Drinking Water Systems

PURPOSE
The University is responsible for planning, operating, sampling, maintaining, and protecting University-owned public drinking water systems and water supply connections to meet federal, state, and local requirements. The University is also responsible for helping to ensure that the quality of water that WSU facilities receive from non-WSU public water systems meets state and federal requirements. (WAC Chapters 246-290 to -296, WAC 173-160, WAC 51-56)

REPORTING CONCERNS OR EMERGENCIES

Water Leaks or Lack of Service
Report water leaks or lack of service to the one of the following offices, as appropriate.

In Whitman County
In Whitman County, immediately contact Facilities Services, Operations at 509-335-9000.

Outside Whitman County
All other WSU locations are to immediately contact the local facilities maintenance organization.

Drinking Water Quality Concerns or Suspected Illnesses
Report drinking water quality concerns or suspected illnesses from drinking water immediately to Environmental Health and Safety (EH&S) for prompt investigation.

In Whitman County
For water systems within Whitman County, use the following contact telephone numbers.

During Regular Working Hours
Contact EH&S; telephone 509-335-3041.

During Off-Hours
Contact Facilities Services, Operations; telephone 509-335-9000.

Outside Whitman County
For all other water systems, use the following contact telephone numbers, as appropriate:

During Regular Working Hours
Contact Statewide EH&S Services—Statewide Campuses and Research Units at or near the following locations; telephone:

- Spokane  509-358-7993
- Tri-Cities   509-372-7163
- Vancouver   360-546-9706
- Wenatchee   509-663-8181, ext. 230
Drinking Water Systems

*During Regular Working Hours* (cont.)

To obtain EH&S telephone numbers for other statewide locations, go to the Statewide EH&S website at:

www.tricity.wsu.edu/BC-RS/statewide.asp

Select a location to obtain the telephone number for the EH&S representative assigned to the location.

*During Off-Hours*

Contact the local public water system or the Whitman County Communications Center (WHITCOM) Non-Emergency Response; telephone 509-332-2521. WHITCOM is able to assist by contacting the appropriate local agencies.

**WSU Spokane**

At WSU Spokane, contact Campus Security; telephone 509-358-7995. For emergencies, Campus Security must contact the City of Spokane Water Department; telephone 509-625-7800.

**WATER SYSTEM MODIFICATIONS OR ADDITIONS**

Contact the Architectural and Engineering Manager and the Water Distribution Manager, both at Facilities Services, Operations, regarding all modifications or additions to WSU drinking water systems.

Facilities Services, Operations recommends that WSU Pullman departments submit requests for water system modifications or additions through the myFacilities website (see *BPPM 80.45*). The myFacilities website is located at:

myfacilities.wsu.edu

WSU Pullman departments unable to access or utilize the myFacilities website may submit requests for water system modifications or additions to Facilities Services, Operations; telephone 509-335-9000.

Other statewide units are to contact facilities services, operations managers at their locations who submit requests for water system modifications or additions to Pullman Facilities Services, Operations; telephone 509-335-9000.

All University departments, organizations, persons, or non-University entities must receive approval from Facilities Services, Operations before:

- Connecting equipment to water lines.
- Repairing or maintaining piping.
- Drilling a well.
- Making any changes to water systems.
Drinking Water Systems

Connecting to Water Lines

Each new water system point of use connection must have a service meter and premises isolation or in-premises isolation (backflow prevention assemblies) as determined by the WSU Cross Connection Control Specialist.

Non-University entities are required to install service meters and premises isolation or in-premises isolation (backflow prevention assemblies) as determined by the WSU Cross Connection Control Specialist. Non-University entities must also reimburse the University for water used.

The Facilities Services, Operations Water Distribution Manager must receive certification of backflow prevention testing and verify the installation of appropriate metering and backflow prevention assemblies prior to turning on the system water to new services.

WATER BOARD

The Water Board is responsible for ensuring that University water systems and facilities conform to applicable regulations.

The board is comprised of staff or representatives from the following areas:

- Facilities Services, Operations
- Environmental Health and Safety
- Regional Campuses and Research Units (RCRU)
- Housing and Dining Services
- Facilities Services, Capital

The Water Board is also responsible for coordinating the planning, operation, sampling, maintenance, and protection of the University’s public drinking water systems and water supply connections throughout the state in order to meet state requirements. (WAC 246-290 through WAC 246-296, WAC 173-160, and WAC 51-56)

Program Document

The Water Board develops all policies and procedures in the WSU Drinking Water, Cross-connection Control, and Water Conservation Program (hereinafter referred to as the Program). The Program provides detailed planning, development, construction, maintenance, sampling, monitoring, and operating procedures to ensure that University drinking water systems are maintained and operated in a safe and cost-effective manner.
Drinking Water Systems

Program Document (cont.) The most current version of the Program is located on the WSU EH&S Public Health website under drinking water. To view the Program, go to:

ehs.wsu.edu/

Select Public Health; then
Select Drinking Water Quality, then
Select Drinking Water Program.

Board Member Positions The Water Board is co-chaired by the Facilities Services, Operations and EH&S directors. Regional Campus and Research Unit representatives assign appropriate staff members to serve on the board. The Water Board meets at least annually.

The Board is comprised of the following positions:

- Facilities Services, Operations
  Assistant Vice President
  Director, Maintenance and Utilities Services
  Water Distribution Manager
  Water System Engineer

- Environmental Health and Safety
  Director
  Public Health Manager
  Facility Health and Safety Coordinator

- Regional Campuses and Research Units (RCRU)
  WSU Spokane— Facility Services Director
  WSU Tri-Cities— Facilities Department Manager
  WSU Vancouver— Facilities Operations Director
  Director, CAHNRS Business and Personnel Office

- Facilities Services, Capital
  Director, Construction Service and Quality Assurance
  Project Manager / Professional Engineer

- Housing and Dining Services
  Director, Housing and Dining Maintenance Services
  Industrial Hygienist
  Maintenance Coordinator
Drinking Water Systems

RESPONSIBILITIES

Water Board

The Water Board:

- Develops all drinking water programs, policies, and procedures for WSU.
- Helps protect drinking water systems and water supply connections including, but not limited to, establishing and enforcing cross-connection control programs.
- Performs and enforces corrective actions.
- Ensures that qualified personnel are provided to develop and implement all applicable programs.
- Develops schedules for performing risk assessments.
- Develops a quality assurance program for backflow prevention assembly testing.
- Develops procedures for responding to drinking water quality and backflow incidents.
- Provides educational programs for consumers about drinking water systems, conservation, cross-connection controls, etc.
- Coordinates with and notifies the Department of Health (DOH), local administrative and/or health authorities of any incidents, and documents the incidents.

Facilities Services, Operations

Facilities Services, Operations:

- Operates and maintains all Group A and B water systems located in Whitman County, excluding the Palouse Conservation Field Station, which is operated by the U.S. Department of Agriculture (USDA) and maintained and repaired by Facilities Services, Operations. See Public Water Systems for water system definitions.
- Conducts limited monitoring of the drinking water system.
Drinking Water Systems

Facilities Services, Operations (cont.)

- Provides a certified Water Distribution Manager who is responsible for the daily operational activities of the Whitman County water systems, treatment facilities, and distribution systems that directly impact water quality and/or quantity as required in accordance with WAC 246-292.

- Coordinates water conservation efforts.

- Coordinates master planning with the Infrastructure Master Planning Committee.

NOTE: The committee is comprised of engineering staff from Facilities Services, Capital and Facilities Services, Operations.

- Takes responsibility, along with Facilities Services, Capital and RCRU, for the design and construction of additions and modifications to University drinking water systems throughout the state.

The Utilities division of Facilities Services, Operations must review and approve all plans and specifications for new and remodeled construction.

- Provides bacteriological and chlorine disinfection water sampling for construction and repairs (or oversees the contractor that performs the sampling), with assistance from EH&S, Housing and Dining Services, RCRU, and/or Facilities Services, Capital.

Prior to water being used for drinking purposes, Facilities Services, Operations must:

- Test all new backflow prevention assemblies (Whitman County),

- Obtain backflow prevention assembly testing results from RCRU or contractors (outside of Whitman County), and

- Obtain satisfactory bacteriological sample results from repairs or maintenance (Whitman County).

Facilities Services, Operations (or the contractor, if applicable) must provide the bacteriological sample results to EH&S.
Drinking Water Systems

Facilities Services, Operations (cont.)

• Provides alternative drinking water sources if construction and/or maintenance requires disruption of water service on a case by case basis.

Environmental Health and Safety

Environmental Health and Safety:

• Conducts bacteriological and chemical sampling for Whitman County water systems (excluding construction and repair samples), as required by federal and state regulations.

NOTE: Facilities Services, Operations or the contractor performs sampling for water system construction and repairs. See above.

• Assists Facilities Services, Operations, RCRU, and contractors with sampling responsibilities for water systems at WSU locations around the state.

• Investigates concerns regarding drinking water quality and performs sanitary surveys of drinking water systems, including wells, reservoirs, distribution systems, and treatment facilities.

• Reviews plans and specifications for new construction and remodels.

• Evaluates current and new regulations to help ensure the University remains in compliance and maintains safe and healthy drinking water.

• Acts as the liaison with the Washington State DOH, Department of Ecology, local health departments and districts, and the Environmental Protection Agency (EPA) regarding regulatory compliance.

• Develops and prepares various regulatory reports as required.

Facilities Services, Capital

Facilities Services, Capital:

• Coordinates with and receives approval from the Facilities Services, Operations Cross-connection Control Specialist and Water Distribution Manager on water line maintenance and installation, backflow prevention assembly testing, connection of new equipment, etc.
Drinking Water Systems

Facilities Services, Capital (cont.)

Prior to water being used for drinking purposes, Facilities Services, Capital must obtain satisfactory bacteriological sample results and must have Facilities Services, Operations test backflow prevention assemblies from new construction or repairs in Whitman County. Outside of Whitman County, the contractor must test backflow prevention assemblies and obtain satisfactory bacteriological sample results prior to water being used for drinking purposes.

Facilities Services, Capital or the contractor, as applicable, must provide the bacteriological sample results to EH&S. The contractor must provide the backflow prevention assembly test results for operations outside of Whitman County, and the names, certifications, and telephone numbers of the certified backflow assembly testers (BATs) to Facilities Services, Operations.

Housing and Dining Services

Housing and Dining Services:

- Coordinates with and receives approval from the Facilities Services, Operations Cross-connection Control Specialist and Water Distribution Manager on water line maintenance and installation, backflow prevention assembly testing, connection of new equipment, etc.

- Conducts maintenance on water lines, and if a certified backflow assembly tester (BAT) and equipment is available, maintains backflow preventers for departmental facilities.

Prior to water being used for drinking purposes, Housing and Dining Services must obtain satisfactory bacteriological sample and backflow prevention assembly testing results from new construction or repairs. Housing and Dining Services or the contractor must provide bacteriological sample and backflow prevention assembly testing results to EH&S. Certified BATs hired or contracted by Housing and Dining Services must provide their names, certifications, and telephone numbers to Facilities Services, Operations.

Regional Campuses and Research Units (RCRU)

The Regional Campuses and Research Units group (RCRU):

- Operates, maintains, and conducts limited monitoring of the drinking water systems located outside Whitman County, and coordinates water conservation efforts.
Drinking Water Systems

RCRU (cont.)

• Provides a certified Water Distribution Manager who is responsible for the daily operational activities of the following, as required in accordance with WAC 246-292:

  WSU Prosser Irrigated Agriculture Research and Extension Center (IAREC) water system.

  Group B systems at the Roza, Royal Slope, Lind, and Othello Research Units.

  Associated treatment facilities and distribution systems that directly impact water quality and/or quantity.

See Public Water Systems for water system definitions.

RCRU Representatives

RCRU representatives are responsible for the following:

• The RCRU Facilities Services, Capital representative coordinates master planning with the Infrastructure Master Planning Committee.

• The RCRU Facilities Services, Operations and Capital representatives, in coordination with Facilities Services, Operations and Facilities Services, Capital, are responsible for the design and construction of additions and modifications to WSU drinking water systems across the state. RCRU Facilities Services, Operations and Capital representatives, Facilities Services, Operations, and Facilities Services, Capital review plans and specifications for new construction and remodels to ensure compliance with all regulations.

• The RCRU Facilities Services, Operations representative coordinates with and receives approval from the Facilities Services, Operations Cross-connection Control Specialist and Water Distribution Manager on water line maintenance and installation, backflow prevention assembly testing, connection of new equipment, etc.

• The RCRU Facilities Services, Operations and EH&S representatives provide bacteriological and chemical sampling for WSU water systems located outside Whitman County (excluding construction and repair samples) as required by federal and state regulations. The RCRU Facilities Services, Operations and EH&S representatives assist Facilities Services, Operations and managers of other WSU water
Drinking Water Systems

RCRU Representatives (cont.)

systems across the state with sampling responsibilities. The department or the contractor that completes construction and/or repairs must perform any required sampling.

Prior to water being used for drinking purposes, the RCRU Facilities Services, Operations and/or Capital, and/or EH&S representative must obtain satisfactory bacteriological sample and backflow prevention assembly testing results from new construction or repairs. RCRU or the contractor must provide the bacteriological sample results to EH&S and the backflow prevention assembly testing results to Facilities Services, Operations. Certified BATs hired or contracted by RCRU must provide their names, certifications, and telephone numbers to Facilities Services, Operations.

• The RCRU Facilities Services, Operations or the RCRU Facilities Services, Capital representative must provide alternative drinking water sources if construction and/or maintenance requires disruption of water service on a case by case basis.

• The RCRU EH&S representative investigates concerns regarding drinking water quality and performs sanitary surveys of drinking water systems, including wells, reservoirs, distribution systems, and treatment facilities.

• The RCRU EH&S representative acts as the liaison with the Washington State DOH, Department of Ecology, and the EPA regarding regulatory compliance.

• The RCRU EH&S representative develops and prepares various regulatory reports as required.

Environmental Health and Safety, WSU Pullman, evaluates current and new regulations to help ensure WSU remains in compliance with state and federal regulations and maintains safe and healthy drinking water.

Water System Users

Any University department, organization, non-University entity, or person that connects equipment, installs piping, or makes changes to University water systems must receive prior approval from Facilities Services, Operations.
Drinking Water Systems

**Water System Users (cont.)**
For University water systems outside Whitman County, the departments, organization, non-University entities, or person must also contact RCRU for approval prior to connecting equipment, installing piping, or making changes.

**Assigned Responsibilities**
The Water Board may assign or reassign drinking water responsibilities to water system users (e.g., USDA Palouse Conservation Field Station). Such assignments and/or reassignments must be submitted in writing and maintained on file at EH&S.

**PROGRAM ELEMENTS**
The following summarizes each program element in this policy. Refer to the Program for more specific information on these program elements.

To view the Program, go to:

[ehs.wsu.edu/](http://ehs.wsu.edu/)

Select **Public Health**; then
Select **Drinking Water Quality**, then
Select **Drinking Water Program**.

**Public Water Systems**
WSU facilities receive water from either WSU-owned and operated Group A or Group B water systems or from non-WSU-owned public water systems.

**Group A System**
A Group A water system is a public water system that serves fifteen or more residential service connections or twenty-five or more people per day for 60 or more days per year.

For any new Group A systems that are developed, refer to **WAC 246-290-020**.

**WSU-Owned and -Operated**
The Group A water systems owned and operated by WSU are:

- WSU Pullman (Group A community)
- Tula Young Hastings Farm (Group A nontransient noncommunity)
- WSU Prosser—Irrigated Agricultural Research and Extension Center (Group A nontransient noncommunity)
Drinking Water Systems

Group B System

A Group B water system is a public water system that serves less than fifteen residential service connections and less than twenty-five people per day, or 25 or more people per day for less than sixty days per year.

For any new Group B systems that are developed, refer to WAC 246-291.

WSU-Owned and -Operated

The Group B water systems owned and operated by WSU are:

- Central Ferry Research Farm
- Colockum Multiple Use Research Unit
- Columbia View Orchard Research Unit
- Lind Dry Land Research Unit
- Othello Research Unit
- Palouse Conservation Field Station (operated by USDA)
- Smoot Hill Biological Field Study Area
- Spillman Farm
- Royal Slope Columbia Basin Research Unit #2 (operated by private organization)
- Roza Research Unit

Non-WSU-Owned Public Water Systems

The WSU facilities that receive water from non-WSU-owned public water systems are:

- WSU Spokane
- WSU Tri-Cities
- WSU Vancouver
- Intercollegiate Center for Nursing—Spokane
- Smith Tract—Spokane
- Spokane Intercollegiate Research and Technology Institute (SIRTI)
- WSU Mount Vernon Research and Extension Unit
- WSU Puyallup Research and Extension Unit
- WSU Vancouver Research and Extension Unit
- WSU Wenatchee TFREC
Drinking Water Systems

Construction, Cross-connection Controls, and Plan Review

Construction

Facilities Services, Operations, RCRU, and Facilities Services, Capital must submit project reports and construction documents to the DOH for approval prior to commencing construction on any of the following:

- Group A and B water systems (see definitions above)
- Extension of systems
- Improvements

Facilities Services, Operations or Facilities Services, Capital must also provide copies of project reports and construction documents to EH&S.

EXCEPTION: The Washington DOH does not require project reports and construction documents be submitted for activities listed under WAC 246-290-125.

Refer also to Plan Review and Design Standards.

Cross-connection Control

The University maintains safe drinking water supplies by eliminating or controlling existing cross-connections between the following:

- Potable and non-potable water systems
- Plumbing fixtures
- Industrial piping systems (including reclaimed and/or reuse water)

After new construction or repairs, and prior to water being used for drinking purposes, the department overseeing the project must obtain satisfactory backflow prevention assembly testing results,
Drinking Water Systems

Cross-connection Control (cont.)

The department must provide these results to Facilities Services, Operations as soon as possible.

Departments and owners responsible for Group A water systems must have a certified cross-connection control specialist inspect and survey the water system facilities on an annual basis or after a backflow incident per WAC 246-290-490(7)(b).

For Group B water systems and WSU facilities on non-WSU public water systems, all responsible departments and owners must have a certified cross-connection control specialist inspect and survey them as determined by the Water Board or after a backflow incident.

The Water Board has established the Cross-connection Control Program in the Program document to comply with WAC 246-290-490, WAC 246-291-270, WAC 51-56-0600, and Uniform Plumbing Code (UPC) regulations.

WSU must adhere to WAC 246-290-490 and WAC 246-291-270 for premises isolation (water supply to buildings), and the UPC and WAC 51-56-0600 for in-premises isolation (internal building water distribution).

Plan Review and Design Standards

Facilities Services, Operations, a certified cross-connection control specialist, EH&S, Housing and Dining Services, RCRU, and Facilities Services, Capital must review all plans and design standards for new or remodeled construction involving water systems.

All plans and work must meet Group A and B water system engineering requirements and design standards, as well as the requirements of the local administrative authority, if applicable.

Plans must be prepared under the direction of a professional engineer licensed in Washington.

Water System Plans

The Pullman campus system is required to submit a revised water system plan every six years to DOH. Facilities Services, Operations is responsible for preparing and submitting this plan.

Small water system plans are required for small Group A water systems. (See definition under Group A System.) The RCRU, Facilities Services, Operations, Facilities Services, Capital, and EH&S are responsible for developing these plans for their respective systems.
Drinking Water Systems

Well Construction, Decommissioning, Maintenance, Source Approval, and Interties

Facilities Services, Operations and RCRU, with assistance from EH&S, are responsible for the following:

- Obtaining source water approval
- Interties with other systems
- Construction and decommissioning of all University wells, including agricultural, municipal, industrial, domestic, or commercial wells
- Water rights

NOTE: The Real Estate Office, Finance and Administration, assists with applications for water rights.

Sampling, Monitoring, Repair, Reporting, and Recordkeeping

Sampling, Monitoring, and Repair

Environmental Health and Safety, Facilities Services, Operations, and RCRU are responsible for all bacteriological and chemical sampling (excluding construction and repair sampling). The Water Distribution Manager provides assistance with daily monitoring.

For repairs and installation of new lines and systems, Facilities Services, Operations, Housing and Dining Services, RCRU, and/or Facilities Services, Capital are responsible for:

- Ensuring chlorination meets the most recent American Water Works Association (AWWA) standards.
- Obtaining adequate bacteriological sampling results.

After new construction or repairs, and prior to water being used for drinking purposes, the department overseeing the project must obtain satisfactory results of bacteriological samples. The department must provide these results to EH&S as soon as possible.

Reporting, Public Notification and Recordkeeping

Environmental Health and Safety, RCRU, Facilities Services, Operations, and Facilities Services, Capital are responsible for all regulatory reporting and recordkeeping (excluding cross-connection control), and public notification in cases of water
**Drinking Water Systems**

<table>
<thead>
<tr>
<th>Reporting, Public Notification and Recordkeeping (cont.)</th>
<th>quality violations. The Water Distribution Manager provides assistance with these functions.</th>
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<tbody>
<tr>
<td>Facilities Services, Operations, EH&amp;S, and RCRU are responsible for all cross-connection control recordkeeping, in accordance with applicable records retention requirements. See <em>BPPM</em> 90.01.</td>
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</tr>
</tbody>
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### Sanitary Surveys, Vulnerability Assessments, and Emergency Response Plans

<table>
<thead>
<tr>
<th>Sanitary Surveys</th>
<th>A qualified sanitary surveyor is required to perform Group A water system surveys every five years. Environmental Health and Safety is responsible for coordinating the surveys.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vulnerability Assessments and Emergency Response Plans</td>
<td>Environmental Health and Safety, Facilities Services, Operations, Housing and Dining Services, RCRU, Facilities Services, Capital, and Public Safety are responsible for vulnerability assessments and emergency response plans for their respective systems and facilities.</td>
</tr>
</tbody>
</table>

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<tr>
<th>Wellhead Protection and Sanitary Control Areas</th>
<th>Facilities Services, Operations, RCRU, Facilities Services, Capital, and EH&amp;S are responsible for maintaining wellhead protection programs and sanitary control areas around wellheads for Group A water systems.</th>
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<tr>
<td></td>
<td>Group B water systems are not required to have wellhead protection programs. However, the University must maintain sanitary control areas (100 foot radius) around the wellheads.</td>
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<tr>
<td></td>
<td>Facilities Services, Operations and RCRU must ensure that the wellhead protection program for Group A systems is incorporated into their water system plans every six years.</td>
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<td></td>
<td>Environmental Health and Safety and RCRU must ensure that the contaminant inventory list required in their wellhead protection program for Group A systems is updated every two years with appropriate notification to regulatory and owner agencies.</td>
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</tbody>
</table>

### Operating Permits and Water Works Operators Certifications

| All Group A water systems are required to have operating permits. *(WAC 246-294)* | In addition, the Pullman campus water system is required to have at least one certified Water Distribution Manager 3 in responsible charge of the daily operational activities of the system. Smaller |
Drinking Water Systems

Permits/Certifications (cont.)  Group A water systems are required to have at least one certified Water Distribution Specialist. (WAC 246-292)

Water Conservation  Two representatives from WSU serve on the Palouse Basin Aquifer Committee to promote water conservation at University facilities in Whitman County. For all other University water systems and facilities, the RCRU promotes water conservation at those locations.