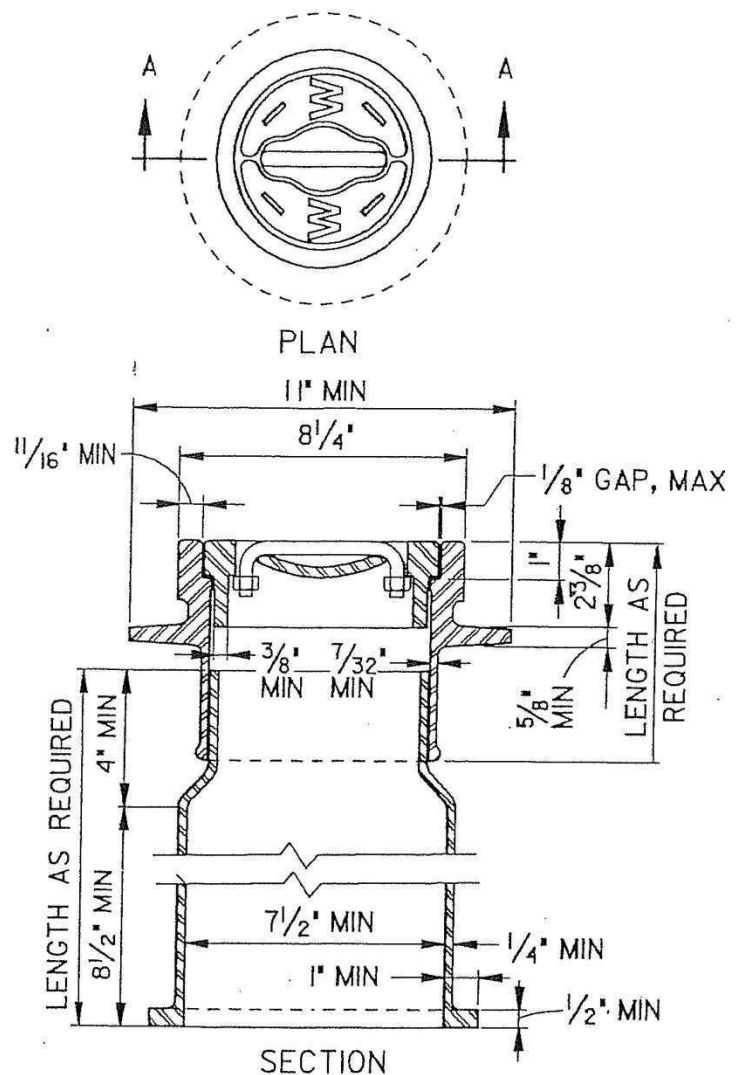
STANDARD PLAN 3



VALVE BOX EXTENSION
(WHEN REQUIRED)

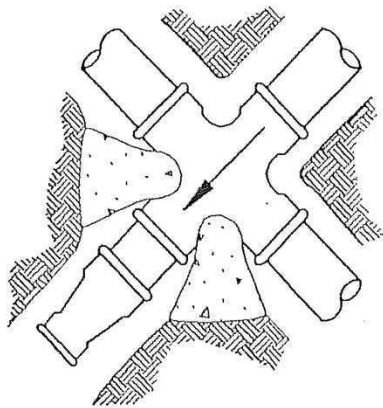


PLASTIC FOAM RING

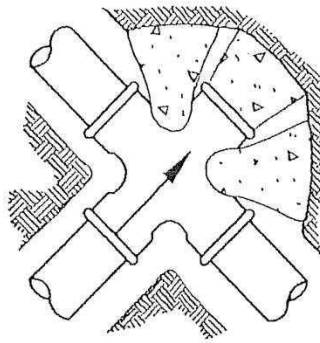


CAST IRON VALVE BOX

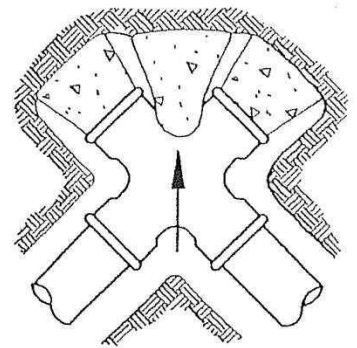
CAST IRON VALVE BOX DETAILS



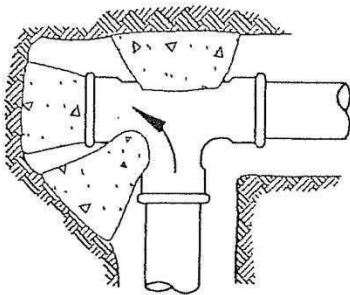
UNBALANCED CROSS



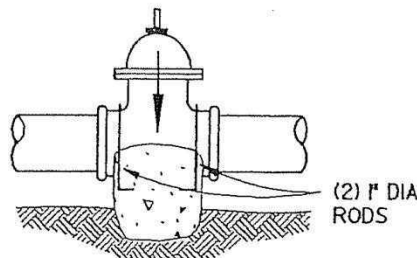
PLUGGED CROSS



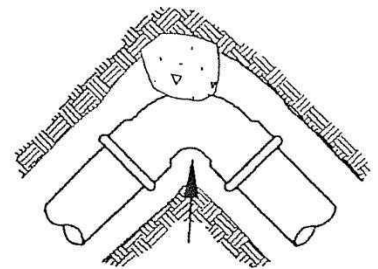
PLUGGED CROSS



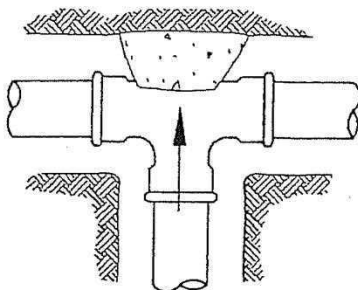
PLUGGED TEE



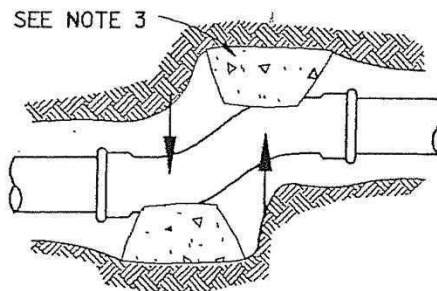
VALVE



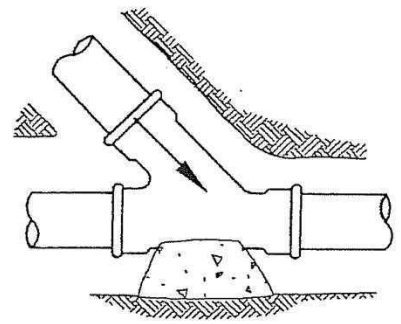
HORIZONTAL BEND



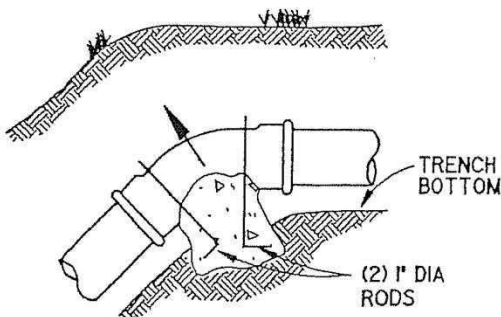
TEE



OFFSET



WYE BRANCH



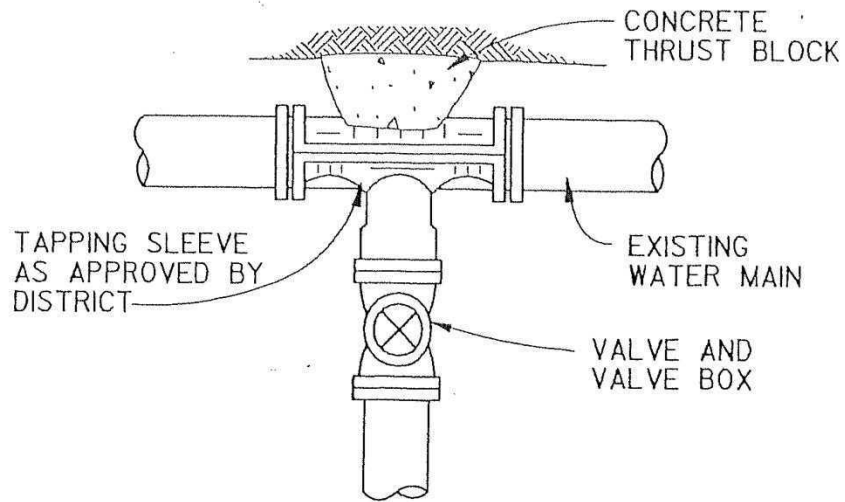
VERTICAL BEND

NOTES:

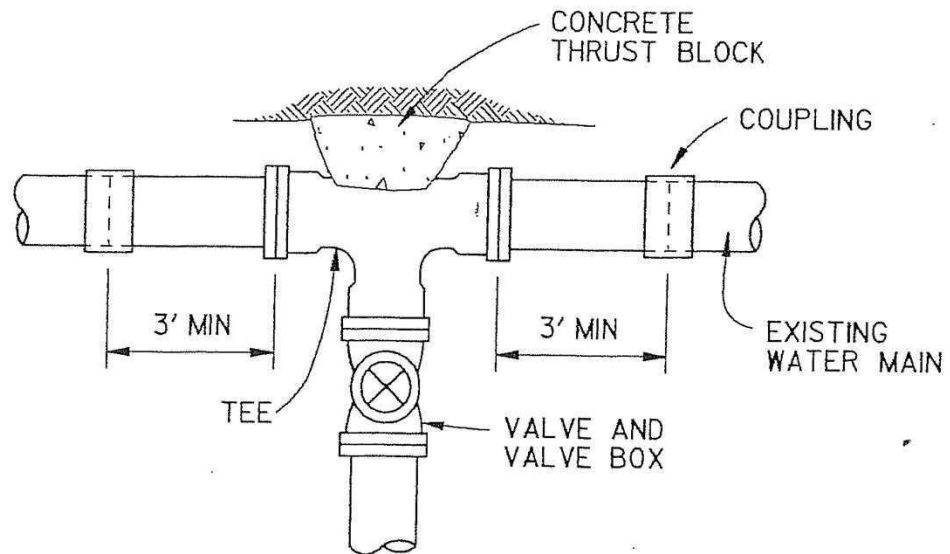
1. SIZE OF BLOCK TO BE DETERMINED BY THE CONTRACTOR. TO BE ADEQUATE FOR SOIL CONDITION AND PRESURE INVOLVED.
2. ALL BLOCKING TO BE ON UNDISTURBED MATERIAL.
3. BLOCKING REQUIRED IF PLUGS NOT SECURED BY BOLTING OR ADEQUATE STRAPS.
4. PLASTIC SHALL BE PLACED AGAINST FITTINGS TO PREVENT CONCRETE FROM ADHERING TO FITTINGS.

CONCRETE THRUST BLOCKING

STANDARD PLAN 5



PRESSURIZED



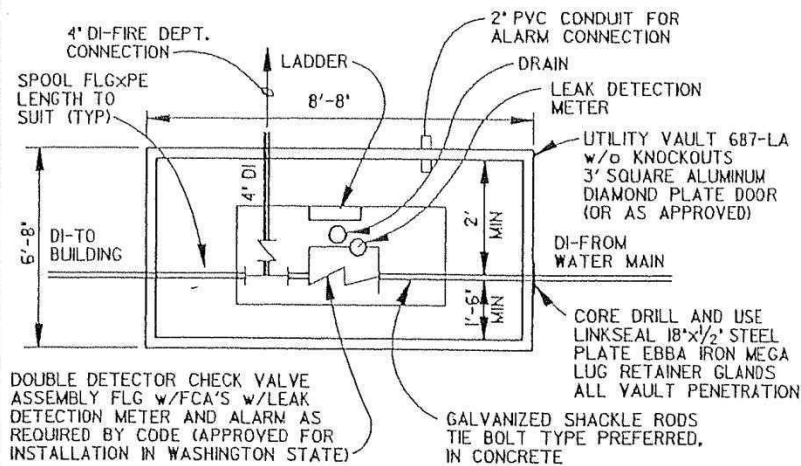
NON-PRESSURIZED

NOTE:

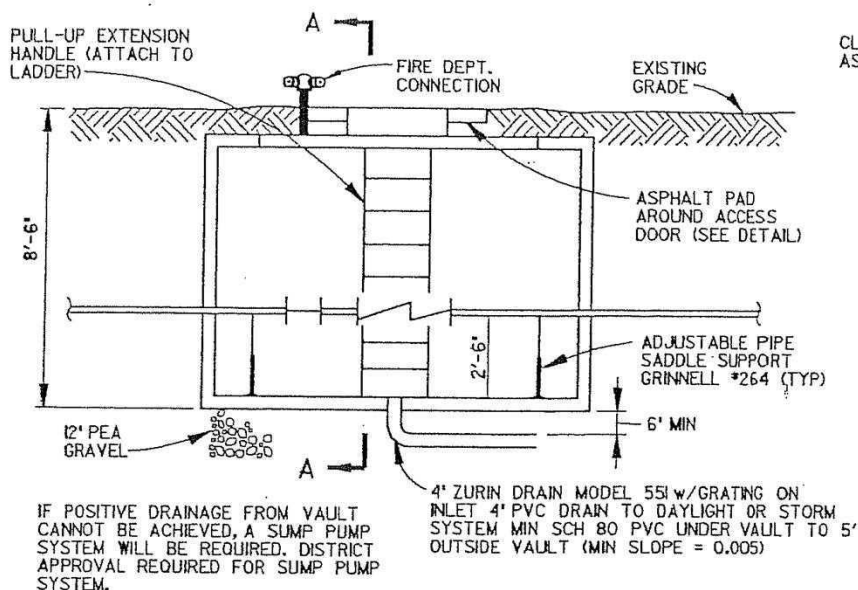
- I. PLASTIC SHALL BE PLACED AGAINST FITTINGS TO PREVENT CONCRETE FROM ADHERING TO FITTINGS.

CUT INTO EXISTING LINES

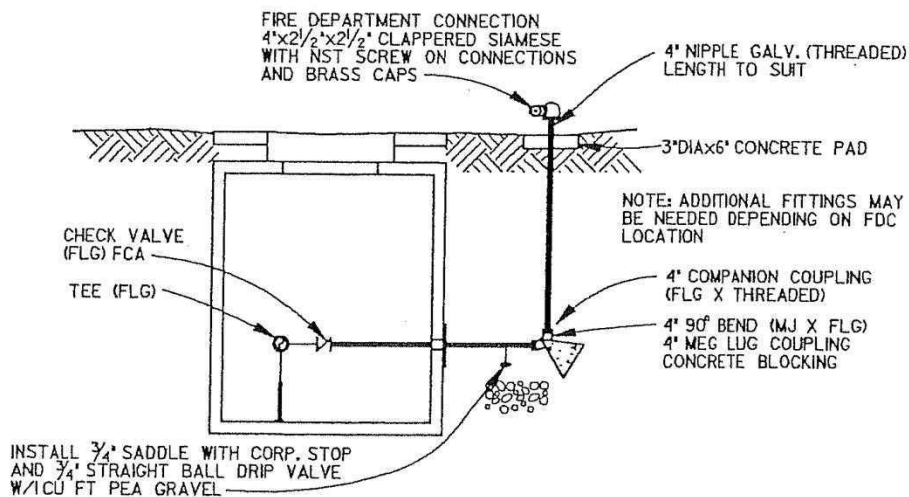
STANDARD PLAN 6



PLAN



ELEVATION



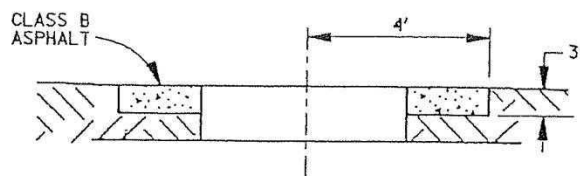
SECTION AA

NOTES:

1. ADJUST COVER TO MATCH EXISTING GRADE OR 6" ABOVE IN UNIMPROVED AREA.
2. VAULT SHALL BE PLACED LEVEL SO ALL WATER WILL DRAIN IN CENTER.

PAINT SCHEDULE:

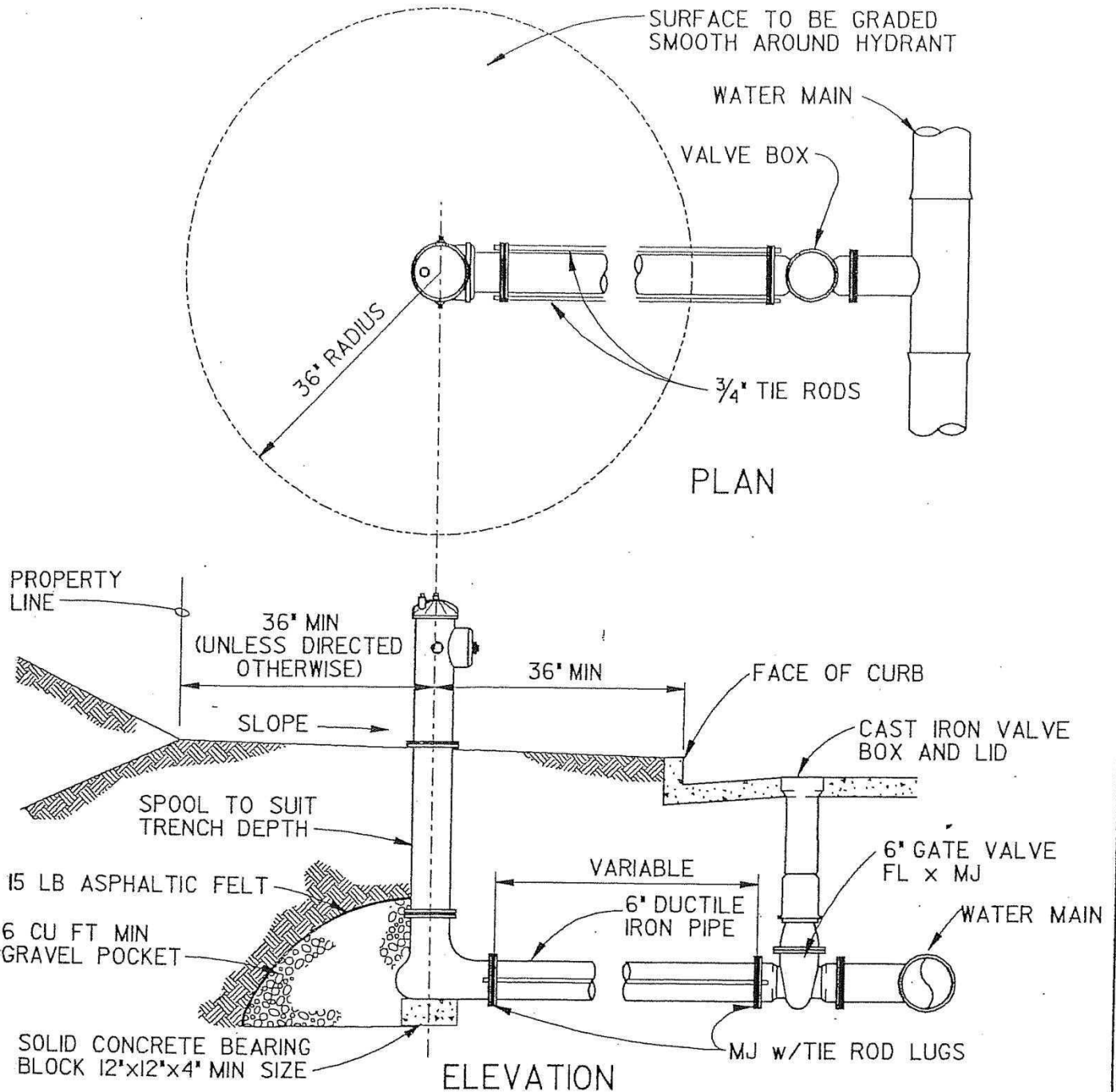
1. EXTERIOR OF VAULT BELOW GRADE TWO COATS OF BLACK BITUMASTIC SOLUTION.
2. VAULT SHOULD BE DRIED WITH NO MOISTURE PRESENT PRIOR TO APPLICATION OF COATING.
3. PAINT INTERIOR PIPING ONLY. TNEMEC SERIES 66, EPOXOLINE, SAFETY BLUE



DETAIL-ASPHALT PAD AROUND ACCESS DOOR

DOUBLE DETECTOR CHECK VALVE ASSEMBLY

STANDARD PLAN 7

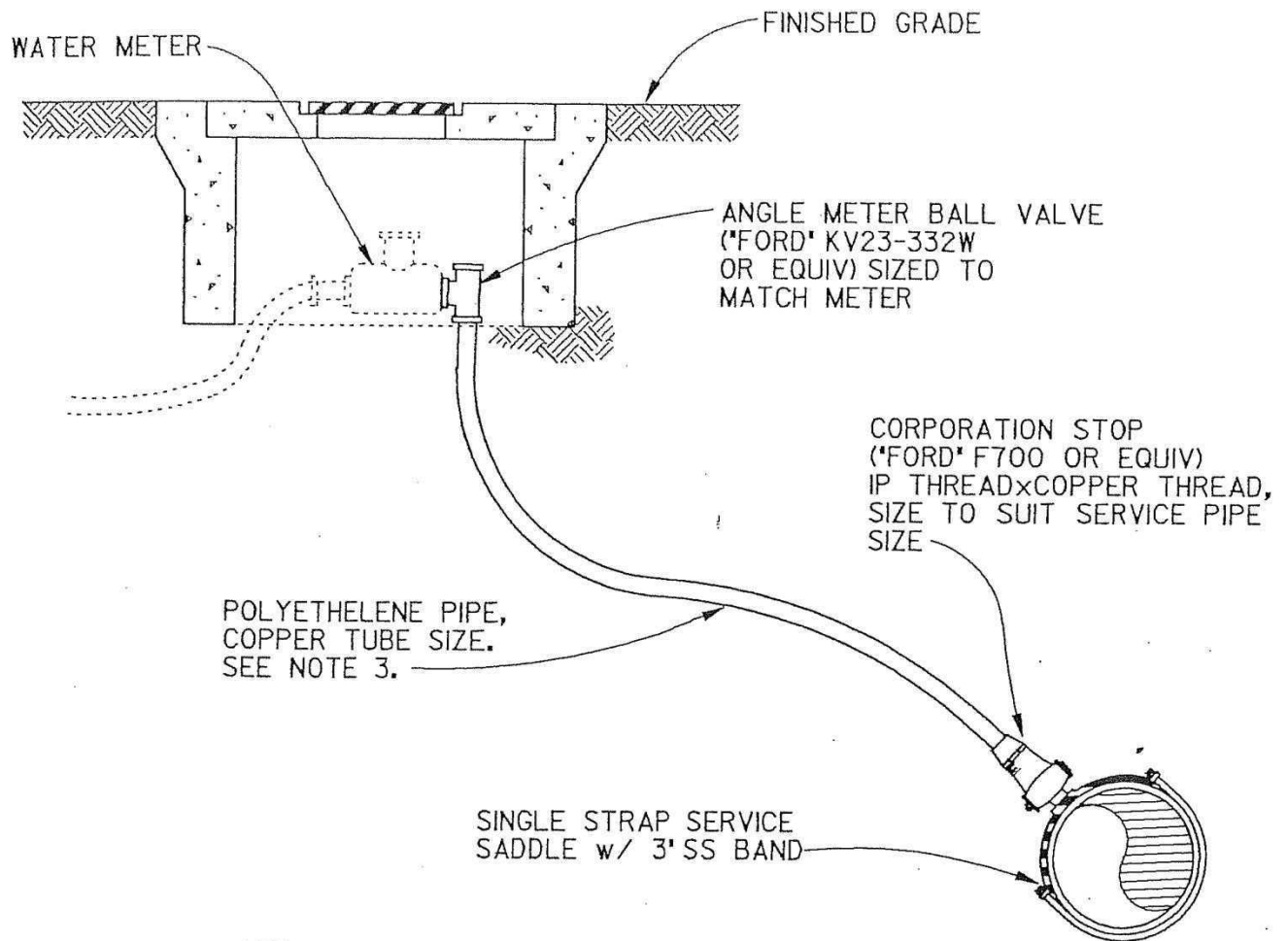


NOTE:

1. STEEL TIE RODS TO BE HEAVILY COATED WITH ASPHALT SEALER AFTER INSTALLATION.

FIRE HYDRANT ASSEMBLY AND TYPICAL INSTALLATION

STANDARD PLAN 8

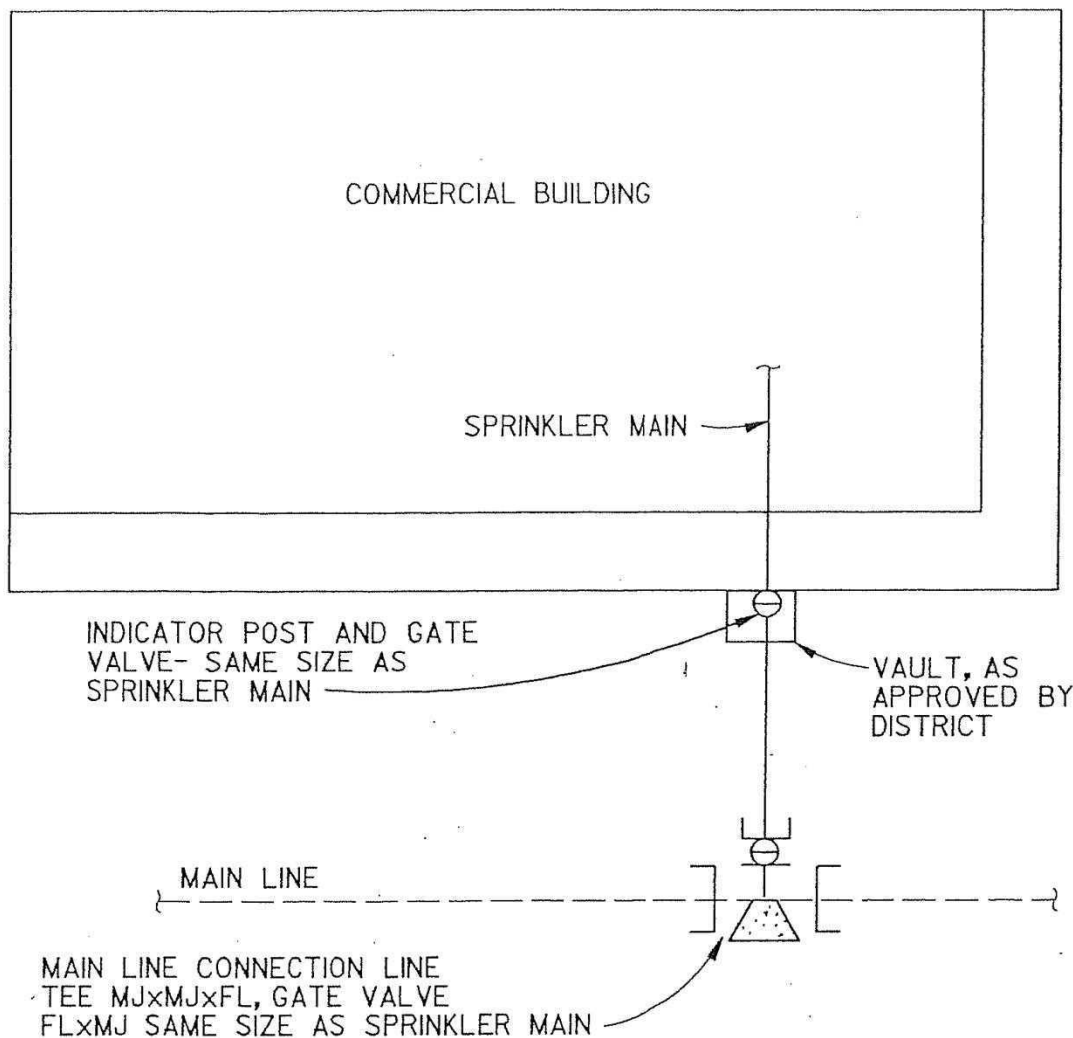


NOTES:

1. ALL FITTINGS SHALL BE BRASS
2. SERVICE LINES SHALL HAVE A 36" MINIMUM COVER FROM FINISHED GRADE.
3. $\frac{3}{4}$ ", 1" OR 2" SIZE AS REQUIRED.

SERVICE CONNECTION

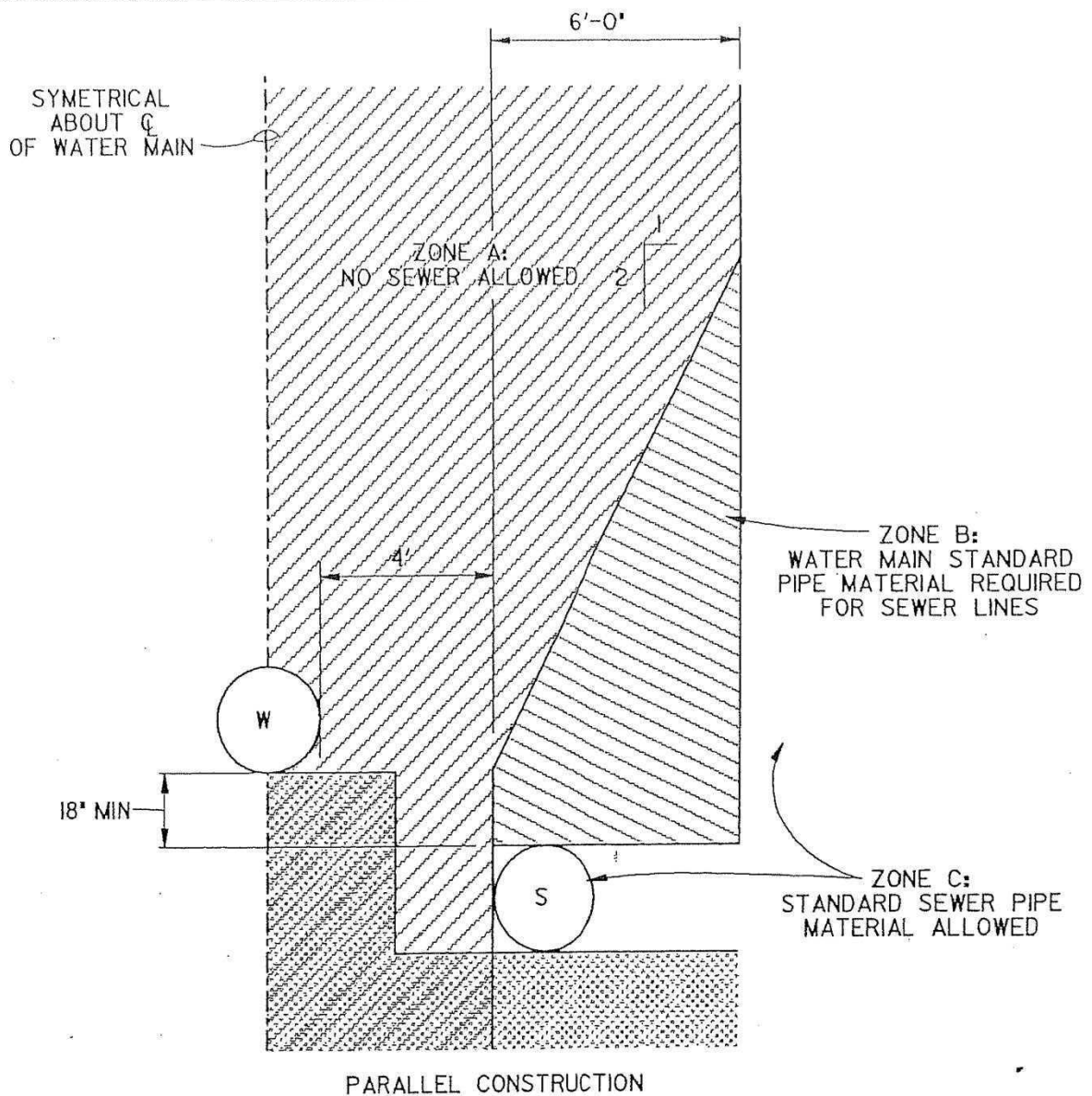
STANDARD PLAN 9



CONNECTION TO HAVE A BACKFLOW PREVENTION DEVICE IN LINE AND SHALL MEET STATE DEPARTMENT OF HEALTH 'APPROVED CROSS-CONNECTION CONTROL DEVICES' LISTINGS. EXACT LOCATION TO BE DETERMINED BY LOCAL FIRE DISTRICT, AND A DETECTOR CHECK PER DISTRICT.

SPRINKLER CONNECTION TO A COMMERCIAL BUILDING

STANDARD PLAN 10



PIPE MATERIAL (WATER MAIN STANDARD) FOR SEWER LINES IN ZONE B

TYPE OF PIPE	AWWA (ASTM) STANDARD		
	PIPE	JOINT	FITTINGS
DUCTILE IRON	C 151 & C 104	C III	C II0
ASBESTOS-CEMENT	C 400 (TYPE II) CLASS 200	(D 1869)	C II0
POLYVINYL-CHLORIDE	C 900	(D 3139 & F 477)	C II0
CONCRETE CYLINDER	C 303		

WATER AND SEWER CLEARANCE AND MATERAIL REQUIREMENTS

STANDARD PLAN 11

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Appendix H

Water Right Certificates and Permits

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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			
		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
1 GWC 608-A	Well 1 & 2, S12	450 gpm	0 gpm	420 afy	0 afy	392 gpm	58 gpm	120 afy	300 afy	392 gpm	58 gpm	181 afy	239 afy
2 GWC 4458-A	Well 6 & 7, S14	190 gpm	0 gpm	304 afy	0 afy	190 gpm	0 gpm	158 afy	146 afy	190 gpm	0 gpm	238 afy	66 afy
3 G1-00529C	Well 5 & 8, S13	100 gpm	0 gpm	51 afy	0 afy	50 gpm	50 gpm	15 afy	36 afy	50 gpm	50 gpm	23 afy	28 afy
4 G1-20328C	Well 4; S04 ¹	50 gpm	0 gpm	26.7 afy	0 afy	0 gpm	50 gpm	0 afy	26.7 afy	0 gpm	50 gpm	0 afy	26.7 afy
5 G1-22787C	Well 5 & 8, S13	160 gpm	0 gpm	125 afy	0 afy	100 gpm	60 gpm	38 afy	87 afy	100 gpm	60 gpm	57 afy	68 afy
6 G1-23372C	Well 6 & 7, S14	600 gpm	0 gpm	291 afy	0 afy	410 gpm	190 gpm	151 afy	140 afy	410 gpm	190 gpm	228 afy	63 afy
7 G1-25058C ²	Well 9, S09	650 gpm	0 gpm	0 afy	416 afy	650 gpm	0 gpm	82 afy	334 afy	650 gpm	0 gpm	124 afy	292 afy
8 G1-25331C ²	Well 10, S10	280 gpm	0 gpm	0 afy	319 afy	280 gpm	0 gpm	18 afy	301 afy	280 gpm	0 gpm	27 afy	292 afy
9 G1-25591C ²	Well 11, S11	70 gpm	0 gpm	0 afy	79 afy	70 gpm	0 gpm	36 afy	43 afy	70 gpm	0 gpm	54 afy	25 afy
TOTALS =		2,550 gpm		1,217.7 afy		2,142 gpm	408 gpm	618 afy	599.7 afy	2,142 gpm	408 gpm	932 afy	285.7 afy

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

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				M
	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	
1 None												
TOTALS =												

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

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:

¹ Well No. 4 (S04) is used as an emergency source of supply due to elevated water levels. The well is maintained as a functional well, but operationally, its use is avoided if possible.

² The annual volume under G1-25058C, G1-25331C, and G1-25591C is based on the demand numbers shown in the table are without conservation.

The demand numbers shown in the table are without conservation.

CERTIFICATE RECORD No. 2 PAGE No. 608-A

STATE OF WASHINGTON, COUNTY OF Kitsap

Certificate of Ground Water Right

Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and the rules and regulations of the State Supervisor of Hydraulics thereunder.

THIS IS TO CERTIFY That MANCHESTER WATER DISTRICT
of Port Orchard, Washington, has made proof
to the satisfaction of the State Supervisor of Hydraulics of Washington, of a right to the use of the
ground waters of two wells
Well No. 1
located within the NW $\frac{1}{4}$ of SW $\frac{1}{4}$; and Well No. 2 located within the SW $\frac{1}{4}$ of SW $\frac{1}{4}$,
Sec. 22, Twp. 24 N., Rge. 2 E.W.M.

for the purpose of municipal supply
under Ground Water Permit No. 316 issued by the State Supervisor of Hydraulics, 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 State Supervisor of Hydraulics of Washington and entered of record
in Volume 2 at page 608-A; that the right hereby confirmed dates from
September 20, 1946; that the quantity of ground water under the right here-
by confirmed for the purposes aforesaid, is limited to an amount actually beneficially used for said
purposes, and shall not exceed 450 gallons per minute; 420 acre-feet per year,
~~for irrigation of xxxxxxxxxxxxxxxxxx acres~~

A description of the lands to which such ground water right is appurtenant, and the place where
such water is put to beneficial use, is as follows:

The Town of Manchester, Kitsap County, Washington

The right to the use of the ground water aforesaid hereby confirmed is restricted to the lands or
place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Hydraulics affixed this 8th day
of May, 1951.

Chas. Carthout
State Supervisor of Hydraulics

ERING DATA
mhw

MANCHESTER WATER DIST
C/O DENNIS O'CONNELL
PO BOX 98
MANCHESTER WA 98353

File NR CG1-*05640CWRIS
WR Doc ID 4495592



State of Washington
Department of Ecology
**SUPERSEDING CERTIFICATE OF WATER
RIGHT**



This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown, but is limited to an amount actually beneficially used.

This certificate supersedes Water Right Certificate 4458-A issued on March 8, 1963 and is subject to the following provisions.

Reference Number: NA

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
June 16, 1960	5640	5336	GWC 4458-A

MAILING ADDRESS

MANCHESTER WATER DIST
C/O DENNIS O'CONNELL
P.O. BOX 98
MANCHESTER WA 98353

SITE ADDRESS (IF DIFFERENT)

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
KITSAP	GROUNDWATER		15-KITSAP
KITSAP	GROUNDWATER		15-KITSAP

Parcel #332402-1-041-2006

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWP	RNG	SEC	QQ Q	LATITUDE*	LONGITUDE
WELL 6	332402-1-041-2006	AAB-488	24N	02E	33	SWNE	47.5283°N	122.5538°W
WELL 7	332402-1-041-2006	AAB-489	24N	02E	33	SWNE	47.5290°N	122.5530°W

Datum: NAD83/WGS84

*Air Photo Based Estimate

ADDITIONAL LEGAL IS ON PAGE 2

SUPERSEDING CERTIFICATE OF WATER RIGHT 1
ECY 040-1-2

CG1-*05640CWRIS (GWC 4458-A)

Quantity Authorized for Withdrawal or Diversion

WITHDRAWAL OR DIVERSION RATE
190

UNITS
GPM

ANNUAL QUANTITY (AF/YR)
304

Purpose

PURPOSE	WITHDRAWAL OR DIVERSION RATE			ANNUAL QUANTITY (AF/YR)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON- ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	
Municipal	190		GPM	304		01/01 - 12/31

PUBLIC WATER SYSTEM INFORMATION

WATER SYSTEM ID	CONNECTIONS
507002	3253

Place of Use

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

The place of use (POU) of this water right is the service area described in the most recent Water System Plan approved by the Washington State Department of Health, so long as the water system is and remains in compliance with the criteria in RCW 90.03.386(2). RCW 90.03.386 may have the effect of revising the place of use of this water right.

Measurement of Water Use

How often must water use be measured?	Weekly
How often must water use data be reported to Ecology?	Upon Request by Ecology
What volume should be reported?	Total Annual Volume
What rate should be reported?	Annual Peak Rate of Withdrawal (gpm or cfs)

Provisions

Wells, Well Logs and Well Construction Standards

All wells constructed in the state shall meet the construction requirements of WAC 173-160 titled "Minimum Standards for the Construction and Maintenance of Wells" and RCW 18.104 titled "Water Well Construction". Any well which is unusable, abandoned, or whose use has been permanently discontinued, or which is in such disrepair that its continued use is impractical or is an environmental, safety or public health hazard shall be decommissioned.

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 wellconstruction 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.

Installation and maintenance of an access port as described in WAC 173-160-291(3) is required.

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", WAC 173-173," 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 for modifications to some of the requirements.

Department of Health Requirements

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 Southwest Drinking Water Operations, 243 Israel Road S.E., PO Box 47823, Tumwater, WA 98504-7823, (360) 236-3030.

Instream Flow Rule

Chapter 173-515 WAC, the Instream Resource Protection Program for WRIA 15, Kitsap Watershed was adopted July 24, 1981. The purpose of the rule "is to retain perennial rivers, streams and lakes in the Kitsap water resources inventory area with instream flows and levels necessary to provide for preservation and protection of wildlife, fish, scenic, aesthetic and other environmental values, recreational and navigational values, and to preserve water quality"(WAC 173-515-020).

Of particular interest to the present application is the inclusion of minimum instream flows (Stream #294) and a partial closure (June 15th to November 1st) under WAC 173-515-030 for Curley Creek, which is located in the immediate area of all three Manchester Water District wells discussed in the water availability and impairment sections of this report.

Water Use Efficiency

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.

Development Schedule and Proof of Appropriation

Water right changes may require development schedules when they involve long term projects taking more than five years to fully implement.

In the present case all construction is complete and both wells are connected to the district's distribution system. A development schedule and Proof of Appropriation are not required and therefore upon final approval of this report the change will be considered to be fully implemented.

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.

The right to use of the 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 90.44.100.

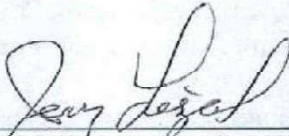
This certificate of water right is specifically subject to relinquishment for non-use of water as provided in Chapter 90.14 RCW.

Given under my hand and the seal of this office at Bellevue, Washington, this 4th day of December 2014.



Maia Bellon, Director
Department of Ecology

DATA REVIEW
OK OK



Jerry Liszaki, Acting Section Manager
Northwest 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

CERTIFICATE OF WATER RIGHT

- ☐ *Surface Water* (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)
- ☒ *Ground Water* (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.)

CERTIFICATE NUMBER G1-00529C	PERMIT NUMBER 9452	APPLICATION NUMBER 9990	PRIORITY DATE January 23, 1969
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NAME

SEDGWICK ENTERPRISES, INC.

ADDRESS (STREET)

24602 Military Road South

(CITY)

Kent

(STATE)

Washington

(ZIP CODE)

98031

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown.

PUBLIC WATER TO BE APPROPRIATED

SOURCE

A well - 8"x300'

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND

MAXIMUM GALLONS PER MINUTE

100.0

MAXIMUM ACRE-FEET PER YEAR

51.0

QUANTITY, TYPE OF USE, PERIOD OF USE

Community domestic supply - continuously

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION/WITHDRAWAL

820 feet West and 180 feet South of the North quarter corner of Sec. 10

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)

SECTION

10

TOWNSHIP N.

23

RANGE, (E. OR W.) W.M.

2 E.

W.R.I.A.

15

COUNTY

Kitsap

RECORDED PLATTED PROPERTY

LOT

24

BLOCK

OF (GIVE NAME OF PLAT OR ADDITION)

Plat of Harper's Suburban Home Tracts

LEGAL DESCRIPTION OF PROPERTY WATER TO BE USED ON

The Plat of Sedgwick Park in Sec. 3, T. 23 N., R. 2 E.W.M.

Nothing in this permit shall be construed as excusing the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations including those administered by local agencies under the Shoreline Management Act of 1971.

The right to the use of the 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 water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Olympia, Washington, this 28th day of July, 1974.

JOHN A. BIGGS, Director
Department of Ecology

ENGINEERING DATA

OK. *[Signature]*

by *[Signature: R. Jerry Bollen]*
R. JERRY BOLLEN, Assistant Director

FOR COUNTY USE ONLY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

- ☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)
- ☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1943, and amendments thereto, and the rules and regulations of the Department of Ecology.)

CERTIFICATE NUMBER	PERMIT NUMBER	APPLICATION NUMBER	PRIORITY DATE
G1-20328C	G1-20328P	G1-20328	October 14, 1972

NAME

MANCHESTER WATER DISTRICT

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
	Manchester	Washington	98353

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown.

PUBLIC WATER TO BE APPROPRIATED

SOURCE

A well

TRIBUTARY (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	50.0	26.7

QUANTITY, TYPE OF USE, PERIOD OF USE

Municipal Supply - continuous use.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION/WITHDRAWAL

800 feet East and 200 feet North of the South quarter corner of Sec. 29.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, E. OR W. W.M.	W.R.L.A.	COUNTY
SW 1/4 Sec 29	29	24	2 E.	15	Kittitas

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
		Tract 1 of the Plat of Colby Garden Tracts Division No. 1.

LEGAL DESCRIPTION OF PROPERTY WATER TO BE USED ON

Area served by Manchester Water District.

The right to the use of the 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 water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Olympia, Washington, this 31st day
of October , 19 75

JOHN A. BIGGS, Director
Department of Ecology

ENGINEERING DATA

OK.....

by Robert L. McCormick

ROBERT K. McCORMICK, Regional Manager

FOR COUNTY USE ONLY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

☐ Surface Water

(Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water

(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.)

PRIORITY DATE January 20, 1977	APPLICATION NUMBER G1-22787	PERMIT NUMBER G1-22787P	CERTIFICATE NUMBER G1-22787C
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NAME
MANCHESTER WATER DISTRICT

ADDRESS (STREET)
P. O. BOX 98

(CITY)
Manchester

(STATE)
Washington

(ZIP CODE)
98353

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
Well

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND

MAXIMUM GALLONS PER MINUTE
160.0

MAXIMUM ACRE-FEET PER YEAR
125.0

QUANTITY, TYPE OF USE, PERIOD OF USE
Community Supply - continuously

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL

820 feet west and 180 feet south of the north quarter corner of section 10

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)
NE $\frac{1}{4}$ N.W $\frac{1}{4}$

SECTION
10

TOWNSHIP N.
23

RANGE, (E. OR W.) W.M.
2 E.

W.R.I.A.
15

COUNTY
Kitsap

RECORDED PLATTED PROPERTY

LOT
24

BLOCK

OF (GIVE NAME OF PLAT OR ADDITION)
Harper's Suburban Home Tracts

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Area served by Manchester Water District.

PROVISIONS

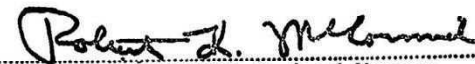
The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

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

Given under my hand and the seal of this office at Redmond Washington, this 31st day
of August, 1978

Department of Ecology

ENGINEER'S DATA
OK 

by 
ROBERT K. MCCORMICK, Regional Manager

FOR COUNTY USE ONLY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

- ☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)
- ☒ Ground Water (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.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
May 1, 1979	G1-23372	G1-23372P	G1-23372C

NAME Manchester Water District			
ADDRESS (STREET) P.O. Box 98	(CITY) Manchester	(STATE) Washington	(ZIP CODE) 98353

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown, but is limited to an amount actually beneficially used.

PUBLIC WATER TO BE APPROPRIATED

SOURCE Wells (2)	TRIBUTARY OF (IF SURFACE WATERS)		
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MAXIMUM CUBIC FEET PER SECOND —	MAXIMUM GALLONS PER MINUTE 600	MAXIMUM ACRE-Feet PER YEAR 291
------------------------------------	-----------------------------------	-----------------------------------

QUANTITY, TYPE OF USE, PERIOD OF USE Municipal supply - continuously

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL 650 feet north and 800 feet east of center of Section 33
--

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION) NE 1/4 SW 1/4	SECTION 33	TOWNSHIP N. 24	RANGE, (E. OR W.) W.M. 2E	W.R.I.A. 15	COUNTY Kitsap
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RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
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LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Area served by Manchester Water District.

PROVISIONS

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gauge may be installed in addition to the access port.

At such time that the Department of Ecology determines that regulation and management of the subject waters is necessary and in the public interest, an approved measuring device shall be installed and maintained in accordance with RCW 90.03.360 and WAC 508-64-020 through WAC 508-64-040.

All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

The right to the use of the 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 water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Redmond, Washington, this 15 day
of December, 19 86.

Department of Ecology

ENGINEERING DATA

OR

by

Nancy Ellison, Regional Manager

FOR COUNTY USE ONLY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

- ☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)
- ☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1946, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
August 20, 1987	G1-25058	G1-25058P	G1-25058C

NAME			
Manchester Water District			
ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
P. O. Box 98	Manchester	Washington	98353

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown, but is limited to an amount actually beneficially used.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
Well #9
TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
---	650	416.0*

QUANTITY, TYPE OF USE, PERIOD OF USE
Municipal supply - continuously

*Supplemental to existing rights held by applicant.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL
900 feet west and 100 feet south of N $\frac{1}{4}$ corner of Section 10.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.)	W.M.	W.R.I.A.	COUNTY
NE $\frac{1}{4}$ NW $\frac{1}{4}$	10	23	2E		15	Kitsap

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
24		Harper's Suburban Home Tracts

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Area served by Manchester Water District, Kitsap County.

PROVISIONS

Instantaneous withdrawal from this well will not exceed 650 gpm. Annual quantity is supplemental to existing rights. As such, total annual quantities from all existing rights will not exceed 1,217.7 acre-feet per year.

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gauge may be installed in addition to the access port.

An approved measuring device shall be installed and maintained in accordance with RCW 90.03.360, WAC 508-64-020 through WAC 508-64-040 (Installation, operation and maintenance requirements attached hereto).

The right to the use of the 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 water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Redmond Washington, this 15th day of February, 19 90.

Department of Ecology

ENGINEERING DATA

OK

by

Herman H. Huggins, Section Supervisor Water Resources

FOR COUNTY USE ONLY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

☐ **Surface Water** (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ **Ground Water** (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1940, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE October 1, 1988	APPLICATION NUMBER G1-25331	PERMIT NUMBER G1-25331 P	CERTIFICATE NUMBER G1-25331 C
----------------------------------	--------------------------------	-----------------------------	----------------------------------

NAME
Manchester Water District

ADDRESS (STREET) P.O. Box 98	(CITY) Manchester	(STATE) WA	(ZIP CODE) 98353
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This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown, but is limited to an amount actually beneficially used.

PUBLIC WATERS TO BE APPROPRIATED

SOURCE
Well

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE 280	MAXIMUM ACRE-Feet PER YEAR 316*
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QUANTITY, TYPE OF USE, PERIOD OF USE

Municipal supply - continuously

*Not additive to existing rights. Annual appropriations for all Manchester Water District Rights will not exceed 1217.7 acre-feet.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL

646 feet south and 440 feet east from north quarter corner of Section 21

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION) NW¼ NE¼	SECTION 21	TOWNSHIP N 24N	RANGE, (E. OR W.) W.M. 2E	W.R.L.A. 15	COUNTY Kitsap
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RECORDED PLATTED PROPERTY

LOT 23	BLOCK 16	OF (GIVE NAME OF PLAT OR ADDITION) Replat of Manchester Heights, Vol. 3, Page 27, Kitsap Co.
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LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Area served by Manchester Water District in Sections 21, 22, 27, 28, 33, 34, 35 Township 24N, Range 2E, W.M. Sections 1, 2, 3, 4 Township 23N, Range 2E, W.M. all within Kitsap County, Washington

CERTIFICATE

PROVISIONS

Permittee or its successor(s) shall submit in writing to the Department of Ecology, Northwest Regional Office, Bellevue, Washington, during the months of April and August each year, the chloride concentration of the water pumped and static water level (pump off) of the well authorized by this certificate. Depending on the results of the data collection, the withdrawal of ground water under this certificate may be limited, or other appropriate action may be required, by Department of Ecology Order, to prevent seawater intrusion into the subject aquifer.

An approved measuring device shall be installed and maintained in accordance with RCW 90.03.360, WAC 508-64-020 through WAC 508-64-040. Meter readings shall be recorded daily and this data shall be summarized monthly and maintained and be made available to the Department of Ecology upon request.

Static water level (SWL) at least once each month. Measurements shall be taken after pump has been shut off a reasonable time to allow water level to return to normal. Ecology's Water Resources section (NWRO) shall be notified if a below normal seasonal drop is measured in SWL, otherwise this data shall be maintained and be made available to Ecology upon request.

This certificate is subject to the implementation of the minimum requirements established in the Interim Guidelines for Public Water Systems Regarding Water Use Reporting, Demand Forecasting Methodology and Conservation Programs, July 1990.

The right to the use of the 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 water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

*Given under my hand and the seal of this office at Bellevue, Washington,
this 15th day of December, 1993.*

Department of Ecology

ENGINEERING DATA
OK NCS

by Stephen J. Hirschey
Stephen J. Hirschey, Section Supervisor, Water Resources

FOR COUNTY USE ONLY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
CERTIFICATE OF WATER RIGHT

- ☐ **Surface Water** (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)
- ☒ **Ground Water** (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1940, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE December 19, 1989	APPLICATION NUMBER G1-25591	PERMIT NUMBER G1-25591 P	CERTIFICATE NUMBER G1-25591 C
---	---------------------------------------	------------------------------------	---

NAME
Manchester Water District

ADDRESS (STREET) P.O. Box 98	CITY Manchester	STATE WA	ZIP CODE 98353
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This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown, but is limited to an amount actually beneficially used.

PUBLIC WATERS TO BE APPROPRIATED

SOURCE
Well

TRIBUTARY OF (IF SURFACE WATER)

MAXIMUM CUBIC FEET PER SECOND 70	MAXIMUM GALLONS PER MINUTE 70	MAXIMUM PUMP FEET PER YEAR 79*
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QUANTITY, TYPE OF USE, PERIOD OF USE

Municipal supply - continuously

*Not additive to existing rights. Annual appropriations for all Manchester Water District rights will not exceed 1217.7 acre-feet.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL

586 feet south and 440 feet east from north quarter corner of Section 21

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION) NW¼ NE¼	SECTION 21	TOWNSHIP N. 24N	RANGE (E. OR W.) W.M. 2E	W.R.L.A. 15	COUNTY Kitsap
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RECORDED PLATTED PROPERTY

LOT 8	BLOCK 16	OF (GIVE NAME OF PLAT OR ADDITION) Replat of Manchester Heights, Vol. 3, Page 27, Kitsap Co.
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LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Area served by Manchester Water District in Sections 21, 22, 27, 28, 33, 34, 35 Township 24N, Range 2E, W.M. Sections 1, 2, 3, 4 Township 23N, Range 2E, W.M. all within Kitsap County, Washington.

CERTIFICATE

PROVISIONS

Permittee or its successor(s) shall submit in writing to the Department of Ecology, Northwest Regional Office, Bellevue, Washington, during the months of April and August each year, the chloride concentration of the water pumped and static water level (pump off) of the well authorized by this certificate. Depending on the results of the data collection, the withdrawal of ground water under this certificate may be limited, or other appropriate action may be required, by Department of Ecology Order, to prevent seawater intrusion into the subject aquifer.

An approved measuring device shall be installed and maintained in accordance with RCW 90.03.360, WAC 508-64-020 through WAC 508-64-040. Meter readings shall be recorded daily and this data shall be summarized monthly and maintained and be made available to the Department of Ecology upon request.

Static water level (SWL) at least once each month. Measurements shall be taken after pump has been shut off a reasonable time to allow water level to return to normal. Ecology's Water Resources section (NWRO) shall be notified if a below normal seasonal drop is measured in SWL, otherwise this data shall be maintained and be made available to Ecology upon request.

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

*Given under my hand and the seal of this office at Bellevue, Washington,
this 15th day of December, 1993.*

Department of Ecology

ENGINEERING DATA

OK AKS

by Stephen J. Hirschey

Stephen J. Hirschey, Section Supervisor, Water Resources

FOR COUNTY USE ONLY



State of Washington
REPORT OF EXAMINATION
FOR WATER RIGHT CHANGE

File NR CG1-*05640C
WR Doc ID 4495592

Added or Changed Point of Withdrawal/Diversion

PRIORITY DATE
June 16, 1960

WATER RIGHT NUMBER
G1-*05640C (GWC 4458-A)

MAILING ADDRESS
MANCHESTER WATER DISTRICT
P.O. BOX 98
MANCHESTER WA 98353

SITE ADDRESS (IF DIFFERENT)

Total Quantity Authorized for Withdrawal or Diversion

WITHDRAWAL OR DIVERSION RATE
190

UNITS
GPM

ANNUAL QUANTITY (AF/YR)
304

Purpose

PURPOSE	WITHDRAWAL OR DIVERSION RATE			ANNUAL QUANTITY (AF/YR)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON- ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	
Municipal	190		GPM	304		01/01 - 12/31

WATER SYSTEM ID
507002

PUBLIC WATER SYSTEM INFORMATION
CONNECTIONS
3,253

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA					
			15-KITSAP					
SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWP	RNG	SEC	QQ Q	LATITUDE*	LONGITUDE
WELL 6	332402-1-041-2006	AAB-488	24N	02E	33	SWNE	47.5283°N	122.5538°W
WELL 7	332402-1-041-2006	AAB-489	24N	02E	33	SWNE	47.5290°N	122.5530°W

*Air Photo Based Estimate

Datum: NAD83/WGS84

REPORT OF EXAMINATION FOR WATER RIGHT CHANGE

Place of Use (See ATTACHMENT 1)

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

The place of use (POU) of this water right is the service area described in the most recent Water System Plan approved by the Washington State Department of Health, so long as the water system is and remains in compliance with the criteria in RCW 90.03.386(2). RCW 90.03.386 may also have the effect of revising the place of use of this water right.

Proposed Works

The proposed new points of withdrawal, Well 6 and Well 7, are existing groundwater sources connected to the Manchester Water District distribution system. Wells 6 and 7 are both 8-inch diameter steel-cased wells. Well 6 is completed at 507 feet below ground surface (bgs) and Well 7 is completed at 495.5 feet bgs.

Development Schedule

BEGIN PROJECT	COMPLETE CONSTRUCTION	PUT WATER TO FULL USE
NA	NA	September 30, 2014

Measurement of Water Use

How often must water use be measured?	Weekly
How often must water use data be reported to Ecology?	Upon Request by Ecology
What volume should be reported?	Total Annual Volume
What rate should be reported?	Annual Peak Rate of Withdrawal (gpm or cfs)

Provisions

Wells, Well Logs and Well Construction Standards

All wells constructed in the state must meet the construction requirements of WAC 173-160 titled "Minimum Standards for the Construction and Maintenance of Wells" and RCW 18.104 titled "Water Well Construction". Any well which is unusable, abandoned, or whose use has been permanently discontinued, or which is in such disrepair that its continued use is impractical or is an environmental, safety or public health hazard must be decommissioned.

All wells must 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 construction coordinator at the regional Department of Ecology office issuing this decision. This tag must remain attached to the well. If you are required to submit water measuring reports, reference this tag number.

Installation and maintenance of an access port as described in WAC 173-160- 291(3) is required.

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",

WAC 173-173, 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 for modifications to some of the requirements.

Department of Health Requirements

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 Southwest Drinking Water Operations, 243 Israel Road S.E., PO Box 47823, Tumwater, WA 98504-7823, (360) 236-3030.

Instream Flow Rule

Chapter 173-515 WAC, the Instream Resource Protection Program for WRIA 15, Kitsap Watershed was adopted July 24, 1981. The purpose of the rule "is to retain perennial rivers, streams and lakes in the Kitsap water resources inventory area with instream flows and levels necessary to provide for preservation and protection of wildlife, fish, scenic, aesthetic and other environmental values, recreational and navigational values, and to preserve water quality"(WAC 173-515-020).

Of particular interest to the present application is the inclusion of minimum instream flows (Stream #294) and a partial closure (June 15th to November 1st) under WAC 173-515-030 for Curley Creek, which is located in the immediate area of all three Manchester Water District wells discussed in the water availability and impairment sections of this report.

Water Use Efficiency

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.

Development Schedule and Proof of Appropriation

Water right changes may require development schedules when they involve long term projects taking more than five years to fully implement.

In the present case all construction is complete and both wells are connected to the district's distribution system. A development schedule and Proof of Appropriation are not required and therefore upon final approval of this report the change will be considered to be fully implemented.

A superseding certificate of groundwater right shall be issued once the approval for the change has been issued and the 30-day appeal period has passed.

Schedule and Inspections

Department of Ecology personnel, upon presentation of proper credentials, will 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.

Findings of Facts

Upon reviewing the investigator's report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I concur with the investigator that water is available from the source in question; that there will be no impairment of existing rights; that the purpose of use are beneficial; and that there will be no detriment to the public interest.

Therefore, I ORDER approval of Change Application No. CG1-*05640C, 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).

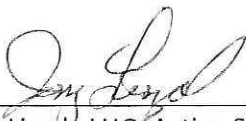
To appeal you must do the following within 30 days of the date of receipt of the Order.

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 on 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	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 1111 Israel RD SW Ste 301 Tumwater, WA 98501	Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

Signed at Bellevue, Washington, this 2nd day of September, 2014.


Jerry L. Liszak, LHG, Acting Section Manager

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>.

Appendix I

Water Quality Monitoring Plan

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Appendix I - 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 the 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 system operation.

Existing Water System Description

Water System Information

Manchester Water District (District) is a municipal corporation that owns and operates a public water system within its water service area. Water system data on file at the Washington State Department of Health (DOH) for the District's system is as follows.

Information Type	Description
System Type	Group A – Community – Public Water System
System Name	Manchester Water District
County	Kitsap
DOH System ID Number	50700 2
Owner Number	003566
Mailing Address	PO Box 98, Manchester, WA 98353
Physical Address	8185 E Daniels Loop, Port Orchard, WA 98366
Contact	Tony Lang, General Manager
Contact Phone Number	(360) 871-0500

Water System Operation and Control

The District currently serves customers within an elevation range of approximately sea level in areas along the shores of Puget Sound to approximately 365 feet above mean sea level along SE Sedgwick Road in the southern portion of the system. The wide range of elevations requires that the water pressure be increased or reduced to maintain pressures that are safe and sufficient to meet the flow requirements of the system. This is achieved by dividing the water system into seven distinct pressure zones. The pressure in each pressure zone is regulated by reservoir levels, pressure reducing station settings, pump station settings, or a combination.

The North 277 Zone is supplied with water from Wells 1 and 2. The operation of the wells is controlled by the surface water level in the Cedar Street Tank. The Madrone and Seaview pressure reducing valves (PRVs) also can supply the North 277 Zone, though they do not flow water during normal demand conditions. The PRVs are set to supply water to the North 277 Zone from the North 430 Zone upon a suppressed level in the Cedar Street Tank or during a localized drop in pressure, such as during fire flow.

The South 277 Zone is supplied water through a series of four pressure reducing stations, which supply water to the zone from the North 430 Zone and the South 430 Zone. The operation of the pressure reducing stations is determined by the surface water level in the Banner Road Tank and the level of demand in the zone.

When the zone valve between the North 277 Zone and the South 277 Zone is set to the open position, as is the current operation, the two zones operate essentially as one zone. The facilities operate in the same manner as described for their independent operation; however, the Cedar Street Tank and the Banner Road Tank operate in conjunction with each other to dictate the operation of all supply facilities for the two zones.

The 215 Zone is supplied with water continuously from the North 430 Zone through the Montana PRV. The Beach PRV functions as a lag supply facility for the zone and is set to supplement supply from the Montana PRV during a localized drop in pressure. The Alki View PRV supplies the 223 Zone with water continuously from the North 430 Zone. The 242 Zone is supplied with water continuously from the North 430 Zone through the Montana Extension PRV.

Wells 4, 6, 7, 10, and 11 supply the North 430 Zone, and their operation is controlled by the surface water level in the California Avenue Tanks. Well 4 also is controlled by a time clock that restricts its operation to a maximum of 8 hours per day. The Cedar Street Booster Pump Station is operated manually to transfer water from the Cedar Street Tank to the North 430 Zone, as needed to supplement supply to the zone during emergency conditions.

The South 430 Zone is supplied with water from Wells 5, 8, and 9. Well 9 operates during periods of higher demands, generally from June through October. During this time, Wells 5 and 8 are manually turned off and the shared chlorination equipment is located in the Well 9 building. As demands decrease in the system, and the District reverts to its winter operation, Well 9 is manually taken offline while Wells 5 and 8 are turned on and the chlorination equipment is transferred to the Well 5 building. The surface water level in the Sedgwick Road Tank controls the operation of the well(s) that are online. The Banner Road Booster Pump Station is operated manually to transfer water from the Banner Road Tank to the South 430 Zone, as needed, to supplement supply to the zone during emergency conditions.

Pressure Zones

A list of the District's existing pressure zones and their respective maximum hydraulic elevations is presented in Table 1. The table also shows the estimated connections and population in each pressure zone.

Table 1
Pressure Zones

Name	Maximum Hydraulic Elevation	Water Demand Allocation	Estimated Connections	Estimated Population
North 430 Zone	430 feet	45.2%	1,339	3,639
South 430 Zone	430 feet	9.5%	281	765
North 277 Zone	277 feet	21.0%	622	1,692
South 277 Zone	277 feet	22.4%	663	1,804
242 Zone	242 feet	0.1%	4	11
223 Zone	223 feet	0.2%	6	16
215 Zone	215 feet	1.6%	48	129
Totals			2,963	8,056

Water Sources

A list of the District's existing water sources is presented in Table 2. All the supply currently is provided by groundwater wells.

Table 2
Water Sources

DOH No.	Source Name	Location	Well Depth (feet)	Capacity (gpm)	Current Status
S12	Well 1 and 2	NW SW 22 24N 02E	140, 110.75	400	Active
S04	Well 4 ¹	SE SW 29 24N 02E	250	50	Active
S13	Well 5 and 8 Well Field ²	NE NW 10 23N 02E	215, 227	410	Active
S14	Well 6 and 7 Well Field	SW NE 33 24N 02E	507, 495.5	600	Active
S09	Well 9	NE NW 10 23N 02E	310	650	Active
S10	Well 10	NW NE 21 24N 02E	356	280	Active
S11	Well 11	NW NE 21 24N 02E	269.2	70	Active
Notes: 1) Well 4 is limited to operating 8 hours per day at 50 gpm within each 24-hour period. 2) Wells 5 and 8 Well Field source capacity is 410 gpm; however, it cannot be operated simultaneously with Well 9. 3) gpm = gallons per minute.					

Water Storage

A list of the District's existing water storage facilities is presented in Table 3.

Table 3
Water Storage

Name	Pressure Zone	Material	Volume (gallons)	Overflow Elev. (feet)	Current Status
Banner Road Tank	South 277	Steel	100,000	277.3	Active
California Avenue Tank No. 1	North 430	Steel	450,000	430.0	Active
California Avenue Tank No. 2	North 430	Steel	1,900,000	430.0	Active
Cedar Avenue Tank	North 277	Steel	250,000	277.5	Active
Sedgwick Road Tank	South 430	Steel	500,000	430.0	Active

Pump Stations

A list of the District's existing booster pump stations is presented in Table 4.

Table 4
Booster Pump Stations

Name	Lower Zone (From)	Upper Zone (To)	Current Status
Cedar Avenue Booster Pump Station	North 277	North 430	Active
Banner Road Booster Pump Station	South 277	South 430	Active

Pressure Reducing Stations

A list of the District's existing pressure reducing stations is presented in Table 5.

Table 5
Pressure Reducing Stations

Name	Upper Zone (From)	Lower Zone (To)	Current Status
Montana PRV	North 430	215	Active
Madrone PRV	North 430	North 277	Active
Seaview PRV	North 430	North 277	Active
Garfield PRV	North 430	South 277	Active
Banner PRV	South 430	South 277	Active
Harper PRV	South 430	South 277	Active
Sedgwick PRV	South 430	South 277	Active
Beach PRV	277	215	Active
Alki View PRV	North 430	223	Active
Montana Extension PRV	North 430	242	Active

Water Treatment

The District provides fluoridated water to its customers on a system-wide basis. With the exception of Wells 4 and 10, fluoridation is achieved at each of the well buildings through a fluoride injection system that consists of a sodium fluoride solution holding tank and a metering pump to automatically regulate the flow of sodium fluoride in proportion to the water supplied by the well. The metering pumps maintain a target residual range for fluoride of 0.5 to 0.9 milligrams per liter (mg/L). Well 4 is not equipped with a fluoridation system because of its minimal flow rate and water right restrictions. Similarly, Well 10 is not equipped with a fluoridation system because relatively high manganese concentrations in the water produced by the well restrict the operation of the facility. Wells 4 and 10 are only operated in conjunction with other sources of supply, such that water from the two wells is blended with fluoridated water. District staff monitor fluoridation levels daily.

The District currently is not required to provide routine disinfection on a system-wide basis. In the northerly portion of the service area, chlorine is added at several wells for taste and odor control purposes. Chlorination is achieved at Wells 4, 6, and 7 by injection of a 12.5-percent sodium hypochlorite (NaOCl) solution to oxidize hydrogen sulfide that occurs naturally in the aquifer. A metering pump in the respective pump houses maintains a target free residual of 0.5 mg/L.

In the southerly portion of the service area, the District is required to disinfect its sources and maintain a detectable level of chlorine within the distribution system. Chlorine is added to water produced at Wells 5, 8, and 9 to protect against coliform bacterial growth in the South 277 Zone and the South 430 Zone. Chlorination is achieved by the injection of sodium hypochlorite via a metering pump at the respective well houses with a target free residual of 0.3 to 0.5 mg/L. Daily chlorine residual monitoring is performed at coliform monitoring sample sites located in the South 277 Zone and the South 430 Zone, as required by DOH.

Source Water Quality Monitoring

The District is required to perform water quality monitoring at each of the active sources for inorganic chemical and physical substances, organic chemicals, unregulated inorganic and organic chemicals, and radionuclides. The monitoring requirements that the District must comply with are specified in WAC 246-290-300. The District must comply with the requirements for groundwater sources. Table 6 summarizes the source water quality monitoring requirements for the next several years. The table is based on information available at the time that this document was prepared and may change in the future.

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Table 6
Monitoring Schedule for 2023-2025

When	Monitor	Type	Frequency	Monitoring Group	Test Method
2023					
Apr-23	All Active Sources	Standard	1 year	Nitrate	NIT
Jan-23	All Active Sources	Standard	3 year	PFAS	LC-MSMS
Apr-23	10 samples in Distribution system	Standard	Monthly	Coliform	Membrane Filtration
Sep-23	1 Site in Distribution System	Reduced	1 year	Stage 2 DBPs	TTHM ² and HAA5
Oct-21 ⁵	WF (S05, S08)	Standard	6-year	Gross Alpha	Gross Alpha
Oct-21 ⁵	WF (S05, S08)	Standard	6-year	Radium	Radium
2024					
Apr-24	All Active Sources	Standard	1 year	Nitrate	NIT
Apr-23	10 samples in Distribution system	Standard	Monthly	Coliform	Membrane Filtration
Aug-24	Well 10	Standard	3 year	Manganese	Reduced/Oxidized Test
Sep-24	1 Site in Distribution System	Reduced	1 year	Stage 2 DBPs	TTHM and HAA5
Sep-24	Well 10	Standard	3 year	Iron	Reduced/Oxidized Test
Oct-24	Well 2	Standard	3 year	VOC	Gas Chromatography
Nov-24	Well 1, 2	Standard	6 year	Gross Alpha	Gross Alpha

When	Monitor	Type	Frequency	Monitoring Group	Test Method
Nov-24	Well 1, 2	Standard	6 year	Radium 228	Radium 228
2025					
Jul-18	All Active Sources	Standard	1 year	Nitrate	NIT
Apr-25	10 samples in Distribution System	Standard	Monthly	Coliform	Membrane Filtration
Aug-18	1 Site in Distribution System	Reduced	1 year	Stage 2 DBPs	TTHM and HAA5
Sep-25	30 Sites in Distribution System	Standard	3 year	Lead and Copper	LCR
May-25	All Active Sources	Initial	Quarterly	PFAS	LC-MSMS
Feb-25	Well 4	Standard	3 year	Manganese	Reduced/Oxidized Test
Feb-25	Well 9	Standard	3 year	Iron	Reduced/Oxidized Test
Mar-25	Well 9	Waiver	6 year	VOC	Gas Chromatography
May-25	Well 5	Standard	3 year	IOC	Inorganic Analysis
Sep-25	Well 5	Initial	Quarterly	Herbicides	LC-MSMS
Sep-25	Well 5	Initial	Quarterly	Pesticides	LC-MSMS
Mar-25	Garfield WF (S06, S07)	Standard	6 year	Gross Alpha	Gross Alpha
Sep-25	Well 5	Initial	Quarterly	Gross Alpha	Gross Alpha
Mar-25	Garfield WF (S06, S07)	Standard	6 year	Radium 228	Radium 228

When	Monitor	Type	Frequency	Monitoring Group	Test Method
Sep-25	Well 5	Initial	Quarterly	Radium 228	Radium 228
Notes: 1) DBPs = Disinfection Byproducts. 2) TTHM = Total Trihalomethanes. 3) HAA5 = Haloacetic Acids. 4) IOC = Inorganic Chemicals. 5) Past Due					

Monitoring Requirements and Procedures

Inorganic Chemical and Physical

A minimum of one sample shall be taken after treatment at the entry point to the distribution system for each source. Monitoring for primary and secondary inorganic chemical and physical substances, except for nitrate, shall be accomplished once every 3 years. If a maximum contaminant level (MCL) is exceeded, quarterly sampling is required for at least two quarters.

Monitoring for nitrate shall be accomplished annually for each source. The repeat monitoring frequency shall be quarterly for at least 1 year following any one sample in which the concentration is greater than or equal to 50 percent of the MCL for nitrate or nitrite.

Volatile Organic Chemicals

A minimum of one sample shall be taken after treatment at the entry point to the distribution system for each source. Monitoring for volatile organic chemicals (VOCs) shall be accomplished once every 3 years. 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 annual samples that comply with the MCLs, a waiver for reduced monitoring (once for every 3-year compliance period) may be applied for again.

Synthetic Organic Chemicals

A minimum of one sample shall be taken after treatment at the entry point to the distribution system for each 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 annual samples that comply with the MCLs, a waiver for reduced monitoring may be applied for again.

Unregulated Inorganic Chemicals

A minimum of one sample shall be taken after treatment at the entry point to the distribution system for each source. Monitoring is required at least once every 5 years, unless a waiver is granted by the State. The District monitors for unregulated inorganic chemicals when samples for regulated inorganic chemicals are taken.

Unregulated Volatile Organic Chemicals

A minimum of one sample shall be taken after treatment at the entry point to the distribution system for each source. Monitoring is required at least once every 5 years. The District monitors for unregulated volatile organic chemicals when samples for regulated volatile organic chemicals are taken.

Unregulated Synthetic Organic Chemicals

A minimum of one sample shall be taken after treatment at the entry point to the distribution system for each source. Monitoring is required at least once every 5 years, unless a waiver is granted by the State.

Radionuclides

A minimum of one sample shall be taken after treatment at the entry point to the distribution system for each source. Initial monitoring for gross alpha particle radioactivity, radium-226, and radium-228 was required in four consecutive quarterly samples. Monitoring thereafter requires four consecutive quarterly samples at least once every 3 years. Specific requirements for the updated regulations are contained in Title 40, Parts 141.25, 141.26, and 141.66 of the Code of Federal Regulations (CFR). At the discretion of DOH, if the results of the analysis are below the detection limit, the District's required monitoring may be reduced to as little as a single sample collected every 9 years. If the results are less than half of the established MCL, the required monitoring may be reduced to a single sample collected every 6 years. The analysis for radium-226 may be omitted, if the results from the gross alpha particle radioactivity analysis are less than 5 picoCuries per liter (pCi/L). The District last sampled for gross alpha and beta particles in 2024 and results indicated levels less than the MCL.

Distribution System Water Quality Monitoring

The District is required to perform water quality monitoring within the District distribution system for coliform bacteria, disinfectant (chlorine) residual concentration, lead and copper, asbestos, fluoride, and trihalomethanes in accordance with Chapter 246-290 WAC.

Monitoring Requirements and Procedures

Coliform Bacteria Routine Sampling

Specific requirements are contained in WAC 246-290-300. As directed by DOH, the District collects a minimum of nine samples per month from different locations throughout the system. If a coliform presence is detected in a sample, repeat samples must be taken.

Table 7 lists the addresses of the District's routine sampling locations, including the upstream and downstream sampling locations in the event that repeat sampling is necessary. Table 8 lists the monitoring schedule for each of the routine sampling sites.

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. These repeat 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), the District shall proceed with public notification in accordance with WAC 246-290-495. Samples of public notification forms that are required to be distributed to all water system customers following an acute or non-acute MCL violation are included in Appendix I of the District's Water System Plan (WSP). A copy of the District's Coliform Monitoring Plan is included in Appendix I of the District's WSP.

Table 7
Coliform Monitoring Sampling Locations

Location/Address for Routing Sample Sites	Location/Address for Repeat Sample Sites		Groundwater Sources for Triggered Sample Sites**
A-1. EPA Lab	Repeat Upstream Downstream	EPA Lab 7411 Beach Drive 7305 Beach Drive	All Active Sources
A-2. 2081 Spring Street	Repeat Upstream Downstream	2081 Spring Street 8095 Hemlock Street 1911 Puget Drive	All Active Sources
A-3. 7194 Polk Street	Repeat Upstream Downstream	7194 Polk Street 7195 Polk Street 965 California Avenue	All Active Sources
A-4. 4031 Stohlton Road	Repeat Upstream Downstream	4031 Stohlton Road 4037 Stohlton Road 8705 Sedgwick Road	All Active Sources
A-5. 4400 Harper Hill Road	Repeat Upstream Downstream	4400 Harper Hill Road 4462 Harper Hill Road 4233 Harper Hill Road	All Active Sources
A-6. 8003 Main Street	Repeat Upstream Downstream	8003 Main Street 2380 Spring Street 8009 Main Street	All Active Sources
A-7. 2282 California Avenue	Repeat Upstream Downstream	2282 California Avenue 2283 California Avenue 2700 Virginia	All Active Sources
A-8. 3166 Alaska Avenue	Repeat Upstream Downstream	3166 Alaska Avenue 7605 Idaho Street 7595 Montana	All Active Sources
A-9. 10566 Sedgwick Road	Repeat Upstream Downstream	10566 Sedgwick Road 10537 Sedgwick Road 10933 Fraser Road	All Active Sources
A-10. 8500 Sedgwick Road	Repeat Upstream Downstream	8500 Sedgwick Road 4780 Westway Drive 8705 Sedgwick Road	All Active Sources

Location/Address for Routing Sample Sites	Location/Address for Repeat Sample Sites		Groundwater Sources for Triggered Sample Sites**
B-1. EPA Lab	Repeat Upstream Downstream	EPA Lab 7411 Beach Drive 7305 Beach Drive	All Active Sources
B-2. 2325 Colchester Drive	Repeat Upstream Downstream	2325 Colchester Drive 2265 Colchester Drive 2288 Colchester Drive	All Active Sources
B-3. 7433 Mile Hill Drive	Repeat Upstream Downstream	7433 Mile Hill Drive 7343 Mile Hill Drive 1490 Alaska Avenue	All Active Sources
B-4. 11150 Tola Road	Repeat Upstream Downstream	11150 Tola Road 11177 Tola Road 11113 Tola Road	All Active Sources
B-5. 10193 Sedgwick Road	Repeat Upstream Downstream	10193 Sedgwick Road 10089 Sedgwick Road 10384 Sedgwick Road	All Active Sources
B-6. 2334 Yukon Harbor Dr	Repeat Upstream Downstream	2334 Yukon Harbor Drive 2333 Yukon Harbor Drive 2259 Yukon Harbor Drive	All Active Sources
B-7. 4210 Banner Road	Repeat Upstream Downstream	4210 Banner Road 4268 Banner Road 4035 Banner Road	All Active Sources
B-8. 1860 California Avenue	Repeat Upstream Downstream	1860 California Avenue 1830 California Avenue 1888 California Avenue	All Active Sources
B-9. 3600 Southworth Drive	Repeat Upstream Downstream	3600 Southworth Drive 9934 Scatterwood Lane 3688 Southworth Drive	All Active Sources
B-10. 4530 Arvick Road	Repeat Upstream Downstream	4530 Arvick Road 4565 Arvick Road 4525 Arvick Road	All Active Sources

Table 8
Coliform Monitoring Sampling Rotation Schedule

Month	Routine Site(s)
January	A
February	B
March	A
April	B
May	A
June	B
July	A
August	B
September	A
October	B
November	A
December	B

Disinfectant Residual Concentration

Disinfection requirements for groundwater sources are contained in WAC 246-290-451, which states that a disinfectant residual concentration shall be detectable in all active parts of the distribution system. The District is required to provide routine disinfection and maintain a detectable level of chlorine on a system-wide basis due to past Total Coliform Violations. A detectable residual disinfection concentration is defined as at least 0.2 milligrams per liter (mg/L).

Lead and Copper

Specific requirements are contained in Title 40, Parts 141.86, 141.87, and 141.88 CFR. Initial monitoring began in August 1992, and at that time the District sampled 40 sites annually. After two consecutive monitoring periods of meeting the lead and copper action levels, the sampling amount was lowered to 20 sites annually in 1994. After monitoring in 1994 yielded levels well below action levels for both lead and copper, monitoring frequency was reduced to 20 samples every 3 years. The results of the latest tests in 2022 indicated a highest level of 2.7 ppb for lead and a highest level of .17 ppb for copper. Sampling in 2016 indicated a range of less than 0.001 mg/L to 0.02 mg/L for lead and a range of 0.2 mg/L to 0.26 mg/L for copper. These results indicate that the 90th percentile concentration of lead and copper from each group of samples did not exceed the action level and the District has no record of 90th percentile concentrations of lead or copper exceeding any action level.

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). All 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.

Asbestos

Since the District has asbestos cement pipe in its water system, the District is required to sample water from a tap that is served by an asbestos cement pipe once every 9 years. The current maximum contaminant level for asbestos is 7 million fibers per liter and greater than 10 microns in length. If the MCL is exceeded, quarterly sampling is required for at least two quarters. The District last tested for asbestos in 2019 and was below the MCL and was at a non-detectable level. 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.

Fluoride Concentration

Specific requirements are contained in WAC 246-290-460 for systems that are fluoridating drinking water. The District is required to monitor the concentration of this fluoride addition in accordance with WAC 246-290-460. The District's fluoridation target is to maintain a fluoride concentration between 0.5 to 0.9 mg/L throughout the distribution system. The District collects a daily sample downstream of each fluoride injection point and analyzes the sample to confirm that the fluoride concentration is within the target range. The results of recent fluoride monitoring performed by the District in 2023 indicates that fluoride levels were successfully maintained within the target range.

Disinfection Byproducts

Specific requirements are contained in WAC 246-290-300. The system is in compliance with the MCL for trihalomethanes and haloacetic acids when the annual average of all samples taken that year is less than or equal to the MCL. If the average for these samples exceeds the MCL, the system is out of compliance. The results of the District's most recent testing for trihalomethanes indicated a range from non-detectable to 10.0 ppb. The District is in compliance with the 80 ppb MCL. The results of the District's most recent testing for haloacetic acids indicated a range from non-detectable to 5.3 ppb. The District is in compliance with the 60 ppb MCL. The District qualified for reduced monitoring and is now required to collect one sample from distribution each year. A copy of the District's 40/30 Certification letter and the District's Disinfection Byproducts Monitoring Plan is included in Appendix I of the District's WSP.

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MANCHESTER WATER DISTRICT
Resolution No. 2025-09

A RESOLUTION AMENDING THE DISTRICT COLIFORM MONITORING PLAN

WHEREAS, Chapter 246-290 WAC requires that all Group A water systems collect samples for coliform bacteria analysis from the distribution system and all sources of supply; and

WHEREAS, WAC 246-290-300(b)(i), requires Group A water systems to develop and update a written coliform monitoring plan (CMP) that identifies sampling sites and a sample collection schedule that are representative of water throughout the distribution system; and

WHEREAS, a Coliform Monitoring Plan requires nine (9) parts;

- System Information and Plan Preparation Information
- Laboratory Information
- Wholesaling of Groundwater
- Routine, Repeat, and Triggered Source Sample Information
- Reduced Triggered Source Monitoring Justification
- Routine Sample Rotation Schedule
- Level 1 and Level 2 Assessment Contact Information
- E. coli-Present Sample Response Plan
- System Map; and

WHEREAS, a coliform monitoring plan helps ensure;

- compliance of regulations
- routine distribution sampling
- repeat and triggered samples in case routine samples indicate a possible water quality problem
- guidance so that more than one person associated with the water system knows where and how to collect coliform samples, and
- water quality surveillance; and

WHEREAS, on March 8, 2017, District staff updated the previous Coliform Monitoring Plan; and

WHEREAS, on February 22, 2025, District management reviewed and determined modifications to the Coliform Monitoring Plan were needed; and

WHEREAS, during review and updating of the District's Coliform Monitoring Plan, staff confirmed the required nine (9) parts of a Coliform Monitoring Plan have been met; and

NOW, THEREFORE BE IT RESOLVED that the Board of Commissioners of the Manchester Water District hereby adopt the amended Coliform Monitoring Plan, attached hereto as Exhibit A.

THIS RESOLUTION was duly considered and approved by the Manchester Water District Board of Commissioners in a regularly scheduled open public meeting on May 13, 2025.

1. **Ratification.** Any act consistent with the authority granted pursuant to this Resolution occurring prior to the effective date of this Resolution is hereby ratified and affirmed; and
2. **Severability.** The provisions of this Resolution are declared separate and severable. The invalidity of any clause, sentence, paragraph, subdivision, section or portion of this resolution or the invalidity of the application thereof to any person or circumstances, shall not affect the validity of the remainder of the resolution, or the validity of its application to other persons or circumstances; and
3. **Effective Date.** This resolution shall become effective immediately upon adoption and signature as provided by law.

ADOPTED by the Manchester Water District Board of Commissioners on May 13, 2025.

Steve Pedersen
Board Chair

James E. Strode
Secretary

Robert Ballard
Commissioner

Approved as to Form:

Ken Bagwell, District Attorney



Coliform Monitoring Plan

Updated May 13, 2025

Coliform Monitoring Plan for: Manchester Water District**A. System Information****Plan Date:** 5/13/2025

Water System Name Manchester Water District	County Kitsap	System I.D. Number 507002
Name of Plan Preparer Tony Lang	Position General Manager	Daytime Phone 360-871-0500
Sources: DOH Source Number, Source Name, Well Depth, Pumping Capacity	S01 – Well 1, 114 ft., 250 gpm (Perm.) S02 – Well 2, 95 ft., 180 gpm (Perm.) S04 – Well 4, 436 ft., 50 gpm (Seasonal/Emergency) S06 – Well 6, 479 ft., 350 gpm (Perm.) S07 – Well 7, 476 ft., 250 gpm (Perm.) S09 – Well 9, 303 ft., 650 gpm (Seasonal - Summer) S10 – Well 10, 359 ft., 280 gpm (Perm.) S11 – Well 11, 277 ft., 70 gpm (Perm.) S14 – Garfield WF (S06,S07), 476 ft., 600 gpm (Perm.) S15 – Well 5R, 236 ft., 250 gpm (Seasonal - Winter)	
Storage: List and Describe	Banner Tank – 0.2 MG Tank California Ave. #1 – 0.45 MG Tank California Ave. #2 – 1.9 MG Tank Cedar Ave. – 0.25 MG Tank Sedgwick Road – 0.5 MG Tank	

Treatment: Source Number & Process	S01 – Chlorination w/o 4-log virus treatment S02 – Chlorination w/o 4-log virus treatment S04 – Chlorination w/o 4-log virus treatment S06 – Chlorination w/o 4-log virus treatment S07 – Chlorination w/o 4-log virus treatment S09 – Chlorination w/o 4-log virus treatment S10 – Chlorination w/o 4-log virus treatment S11 – Chlorination w/o 4-log virus treatment S14 – Chlorination w/o 4-log virus treatment S15 – Chlorination w/o 4-log virus treatment	
Pressure Zones	North 430 Zone South 430 Zone North 277 Zone South 277 Zone 242 Zone 223 Zone 215 Zone	
Population by Pressure Zone	North 430 Zone – 4,246 people South 430 Zone – 725 people North 277 Zone – 1,614 people South 277 Zone – 1,968 people 242 Zone – <20 people 223 Zone – <20 people 215 Zone – 60 people	
Number of Routine Samples Required Monthly by Regulation	10	
Number of Sample Sites Needed to Represent the Distribution System	10	
*Request DOH Approval of Triggered Source Monitoring Plan?	Yes ☐ No ☒	

B. Laboratory Information

Laboratory Name Spectra Laboratories	Office Phone: 360-779-5141 After Hours Phone: 360-779-5141
Address 26276 Twelve Trees Ln. Poulsbo, WA 98370	Project Manager: Jessica Donaldson Phone: 360-779-5141 Ext 1 Email: jessicad@spectra-lab.com
Hours of Operation: Monday – Friday 8:00 AM -5:00 PM	
Contact Name: Jessica Donaldson	
Emergency Laboratory Name Spectra Laboratories	Office Phone 360-779-5141
Address 26276 Twelve Trees Ln. Poulsbo, WA 98370	Email JasonP@Spectra-Lab.com

Hours of Operation: Monday – Friday 8:00 AM - 5:00 PM
Contact Name: Jason Patrick

C. Wholesaling of Groundwater

	Yes	No
We are a consecutive system and purchase groundwater from another water system.	☐	☒
We sell groundwater to other public water systems.	☐	☒

D. Routine, Repeat, and Triggered Source Sample Locations*

Location/Address for <u>Routine</u> Sample Sites	Location/Address for <u>Repeat</u> Sample Sites	Groundwater Sources for <u>Triggered</u> Sample Sites**
A-1. EPA Lab	Repeat Upstream Downstream	EPA Lab 7257 Beach 7411 Beach All Active Sources
A-2. 8674 E. Caraway Rd	Repeat Upstream Downstream	8674 E. Caraway Rd. 8670 E. Caraway Rd 8682 E. Caraway Rd. All Active Sources
A-3. 7194 Polk	Repeat Upstream Downstream	7194 Polk 965 California 7195 Polk All Active Sources
A-4. 4031 Stohlton	Repeat Upstream Downstream	4031 Stohlton 4037 Stohlton 3990 Southworth All Active Sources
A-5. 4400 Harper Hill	Repeat Upstream Downstream	4400 Harper Hill 4408 Harper Hill 4233 Harper Hill All Active Sources
A-6. 8003 Main	Repeat Upstream Downstream	8003 Main 2380 Spring 7936 Main All Active Sources
A-7. 2282 California	Repeat Upstream Downstream	2282 California 2334 Virginia 2283 California All Active Sources
A-8. 3166 Alaska	Repeat Upstream Downstream	3166 Alaska 7605 Idaho 7597 Montana All Active Sources
A-9. 10566 Sedgwick	Repeat Upstream Downstream	10566 Sedgwick 10554 Sedgwick 11200 Sedgwick All Active Sources
A-10. 4739 Westway Dr	Repeat Upstream Downstream	4739 Westway Dr 4749 Westway Dr 4729 Westway Dr All Active Sources
B-1. EPA Lab	Repeat Upstream Downstream	EPA Lab 7257 Beach 7411 Beach All Active Sources
B-2. 2189 Nubling	Repeat Upstream Downstream	2189 Nubling 8098 Spruce 2229 Nubling All Active Sources
B-3. 7433 Mile Hill	Repeat Upstream Downstream	7433 Mile Hill 7343 Mile Hill 1490 Alaska All Active Sources
B-4. 11150 Tola	Repeat Upstream Downstream	11150 Tola 11177 Tola 11113 Tola All Active Sources
B-5. 10193 Sedgwick	Repeat Upstream Downstream	10193 Sedgwick 10089 Sedgwick 10384 Sedgwick All Active Sources
B-6. 2334 Yukon Harbor	Repeat	2334 Yukon Harbor All Active Sources

	Upstream	7335 Southworth	
	Downstream	2333 Yukon Harbor	
B-7. 2847 Banner Rd	Repeat	2847 Banner Rd	All Active Sources
	Upstream	2855 Banner Rd	
	Downstream	8140 Southworth Dr	
B-8. 1860 California	Repeat	1860 California	All Active Sources
	Upstream	1888 California	
	Downstream	1830 California	
B-9. Harper Park	Repeat	Harper Park	All Active Sources
	Upstream	10212 Southworth Dr	
	Downstream	9934 Scatterwood	
B-10. 4530 Arvick	Repeat	4530 Arvick	All Active Sources
	Upstream	4565 Arvick	
	Downstream	4525 Arvick	

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

Important Notes for Sample Collector:

1. Collect samples early in the month and early in the week.
2. Do not collect sample(s) in a week when there is a holiday or when a key staff member is on vacation.
3. If a sample site is no longer a good sample site, substitute an acceptable site in the same area. If the condition change cannot be resolved, choose a permanent new sample site and update this CMP.
4. Always review the lab results for your coliform samples.

E. Reduced Triggered Source Monitoring Justification (add sheets as needed): Not Requested

F. Routine Sample Rotation Schedule

Month	Routine Site(s)	Month	Routine Site(s)
January	B	July	B
February	A	August	A
March	B	September	B
April	A	October	A
May	B	November	B
June	A	December	A

G. Level 1 and Level 2 Assessment Contact Information

Name Tony Lang (WDM3, CCS, WTPO1) (Cert. #13001)	Office Phone 360-871-0500 After Hours Phone 360-900-6472
Address Manchester Water District PO Box 98 Manchester, WA 98353	Email tlang@manchesterwater.org
Name Cody Hodge, Operations Foreman (WDM3, CCS, WTPO1-OIT) (Cert. #14940)	Office Phone 360-871-0500 After Hours Phone 360-360-337-9435
Address Manchester Water District PO Box 98 Manchester, WA 98353	Email chodge@manchesterwater.org

H. *E. coli*-Present Sample Response

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

(Cont.)

Distribution System <i>E. coli</i> Response Checklist				
Potential Public Notice Delivery Methods	Yes	No	N/A	To Do List
It is feasible to deliver a notice going door-to-door.	☒	☐	☐	☐
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.	☒	☐	☐	☐

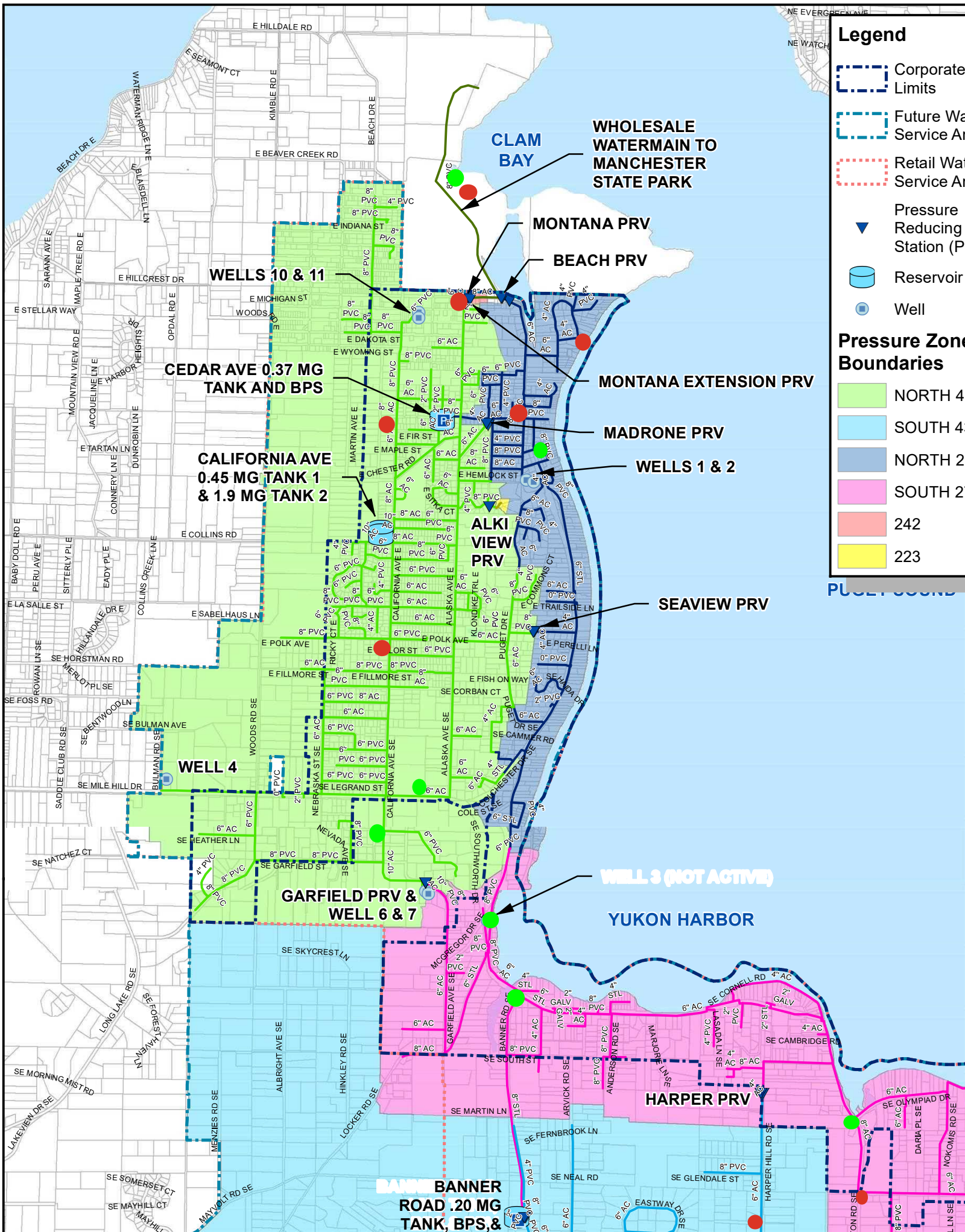
Distribution System <i>E. coli</i> Response Plan
If we have <i>E. coli</i> in our distribution system we will immediately: 1. Call DOH. Kacie Seyfert (564-669-0844) 2. Collect repeat and triggered source samples per Part D. Collect additional investigative samples as necessary. 3. Inspect our water system facilities, including treatment plants, for proper operation. 4. Interview staff to determine whether anything unusual was happening in the water system service area, especially since the previous month's samples. 5. Review new construction activities, water main breaks, and pressure outages that may have occurred during the previous month. 6. Review Cross-Connection Control Program status. 7. Discuss with DOH whether to issue a Health Advisory based on the findings of steps 3-6. If necessary, issue the HA. 8. Wait for repeat sample results. 9. Respond appropriately to the repeat results: • If repeats are all satisfactory, lift HA if one was issued. • If any repeat is unsatisfactory, issue HA if not already issued. Host DOH for an inspection and respond accordingly to inspection findings.

<i>E. coli</i>-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 <i>E. coli</i> -present source sample result with our water system's governing body (Board of Commissioners) and received direction from them on our response plan.	☒	☐	☐	☐
We discussed the requirement for immediate public notice of an <i>E. coli</i> -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.	☒	☐	☐	☐

<u>E. coli-Present Triggered Source Sample Response Checklist – All Sources</u>				
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? _____ 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.	☐	☐	☒	☐

Note: Because Manchester Water District has multiple sources, and the ability to move water throughout different pressure zones, we are not dependent on any single source. In the event of an E.coli-Present Triggered Source Sample result the source in question can be taken out of service until the source of contamination is determined and corrected.

<u>E. coli-Present Triggered Source Sample Response Plan – All Sources</u>
If we have <i>E. coli</i> in <u>Any Source</u> water we will immediately: 1. Call DOH. Kacie Seyfert (564.669.0844) 2. Take the source out of service. 3. Distribute required notice. 4. Perform compliance monitoring at the entry point to the distribution system. 5. Ask DOH to review our Contact Time analysis and acknowledge that we provide 4-log virus treatment before the first customer.



Legend

- Corporate Limits
- Future Water Service Area
- Retail Water Service Area
- Pressure Reducing Station (PRS)
- Reservoir
- Well

Pressure Zone Boundaries

- NORTH 4
- SOUTH 4
- NORTH 2
- SOUTH 2
- 242
- 223



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

December 12, 2007

Reply to
Attn Of: OWW-136

Dennis O'Connell
Manchester Water District
P.O. Box 98
Manchester, Washington 98353

RE: Approval of Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2
DBPR) 40/30 Certification
Manchester Water District ID # WA53507002 – Kitsap County

Dear Mr. O'Connell:

This letter is to provide confirmation that your 40/30 certification, submitted to meet the Initial Distribution System Evaluation (IDSE) requirement of the Stage 2 DBPR, has been approved.

Your next step will be to prepare a monitoring plan for Stage 2 DBPR compliance monitoring. This plan must be completed before you are required to begin Stage 2 DBPR compliance monitoring during the period starting October 2013. The Department of Health will provide guidance pertaining to the preparation of this monitoring plan as your compliance date approaches. Until Stage 2 DBPR compliance monitoring begins, you must continue to conduct Stage 1 DBPR monitoring as required by the state.

Additional information pertaining to choosing Stage 2 DBPR monitoring locations and preparing the Stage 2 DBPR monitoring plan is enclosed for your use. If you have questions regarding this letter, please contact me at (206) 553-1890 or marshall.wendy@epa.gov. For more information regarding this rule visit the Stage 2 DBPR website at www.epa.gov/safewater/disinfection/stage2.

Sincerely,

Wendy Marshall
Environmental Scientist

Enclosure

cc: Ethan Moseng – DOH

RECEIVED

JAN 07 2008

DEPARTMENT OF HEALTH
NW DRINKING WATER

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DOH 331-464
Updated July 2013

Stage 2 DBP Monitoring Plan - Groundwater (Reduced Monitoring)

System Name	Manchester Water District
PWSID#	507002
Date	9/11/2013
Completed by	Stephen Ward
Population	9500

Initial Stage 2 Sampling Period First sampling period following **October 1, 2013**

Number of Samples Required 1 TTHM and 1 HAA5 per Year

Samples must be collected at the location and during the quarter with the highest TTHM single measurement and one at the location and during the quarter with the highest HAA5 single measurement; 1 dual sample set per sample period if the highest TTHM and HAA5 measurements occurred at the same location and quarter

	Stage 2 Compliance Monitoring Site ID	Projected Sampling Date	
Highest TTHM Site	S2DBP #1	AUGUST	If any annual or triennial sample exceeds the MCL (0.080 mg/l for TTHM or 0.060 mg/l for HAA5) you must begin quarterly monitoring for both TTHM and HAA5 for at least four consecutive quarters to determine if you exceed the MCL.
Highest HAA5 Site	S2DBP #1	AUGUST	

To remain on reduced monitoring:

The TTHM LRAA must be less than or equal to 0.060 mg/l AND the HAA LRAA must be less than or equal to 0.045 mg/l at each monitoring location.

What happens if you exceed any of the above levels?

You must return to routine monitoring.

Determining Compliance

Our system is required to monitor annually (or triennially). For compliance, we will determine that each sample taken is less than the MCL. If any sample exceeds the MCL, we must increase monitoring to dual sample sets once per quarter (taken every 90 days) at all locations. If the locational running annual average (LRAA) exceeds the MCL for either TTHM (0.080 mg/l) or HAA5 (0.060 mg/l), an MCL violation will have occurred. The LRAA is calculated based on four consecutive quarters of monitoring. Compliance will then be achieved if the TTHM and the HAA5 LRAA at each monitoring location for the four most recent quarters is less than or equal to 0.080 mg/l for TTHM and less than or equal to 0.060 mg/l for HAA5.

Disinfectant Monitoring for TTHM and HAA5

Chlorine residuals must be measured at the same time and place as routine or repeat coliform samples
MRDL for chlorine and chloramines = 4.0 mg/l as Cl₂

Determining Compliance for disinfectant residuals

Compliance is based on the running annual average (RAA) of 12 consecutive months
Daily residual measurements will / will not be included in the compliance calculations (circle one)

Attach a distribution map with sample locations

Comments

You will need to print a hard copy for your records and make it available upon request. You do not need to submit a copy to DOH.

If you need this publication in an alternate format, call (800) 525-0127. For TTY/TDD call (800) 833-6388.

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NOTICE TO WATER SYSTEM USERS

COLIFORM MAJOR 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 of _____ we did not monitor or test for coliform bacteria, 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 coliform sample required for the month of _____ has been collected and was found to show no presence of coliform bacteria.
- ☐ 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 ____/____/____

Coliform Major 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 ____/____/____.



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



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:
 20425 72nd Ave. S., Suite 310,
 Kent WA 98032
 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 NOTICE CERTIFICATION *E. coli*-MCL Violation

Within 10 days after notifying your customers about an *E. coli*-MCL violation, you must complete this form and send it to our regional office along with 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

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.

Northwest Regional Office:
20425 72nd Ave S Suite 310
Kent WA 98032
(253) 395-6775
Fax: (253) 395-6760
Email: dw.nwro@doh.wa.gov

Southwest Regional Office:
PO Box 47823
Olympia WA 98504-7823
(360) 236-3030
Fax (360) 664-8058
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: mark.steward@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 & 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)



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

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)

Signature of owner or operator	Position	Date
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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

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)
dirección)

(El número de teléfono)

(La

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)
Fecha)

(Posición)

(

Envíe una copia de la notificación completa y la certificación a:

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 ____/____/____.



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

AVISO A LOS USUARIOS DEL SISTEMA DE AGUA

VIOLACIÓN DEL MONITOREO DE LOS SUBPRODUCTOS DE LA DESINFECCIÓN

Nosotros, el sistema del agua _____, con numero de identificación _____, 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(los) mes(es) de _____ o ☐ los cuartos de _____ en el año de _____ no realizamos monitoreo ni pruebas del agua para ☐ el total de los trihalometanos, ☐ los haloácidos, o ☐ bromatos 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.
- ☐ Colectaremos las muestras en el futuro según la norma.
- ☐ Otra información para los usuarios:

Por más información, contacte a _____ al (_____) _____ o en _____.
(Dueño / operador) (Número de teléfono) (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, hospicios 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 _____ el ____/____/____.

Formulario de certificación de la notificación al público del monitoreo de los subproductos de la desinfección

El propósito de este formulario (abajo) es documentar para el departamento que el aviso público fue distribuido.

Marque por favor la caja apropiada y complete la fecha que el aviso fue distribuido: (Esta sección debe ser llenada por el sistema de agua):

- ☐ 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 ____/____/____.
- ☐ Se colocó el aviso (solo con permiso del departamento) en:

_____ el ____/____/____.

(Firma del dueño u operador)

(Posición)



(Fecha)

Si usted necesita esta publicación en un formato diferente, llame al (800) 525-0127. Para TTY/TDD, llame al (800) 833-6388.

Envíe una copia de la notificación completa y la certificación a:

☐ 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):

- ☐ 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

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)



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

**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)



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

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 & 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 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)**



Signature of owner or operator

Position

Date

Send a 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

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

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.
- ☐ Our required lead and copper 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

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 & 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)



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

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.
- ☐ Nuestras muestras de plomo y cobre requeridas han sido tomadas para este periodo de monitoreo.
- ☐ 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 certification form

All Group A water systems that conduct lead and copper monitoring must provide individual sampling results to the persons at each sample location. (CFR 141.85 (d))

Notification of Results: The water system must provide the consumer notice as soon as possible, but no later than 30 days after learning the results.

Community water systems: You must provide individual sampling results to all residences for which you received lead and copper samples. In multi-unit structures, only notify each unit tested.

Nontransient noncommunity water systems (NTNCs): You must notify all consumers who use water from the sample tap, even if they do not receive a water bill. With prior approval from DOH, NTNC water systems can post the notice in public areas.

Certification to the state: DOH must receive a sample copy of one consumer notice and a signed certification form (below) within 90 days after the end of the monitoring period.

To meet this reporting requirement, you may:

- [Use the DOH Consumer Notice Template.](#)
- Use the applicable EPA Consumer Notice template.
- Prepare your own Consumer Notice in conjunction with the state.

If you choose to produce your own Consumer Notice, it must include all of the following:

1. The sample results of the tap tested.
2. An explanation of the health effects of lead.
3. Steps consumers can take to reduce exposure to lead in drinking water.
4. The water system's contact information.
5. The maximum contaminant level goal (MCLG) and action level for lead, and the definitions of these two terms.

If you are responsible for multiple water systems, you can send to the Office of Drinking Water:

- A list of the water systems you provided Consumer Notices to, with name and PWS ID number.
- Send one copy of the Consumer Notice you used.
- Send one completed certification form (below).

Lead and Copper Results: Consumer Notification Certification Form

The water system must complete this section. The signature below certifies that the notice contains all required elements.

Complete the following items (check all that apply):

☐ I mailed/delivered all Consumer Notices to the water users at all of the lead and copper sampling locations within 30 days of receiving the lead and copper results from the laboratory.

☐ **(For NTNC systems ONLY)** Notice posted at _____ on ____ / ____ / ____ within 30 days of receiving the lead and copper results from the laboratory. (Only By Department Approval)

Water System

PWS ID

Signature of owner or operator

Position

Date

Send a copy of the completed notice and this certification form to: Washington State Department of Health, Office of Drinking Water, Water Quality Section, PO Box 47822, Olympia WA 98504-7822 or fax to (360) 236-2252.

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):

- ☐ 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

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 ____ / ____ / ____.	Check all that apply:	
Were the water users notified within 24 hours? ☐ Yes ☐ No	☐ 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 ____ / ____ / ____.		Check all that apply: ☐ Hand delivery, ☐ News release (TV, radio, newspaper, etc.), ☐ Posting at _____ ☐ Other _____ + _____
Were the water users notified within 24 hours? ☐ Yes ☐ No		
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).

Coliform-Monitoring-Sampling-Locations

Location/Address for Routine Sample Sites	Location/Address for Repeat Sample Sites	Groundwater Sources for Triggered Sample Sites
A-1. EPA Lab	Repeat: EPA Lab	All Active Sources
Upstream: 7411 Beach Dr	Upstream: 7411 Beach Dr	
Downstream: 7305 Beach Dr	Downstream: 7305 Beach Dr	
A-2. 2081 Spring St	Repeat: 2081 Spring St	All Active Sources
Upstream: 8095 Hemlock St	Upstream: 8095 Hemlock St	
Downstream: 1511 Puget Dr	Downstream: 1511 Puget Dr	
A-3. 7194 Polk St	Repeat: 7194 Polk St	All Active Sources
Upstream: 7195 Polk St	Upstream: 7195 Polk St	
Downstream: 985 California Ave	Downstream: 985 California Ave	
A-4. 4031 Stohiton Rd	Repeat: 4031 Stohiton Rd	All Active Sources
Upstream: 4037 Stohiton Rd	Upstream: 4037 Stohiton Rd	
Downstream: 8705 Sedgwick Rd	Downstream: 8705 Sedgwick Rd	
A-5. 4400 Harper Hill Rd	Repeat: 4400 Harper Hill Rd	All Active Sources
Upstream: 4482 Harper Hill Rd	Upstream: 4482 Harper Hill Rd	
Downstream: 4233 Harper Hill Rd	Downstream: 4233 Harper Hill Rd	
A-6. 8003 Main St	Repeat: 8003 Main St	All Active Sources
Upstream: 2180 Spring St	Upstream: 2180 Spring St	
Downstream: 8009 Main St	Downstream: 8009 Main St	
A-7. 2282 California Ave	Repeat: 2282 California Ave	All Active Sources
Upstream: 2283 California Ave	Upstream: 2283 California Ave	
Downstream: 2700 Virginia	Downstream: 2700 Virginia	
A-8. 3166 Alaska Ave	Repeat: 3166 Alaska Ave	All Active Sources
Upstream: 7605 Idaho St	Upstream: 7605 Idaho St	
Downstream: 7595 Montana	Downstream: 7595 Montana	

Table 7-(Continued)
Coliform-Monitoring-Sampling-Locations

A-9. 10565 Sedgwick Rd	Repeat: 10565 Sedgwick Rd	All Active Sources
Upstream: 10537 Sedgwick Rd	Upstream: 10537 Sedgwick Rd	
Downstream: 10933 Fraser Rd	Downstream: 10933 Fraser Rd	
A-10. 8500 Sedgwick Rd	Repeat: 8500 Sedgwick Rd	All Active Sources
Upstream: 4780 Westway Dr	Upstream: 4780 Westway Dr	
Downstream: 8705 Sedgwick Rd	Downstream: 8705 Sedgwick Rd	
B-1. EPA Lab	Repeat: EPA Lab	All Active Sources
Upstream: 7411 Beach Dr	Upstream: 7411 Beach Dr	
Downstream: 7305 Beach Dr	Downstream: 7305 Beach Dr	
B-2. 2325 Colchester Dr	Repeat: 2325 Colchester Dr	All Active Sources
Upstream: 2265 Colchester Dr	Upstream: 2265 Colchester Dr	
Downstream: 2268 Colchester Dr	Downstream: 2268 Colchester Dr	
B-3. 7433 Mile Hill Dr	Repeat: 7433 Mile Hill Dr	All Active Sources
Upstream: 7433 Mile Hill Dr	Upstream: 7433 Mile Hill Dr	
Downstream: 1490 Alaska Ave	Downstream: 1490 Alaska Ave	
B-4. 11150 Tola Rd	Repeat: 11150 Tola Rd	All Active Sources
Upstream: 11177 Tola Rd	Upstream: 11177 Tola Rd	
Downstream: 11113 Tola Rd	Downstream: 11113 Tola Rd	
B-5. 10193 Sedgwick Rd	Repeat: 10193 Sedgwick Rd	All Active Sources
Upstream: 10089 Sedgwick Rd	Upstream: 10089 Sedgwick Rd	
Downstream: 10384 Sedgwick Rd	Downstream: 10384 Sedgwick Rd	
B-6. 2334 Yukon Harbor Dr	Repeat: 2334 Yukon Harbor Dr	All Active Sources
Upstream: 2333 Yukon Harbor Dr	Upstream: 2333 Yukon Harbor Dr	
Downstream: 2258 Yukon Harbor Dr	Downstream: 2258 Yukon Harbor Dr	
B-7. 4210 Banner Rd	Repeat: 4210 Banner Rd	All Active Sources
Upstream: 4268 Banner Rd	Upstream: 4268 Banner Rd	
Downstream: 4035 Banner Rd	Downstream: 4035 Banner Rd	
B-8. 1860 California Ave	Repeat: 1860 California Ave	All Active Sources
Upstream: 1830 California Ave	Upstream: 1830 California Ave	
Downstream: 1888 California Ave	Downstream: 1888 California Ave	
B-9. 3600 Southworth Dr	Repeat: 3600 Southworth Dr	All Active Sources
Upstream: 9934 Southworth Dr	Upstream: 9934 Southworth Dr	
Downstream: 3688 Southworth Dr	Downstream: 3688 Southworth Dr	
B-10. 4530 Anvik Rd	Repeat: 4530 Anvik Rd	All Active Sources
Upstream: 4565 Anvik Rd	Upstream: 4565 Anvik Rd	
Downstream: 4525 Anvik Rd	Downstream: 4525 Anvik Rd	

Monthα	Routine·Site(s)α	Monthα	Routine·Site(s)α	α
Januaryα	Aα	Julyα	Aα	α
Februaryα	Bα	Augustα	Bα	α
Marchα	Aα	Septemberα	Aα	α
Aprilα	Bα	Octoberα	B¶	α
Mayα	A¶	Novemberα	Aα	α
Juneα	Bα	Decemberα	Bα	α



DBP Monitoring Plan **(Annual Schedule)**

This template should be used by:

- * Surface water systems who serve less than 500 population
- * Surface water systems who serve between 500-3,300 population on reduced monitoring
- * Groundwater systems who serve less than 10,000 population
- * Groundwater systems who serve 500-99,999 population on reduced monitoring

For more information, refer to the Reference Sheets on the separate tabs

System Name:	Manchester Water District
PWSID#:	507002
Population:	10437
Type of Source Water:	Groundwater
Completed by:	Tony Lang
Date:	9/25/2025

Monitoring Requirments

Monitoring Frequency:

Number of TTHM Samples Required:

Number of HAA5 Samples Required:

Annual
2
2

Monitoring Locations and Month Assigned

Monitoring Location (Name of Site)	Month Assigned
7433 SE Mile Hill Dr	July
10193 SE Sedgwick Rd	July

Determining Compliance for TTHM and HAA5

Our system is required to monitor annually. Compliance will be achieved if the TTHM and the HAA5 at each monitoring location is less than or equal to 0.080 mg/L for TTHM and less than or equal to 0.060 mg/l for HAA5. If these levels are exceeded the monitoring frequency will be increased to quarterly.

To qualify for reduced monitoring:

The TTHM LRAA must be less than or equal to 0.040 mg/l AND the HAA LRAA must be less than or equal to 0.030 mg/l at each monitoring location. For Surface water sources, see Reduced Monitoring Sheet for TOC requirements.

If your system is on reduced annual monitoring, to remain on reduced monitoring:

The TTHM LRAA must be less than or equal to 0.060 mg/l AND the HAA LRAA must be less than or equal to 0.045 mg/l at each monitoring location. If these levels are exceeded, but the MCL is not exceeded, the monitoring frequency will be returned to routine monitoring schedule. For Surface water sources, see Reduced Monitoring Sheet for TOC requirements.

Disinfectant Residual Monitoring

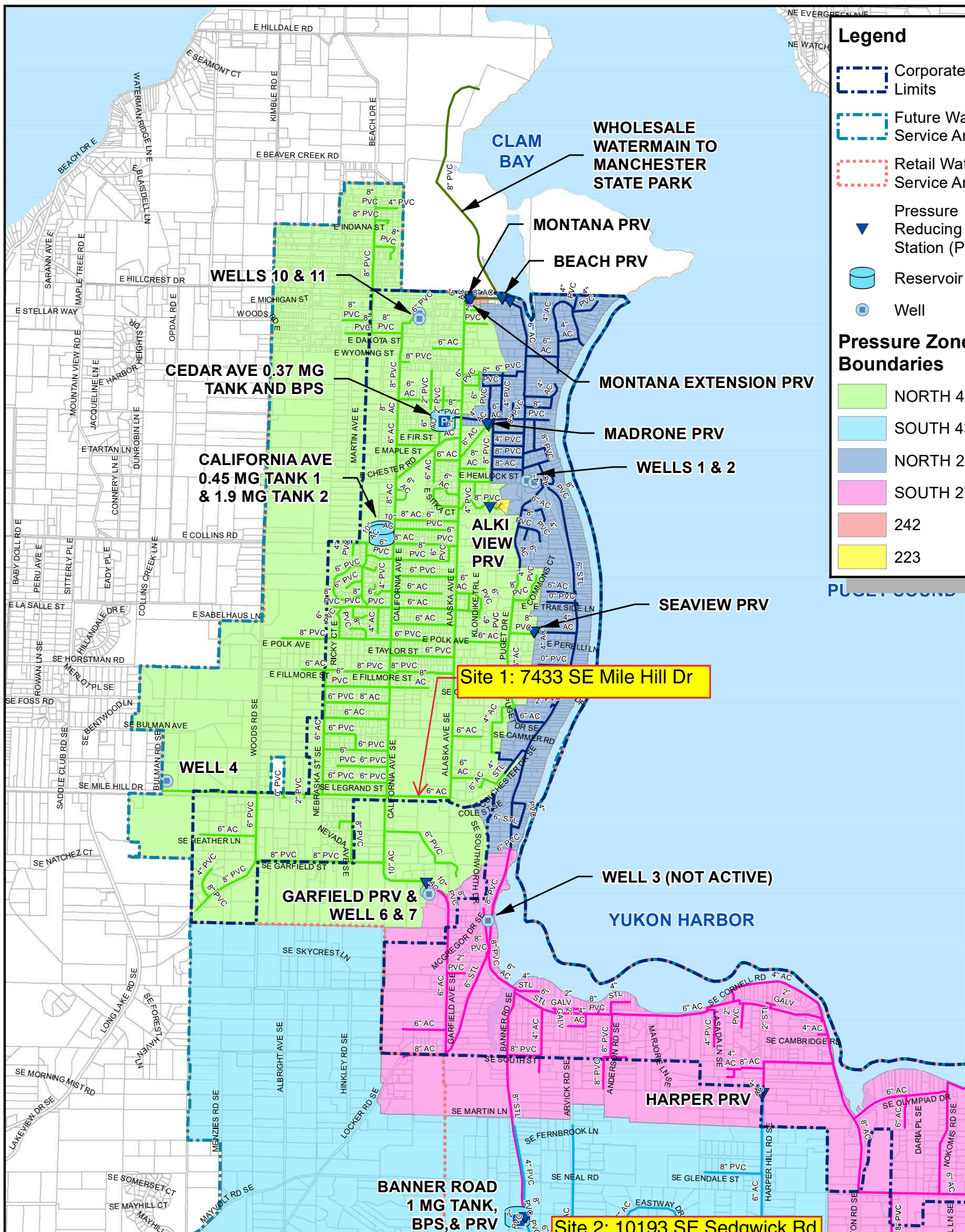
Chlorine residuals must be measured at the same time and place as routine or repeat coliform samples
MRDL for chlorine and chloramines = 4.0 mg/l as Cl₂

Determining Compliance for disinfectant residuals

Compliance is based on the running annual average (RAA) of 12 consecutive months

Daily residual measurements will / will not be included in the compliance calculations (circle one)

(Attach a distribution map with sample locations. You will need to print a hard copy for your records and make it available upon request. You do not need to submit a copy to DOH. If you need this publication in an alternate format, call (800) 525-0127. For TTY/TDD call (800) 833-6388.)



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Appendix J

Wellhead Protection Program

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Wellhead Protection Plan

INTRODUCTION

Manchester Water District is located in the southeast portion of Kitsap County, Washington along the western shores of the Puget Sound. The existing water distribution system extends south to SE Sedgwick Road, north to the EPA's Manchester Laboratory, west to SE Bulman Road and east to the Puget Sound. Portions of the District's existing water distribution system extend beyond the corporate limits and within its defined water service area. The District's corporate boundary encompasses an area of approximately 3.2 square miles and represents those areas which have been annexed by the District. The District's water service area boundary encompasses an area of approximately 10.5 square miles and is not anticipated to change in the future. The water service area boundary also represents the future retail water service area. Water supply to the District is currently provided by 9 groundwater wells. For a detailed description of the District's water system and well sources, refer to **Chapter 2** of the Comprehensive Water System Plan.

All federally defined Group A public water systems that use groundwater as their source of supply are required to develop and implement a wellhead protection program (WHPP). This section of the Comprehensive Water System Plan serves as a synopsis of the District's current wellhead protection efforts and complements the more comprehensive Wellhead Protection Program Report (Manchester Water District, 1998). The scope of this document is limited to a summary of past wellhead protection efforts, an updated database search for potential contaminant sources and a list of recommendations for the ongoing protection of the District's water sources.

WELLHEAD PROTECTION ELEMENTS

The Department of Health (DOH) administers the Washington State wellhead protection program. The required elements for a wellhead protection program are contained in WAC 246-290-135 and include:

- Documentation of source water quality trends;
- Completed susceptibility assessment of each water source;
- Delineation of wellhead protection areas for each water source;
- An inventory of known and potential contaminant sources (this inventory list must be updated every two years);
- Documentation of the purveyor's notification to all owners/operators of known and potential sources of contamination within 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;

Wellhead Protection Plan

- Documentation of the purveyor's coordination with local emergency spill responders (i.e. police, fire and health departments) regarding wellhead protection area boundaries, source susceptibility and contingency plans.

SANITARY CONTROL AREA

WAC 246-290-135 mandates, "The purveyor shall maintain a Sanitary Control Area (SCA) around all sources for the purpose of protecting them from existing and potential sources of contamination." It also states, "For wells and springs, the minimum SCA shall have a radius of one hundred feet (thirty meters) and two hundred feet (sixty meters), respectively, unless engineering justification demonstrates that a smaller area can provide an adequate level of source water protection." As the purveyor, the District is required to maintain authority over construction, storage and disposal of contamination within the SCA, as well as the right to complete sanitary control. In addition, they are required to submit legal documentation stating that the purveyor is maintaining control of any sources of contaminants within the SCA. The District directly manages all SCAs to assure water supply protection.

SUMMARY OF 1998 WELLHEAD PROTECTION PROGRAM

AGI Technologies (AGI) prepared a WHPP Report in 1998 (Manchester Water District, 1998) for the District. Hydrogeologic modeling was used to define Wellhead Protection Areas (WHPA) and an inventory of potential contaminant sources was performed. This report identified and analyzed risks to the 11 wells being used by the District. The District continues to operate most of the wells identified in the 1998 report with the exception of Well 3, Well 5, and Well 8. Well 3 was decommissioned in 2018 and Well's 5 & 8 were decommissioned in 2024.

Findings from the 1998 WHPP Report are summarized below.

- The District's 11 production wells span between three aquifers with screen elevations between 150 feet above sea level and 300 feet below sea level.
- Wellhead protection areas (WHPA), including one, five and ten-year time of travel (TOT) zones, were delineated for the District using the EPA WHPA Code 2.1 analytical model. Maps of these WHPAs produced for the AGI report are included in **Appendix 1** of this Wellhead Protection Plan.
- Data in governmental regulatory and permit files and from a field survey conducted by the District were used to create a contaminant inventory.
- Based on a review of the governmental database search results, it was determined that no listed activities occur within the District's Wellhead Protection Zones; however, during the field surveys, other activities and sources, such as application of fertilizers, pesticides and herbicides, and other common domestic activities were identified.
- Potential risks of identified activities were assessed using the EPA's Priority Setting Analysis method.

The risk analyses performed in 1998 resulted in designations of medium risk activities for nine wells and high risk activities for three wells. Results of the risk analyses include:

- High risk activity for nitrogen in lawn fertilizers and 2, 4-D application along Southworth Highway within the WHPA of Well 3;

- High risk activity for 2, 4-D application along Mile Hill Dr. within the WHPA of Well 4;
- Medium risk activity for nitrate in high nitrogen fertilizers with the WHPAs of Wells 4 through 11;
- Medium risk activity for the potential of spills along Southworth Drive for Well 3; and
- Medium risk activity for residential on-site disposal within the WHPAs for Wells 5, 8 and 9.

The following recommendations were made in response to the results of risk analyses.

- Encouragement of Best Management Practices (BMPs) for lawn care and right-of-way maintenance, particularly along Southworth Drive and Mile Hill Dr, including the use of low-nitrogen fertilizers and rapidly degrading herbicides.
- Development of a comprehensive spill response plan for Southworth Drive and Mile Hill Dr.

UPDATED POTENTIAL CONTAMINANT SOURCES DATABASE SEARCH

The Washington Department of Ecology's *Facility/Site on the Web* database and atlas was searched for the identification of potential contaminant sources in each of the District's WHPAs, as defined in the 1998 Wellhead Protection Plan (Manchester Water District, 1998). At the time of the database search, the webpage had last been updated on January 13, 2006. Facilities identified in this database include:

- Underground Storage Tanks (UST);
- Leaking Underground Storage Tanks (LUST);
- Resource Conservation and Recovery Act (RCRA) Active Handlers;
- Spill cleanup sites;
- Hazardous sites;
- Hazardous waste management facilities;
- Hazardous waste generators;
- Licensed laboratories;
- Superfund sites;
- Farms which draw water from wells; and
- Solid waste and recycling centers.

INVENTORY FINDINGS

There were several potential contaminant sources located within the Manchester Water District's service area; however, the only listed facility located within a WHPA was the District's chlorination and fluoridation treatment plant for the Well 6 and 7 Well Field, which is located in the five-year time of travel zone of the wells. The detail sheet for this facility is located in **Appendix 2** of this Wellhead Protection Plan.

IDENTIFICATION OF CURRENT SOURCE CONTROL MEASURES

The District's past efforts toward protection of its water resources include:

Wellhead Protection Plan

- Restricting access to well and storage sites;
- Conducting inspections of all source of supply and well sites; and
- Being observant of potential harmful activities that can eventually affect the sources of supply.

In addition, the District will continue to implement the following recommendations outlined in the 1998 WHPP (Manchester Water District, 1998).

- Designation of a local WHP Committee.
- Notification to property owners of identified potential contaminant sources that are located within a WHPA.
- Notification of the federal, state or local regulatory agencies that have jurisdiction over identified potential contaminant sources.
- Creation of a Contingency Plan.
- Creation of a Spill Response Plan.

DOCUMENTATION OF SOURCE WATER QUALITY TRENDS

Source Monitoring Requirements

The District is required to perform water quality monitoring at each of the active sources for inorganic chemical and physical substances, organic chemicals and radionuclides. The monitoring requirements that the District must comply with are specified in WAC 246-290-300. A complete description of the source water quality monitoring requirements is included in **Chapter 6** of the Comprehensive Water System Plan and procedures for monitoring each group of substances is contained in the District's Water Quality Monitoring Plan that is included in **Appendix J** of the Comprehensive Water System Plan.

Source Monitoring Results

The quality of the District's sources has been good and meets or exceeds all drinking water standards, except for higher-than-allowable levels of iron and manganese at two of the District's wells. In accordance with DOH regulations, the District sampled the distribution system for haloacetic acids (HAA5) and trihalomethanes (THM) twice during the last compliance period. The District monitored for inorganic chemical and physical substances at Wells 1, 2, 4, 5R, 6, 7, 9, 10 and 11 at least once during the last nine-year monitoring cycle, in accordance with DOH's reduced monitoring schedule for all sources. Volatile Organic Contaminants (VOC's) were monitored at least once during the last nine-year monitoring cycle, in accordance with DOH's reduced monitoring schedule for Wells 1, 4, 6, 7, 9, 10, and 11. VOC's for Well 2 were monitored at least once during the standard 3-year monitoring cycle. Nitrate monitoring has also been performed annually since 1996. The results of inorganic chemical (including nitrate) monitoring and volatile organic chemical monitoring for the District's sources indicate that all primary and secondary standards were met, except for higher-than-allowable levels of manganese at Wells 4 and 10. The results of inorganic chemical monitoring in 1993 indicated slightly higher than allowable levels of iron at Wells 9 and 10; however, monitoring in subsequent years indicated that iron levels at both of these sources were well below the action level. The District routinely monitors radionuclides as directed by DOH. The

results of the radionuclide monitoring indicate that all the District's sources are in compliance with the regulations. Most recently, in 2023/2024 the District sampled for per- and polyfluoroalkyl substances (PFAS) at all the District's wells in accordance with EPA's UCMR5s. All results received were below Minimum Reporting Levels (MRL).

Water Treatment

Chlorination is achieved at Wells 1, 2, 4, 5R, 6, 7, 9, 10, and 11 by injection of a 12.5 percent sodium hypochlorite (NaOCl) solution for taste and odor control purposes. Metering pumps in the respective pump houses maintain a targeted free residual of 0.5 mg/l.

The District fluoridates water supplied from each source except Well 4. Fluoridation is achieved at each of the well buildings through a fluoride injection system that consists of a sodium fluoride solution holding tank and a metering pump to automatically regulate the flow of sodium fluoride in proportion to the water supplied by the well. The metering pumps maintain a target residual range for fluoride of 0.5 to .0.8 mg/l.

SUSCEPTIBILITY ASSESSMENT

In 1994 DOH developed the Susceptibility Assessment Survey Form for water purveyors to complete for use in determining a drinking water source's potential for contamination. The results of the susceptibility assessment provided monitoring waivers that allow reduced source water quality monitoring. Based on the results of the susceptibility assessment survey for each source, DOH assigned a low susceptibility rating to all the District's well sources except Wells 7, 9, and 11. Wells 9 and 11 were assigned a moderate susceptibility rating by DOH, while Well 7 was assigned a high rating. The District's sources were granted a susceptibility waiver that allowed the District to avoid monitoring for dioxin, endothal, diquat, glyphosate, and insecticides through the 2025 compliance period.

RECOMMENDATIONS

The following is recommended to ensure adequate protection of the District's sources of supply.

- A review of the District's current withdrawal rates at each of their well sources should be compared to the withdrawal rates that were used in determining the WHPAs defined in the 1998 Wellhead Protection Report. Changes in withdrawal rates at a particular well or well field could alter the size and/or location of WHPAs for that well or wellfield.
- Perform a current field inventory and assessment of potential sources of groundwater contamination within the wellhead protection areas. Update WHPP maps with this information.
- Review and ensure that recommendations from the 1998 WHPP are being met, including required notifications to potential contaminant sources, regulatory agencies and emergency spill responders as required in WAC-246-290-135.
- Develop a wellhead protection resolution that addresses permitted uses and performance standards for land use management and activities within designated wellhead protection areas, especially within the one-year time of travel zones. Facilities that pose a high risk to groundwater contamination, such as gas stations; oil recycling; dry cleaners; fuel storage

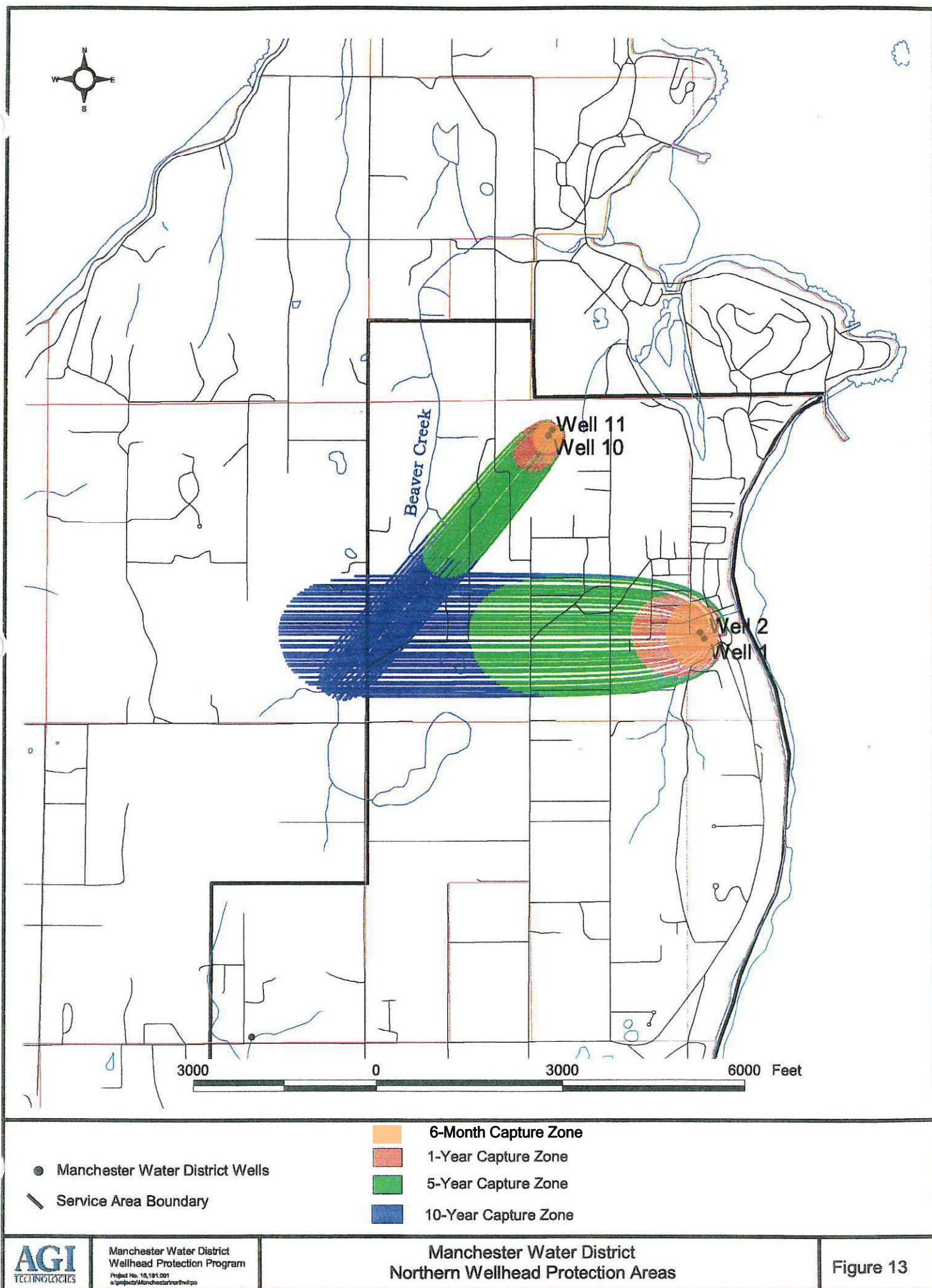
Wellhead Protection Plan

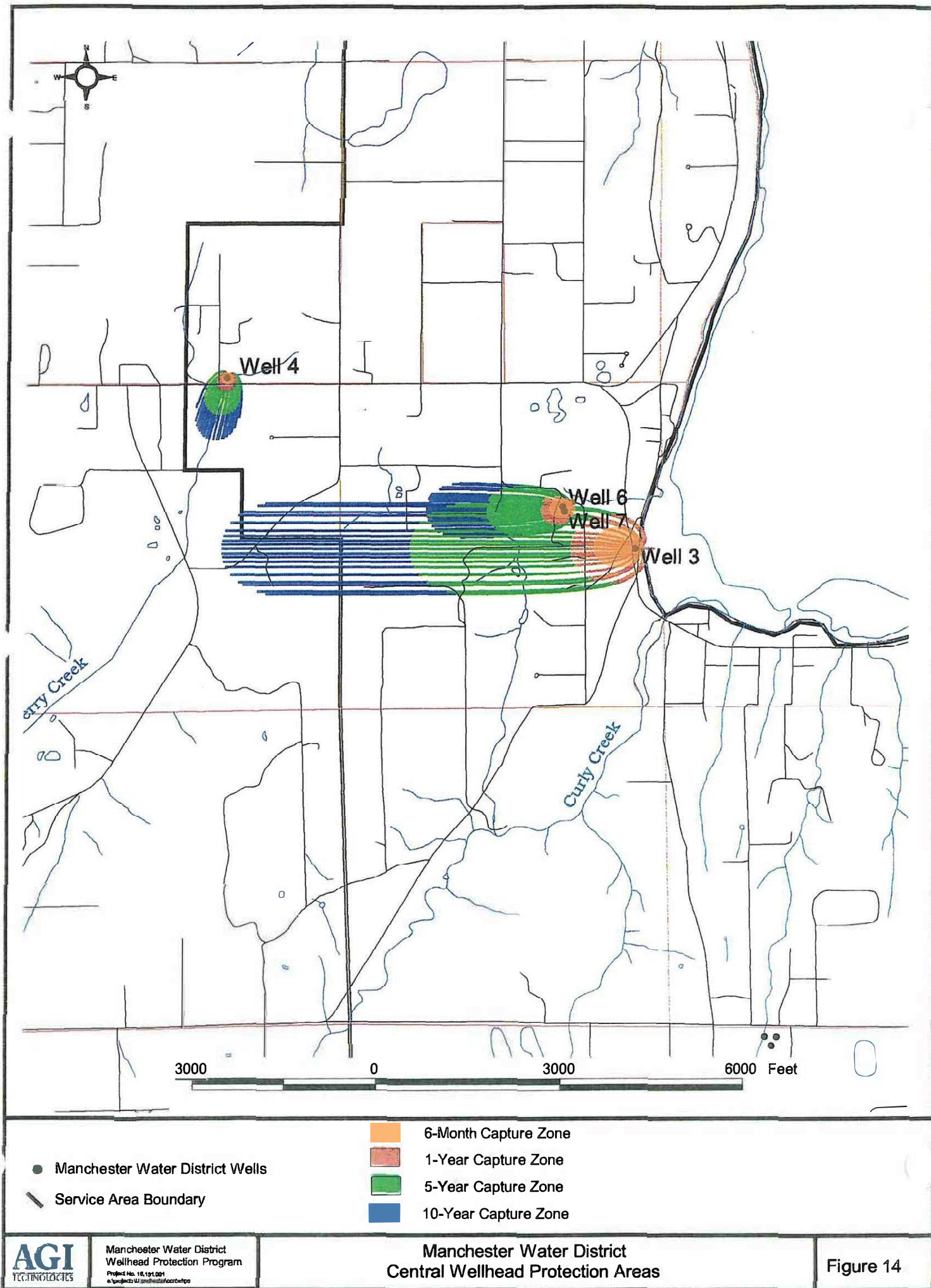
facilities; high density animal keeping; and high-density septic systems should be addressed. Coordinate these efforts with Kitsap County.

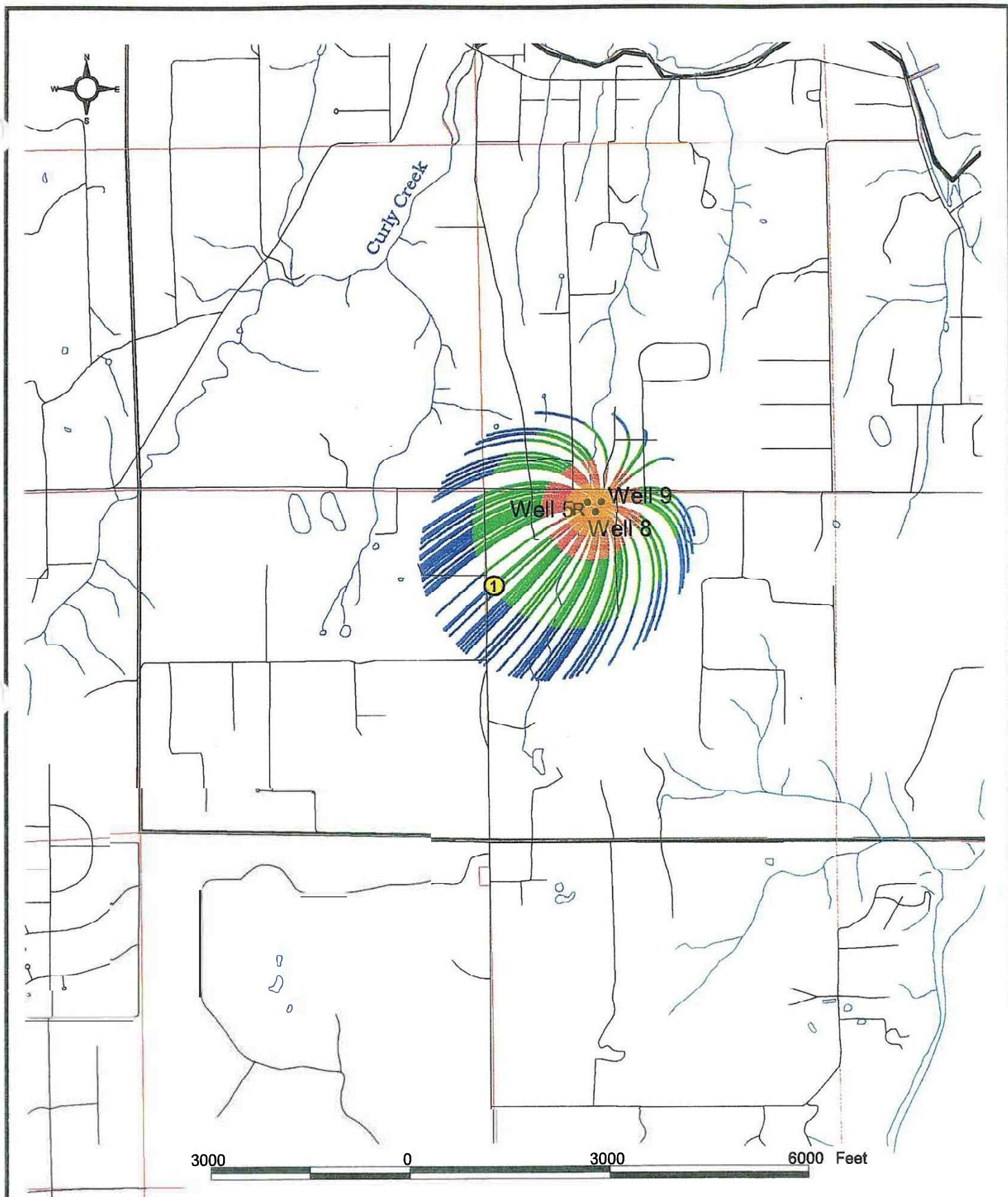
- Continue to stay apprised of groundwater monitoring and remediation efforts taking place near Bangor Subbase and Howerton Landfill.
- Develop and distribute public education materials within the wellhead protection areas to address groundwater protection and household, landscape and gardening practices that could affect groundwater quality.

REFERENCE

Manchester Water District. 1998. Wellhead Protection Report. Manchester, Washington. Prepared by AGI Technologies (AGI).







- Manchester Water District Wells
- ▬ Service Area Boundary

- 6-Month Capture Zone
- 1-Year Capture Zone
- 5-Year Capture Zone
- 10-Year Capture Zone

Contaminant Sources

- ① K.C. Fire District # 7
Station 10
5629 Banner Road S.E.

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Appendix K

Consumer Confidence Report