



PACIFIC NORTHWEST SECTION OF AWWA

VIRTUAL WEBINAR PRESENTATION

MAY 20TH, 2021

PRESENTED BY : TERRY PICKEL



PNWS-AWWA

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PRESENTER BIO:

- Terry Pickel – Water Department Director
Coeur d’Alene, Idaho
- Over 39 years experience as a licensed operator in Idaho and Washington
- Past Chair of the PNWS-AWWA CCC Committee

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AGENDA:

- Brief review of Washington, Oregon and Idaho Drinking Water/CCC Rules.
- Differences in CCC program operator and tester requirements.
- How does this affect operators and testers of each state.
- Review.
- Questions?



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CONTRIBUTORS:

- Bill Bernier – Washington State
Department of Health
- Molly Keller – Oregon Health Authority
- Anna Moody – Idaho Department of
Environmental Quality

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State of Washington Drinking Water Rules

- Promulgated rules
- Enforcement requirements
- CCC Program set up and operation
- Certification (CCS and BAT)
- Reporting requirements
- Responsibilities

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Washington
Administrative Code
- CCC Program

- WAC 246-290-490 (Drinking Water CCC).
- WAC 246-292 (CCS/BAT Duties & Test Reports).
- WAC 173-240 (Wastewater Treatment Facilities):
 - Criteria for Sewage Works Design.

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Washington
Administrative Code
- CCC Program

- WAC 173-219 (CCC Reclaimed Water).
- Uniform Plumbing Code (inside buildings).
- WAC 51-56 (amendments to the UPC).
- WAC 246-215 (food rule).

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DOH - Office of
Drinking Water

- The Office of Drinking Water (ODW) is primarily governed by [WAC 246-290-490](#). This rule requires all Group A public drinking water systems to develop and implement CCC programs. Our responsibility for CCC begins at the water supply source and ends at the customer's meter or property line.

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CCC Programs -
WAC 246-292:

- WAC 246-292-020 covers public water systems.
- WAC 246-292-033 covers the duties of a CCS.
- WAC 246-292-034 covers the duties of a BAT.
- WAC 246-292-036 covers backflow preventer inspection and field test report content.

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10 Elements of a
CCC Program:

1. Adopt a local ordinance.
2. Develop and implement procedures to identify cross connections.
3. Develop and implement procedures to address cross connections.

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10 Elements of a
CCC Program:

4. Ensure a Cross-connection Control Specialist develops and implements the CCC program.
5. Develop and implement a backflow assembly inspection and testing program.
6. Develop and implement a quality assurance program for backflow assembly testing.

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10 Elements of a CCC Program:

7. Develop and implement procedures for responding to backflow incidents.
8. Educate the public about CCC and water system operation.
9. Maintain CCC records.
10. Meet all requirements for use of reclaimed water.

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Plumbing Code –
Chapter 6 - in
Buildings:

- Specific to Washington State is a requirement for special licensing to test inside buildings.
- Must either have a journeyman plumbers license or have completed training and acquired a “Specialty Plumbers license”.
- And must be a licensed Backflow Assembly Tester.

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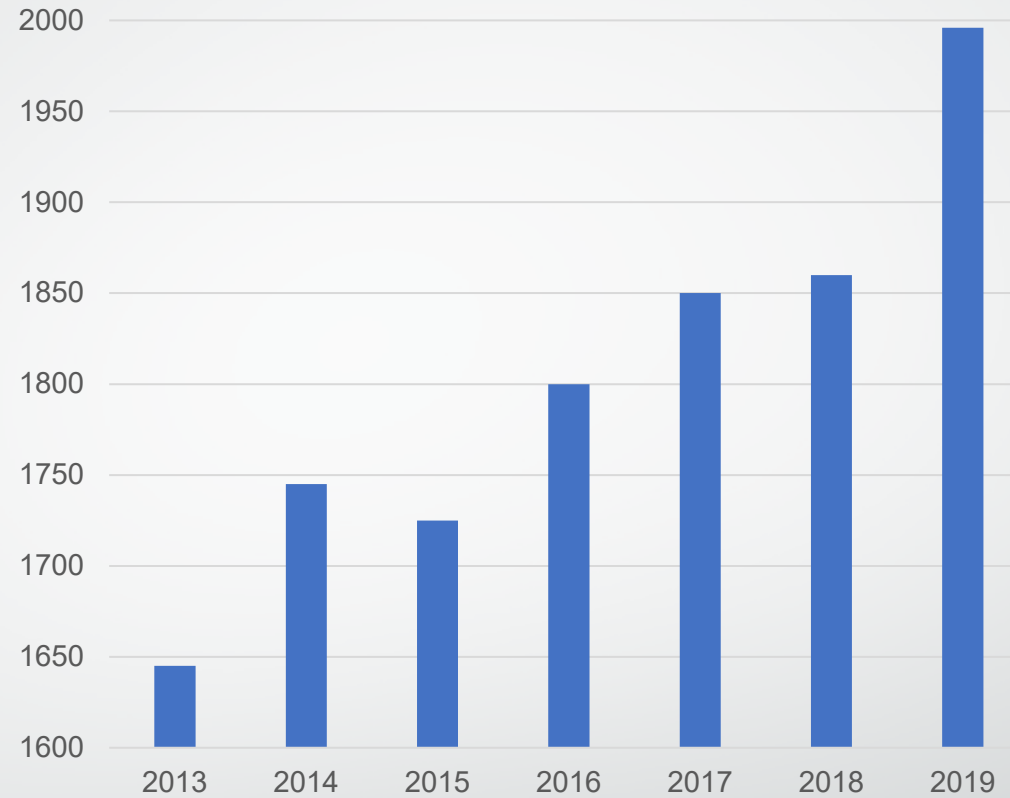
Operator and BAT
certification:

- Washington Certification Services manages certification and training.
- Covers all public water system operators, including Cross Connection Control Specialists (CCS).
- Also covers Backflow Assembly Testers (BAT).
- Ensures that all training meets minimum requirements for certification and recertification relevant to the license.

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Operator
Certification status

Cross Connection Control Specialists



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Annual Summary Report (ASR):

- The ASR continues to be the focal point of our CCC program. All water systems are required to complete an ASR and make them available to ODW upon request. We require systems with over 1,000 connections to report their annual CCC activities through our on-line portal. These 248 systems serve over 5 million people (>75% of the population) and are most likely to serve severe and high health hazard facilities.

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Annual Summary Report (ASR):

- We use the information from these ASR submittals to make data driven decisions about our CCC program.
- 351,849 Backflow Assemblies.
- 85.7% Testing Rate.
- 4.4% Failure Rate.

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CCC Activities:

- We continue to take advantage of speaking opportunities.
- Spring ERWoW- CCC Hazard Surveys.
- “Group” BAT Forum- DOH Update presentation.
- XC2 Users Group- Annual Summary Reporting.
- Inland Empire Service Truck Rodeo- CCC Hazard Surveys.

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Washington Recap:

- WAC's 246-290-490 through 246-292-036 specifically cover cross connection control.
- Must be a licensed Cross Connection Control Specialist (CCS) to run program.
- Must be licensed Backflow Assembly Tester (BAT) to test backflow assemblies.
- Must have at least a Specialty Plumber's license to test assemblies inside a building.
- WCS manages certification of Operators and BAT's.

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Oregon Health
Authority (OHA)

- Oversees public water systems and drinking water rules.
- Drinking Water program provides rules for cross connection control program requirements.
- Provides for Operator and Backflow Assembly Tester Certification.
- Enforcement.

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Oregon
Administrative Rules
(OARs)
For CCC Programs:

- Specifies that Water Suppliers (purveyors) are responsible for establishing and administering a cross connection control program.
- Defines operator and tester responsibilities.
- Indicates assembly approval guidelines.
- Describes certification and training requirements.

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Oregon
Administrative Rules
(OARs)

- 333-061-0070 – Cross Connection Control Requirements
- 333-061-0071 – Backflow Assembly Installation and Operation Standards
- 333-061-0072 – Backflow Assembly Tester Certification
- 333-061-0073 – Cross Connection Specialist Certification
- 333-061-0074 – CCC Training Programs

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CCC Program Requirements:

The program operator (CCS) must:

- Ensure testing of assemblies:
- At the time of installation, repair, or relocation,
- At least annually,
- After a backflow incident.

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CCC Program Requirements:

Also must have:

- Written Enabling Authority & Cross Connection Control Plan:
- Required for all community water systems.
- Requires annual assembly testing, & discontinuing of water service for noncompliance.
- More detailed for large systems (Systems with 300 plus connections).

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CCC Program Requirements:

- Assemblies must be approved by University of Southern California, Foundation for Cross Connection Control and Hydraulic Research (USC – FCCCHR)
- Tests must be completed by:
 - Oregon certified testers or,
 - Oregon Licensed Plumbers with a tester certification.

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CCC Program
Administration:

- Cross Connection **Annual Fee**:
 - For Community water systems with 15+ service connections.
- Cross Connection **Annual Summary Report (ASR)**:
 - For all community water systems is a summary of assemblies in a system and testing data.

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Enforcement Rule:

- Reasons we can deny or revoke a certification:
 - Providing false information,
 - Allowing others to use certification number,
 - Falsified survey/inspection/annual summary report,
 - Failed to comply with OARs, other applicable federal, State, or local laws or regulations.

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Enforcement Rule:

- Reasons we have revoked a Tester certification:
 - Drive by inspections and falsified test reports.
- Reasons we have sent warning letters to Testers:
 - Failure to submit test reports to water systems within 10 days.

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Oregon Tester Certification:

Prerequisites:

- Proof of Education:
 - High School Diploma, GED, or College Diploma.
- Complete a **5-day** Tester Course:
 - Courses must be an Oregon approved course.

Applications must be received within 12 months of completing the training course.

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Oregon Tester Certification:

Reciprocity Prerequisites:

- Proof of Education:
 - High School Diploma, GED, College Diploma.
- Complete a 1 or 2-day tester recertification course:
 - Course must be an Oregon approved course.
- Active certification/license from another State, AWWA, or ABPA.

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Oregon CC
Specialist
Certification:

Prerequisites:

- Proof of Education:
 - High School Diploma, GED, or College Diploma.
- Complete a 4-day Course:
 - *Must be an Oregon approved course.*
- Proof of 1 year of experience in water or plumbing.

Applications must be received within 12 months of completing the training course.

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Oregon CC Specialist Certification:

Reciprocity Prerequisites:

- Proof of Education:
 - High School Diploma, GED, or College Diploma.
- Complete a 1-day Specialist recertification course:
 - *Must be an Oregon approved course.*
- Proof of 1 year of experience in water or plumbing.
- Active certification/license from another State, AWWA, or ABPA.

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Oregon Tester Renewal:

TESTER:

- Complete a 1-2 day Tester Recertification Course:
 - *Course must be an Oregon approved course.*
- Include previous two gauge calibration reports.
- First time renewals don't require a 1 or 2 day tester recertification course.

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Oregon CC Specialist Renewal:

SPECIALIST:

- Complete a 1-day Specialist Recertification Course OR 0.6 CEUs of water related training:
- *Specialist Recertification course must be an Oregon approved course.*
- First time renewals don't require a 1-day specialist recertification course or 0.6 CEUs.

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Oregon Recap:

- OAR 333-061-0070 thru 0074 cover cross connection control.
- Oregon certified CCS required to run CCC Program for public water systems.
- Oregon certified BAT required to perform backflow assembly testing.
- OHA Oregon Drinking Water Services manages operator/BAT certification and training.

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Idaho Rules for CCC and Testing

- The Idaho Department of Environmental Quality (DEQ) oversees drinking water rules – including the establishment and operation of a CCC Program.
- The Idaho Division of Occupational and Professional Licenses – Board of Drinking Water and Wastewater Professionals (IDOPL, formerly IBOL) oversees licensing of operators and backflow assembly testers (BAT).

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Idaho Department of
Environmental
Quality oversees:

- Water quality programs.
- Drinking Water Rules.
- Design, construction and operation of public water systems.
- Cross connection control program.
- Backflow assembly requirements including USC approval requirements.

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Idaho Division of
Occupational and
Professional
Licenses oversees:

- Operator and Tester certification.
- Record keeping.
- Fees and Payment.
- Reciprocity.
- Violations and disciplinary actions.
- BAT Code of Ethics and Standards of Conduct.

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Idaho Administrative
Procedures Act:
(IDAPA)

- IDAPA 24.05.01 – Drinking Water and Wastewater Professionals – Operator and Backflow Assembly Tester License requirements.
- Title 54, Chapter 24 – Licensing Act.
- IDAPA 58.01.08 – Section 542. Facility and Design Standards - Distribution System.

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Title 54-2400 -
Operator and BAT
Certification

- Establishes minimum requirements.
- Renewal requirements.
- Responsibilities.
- Fees.
- Minimum certification and recertification requirements.

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Idaho Administrative
Procedures Act:
(IDAPA)

- IDAPA 58.01.08 – Section 543. Facility and Design Standards – Cross Connection Control.
- IDAPA 58.01.08 – Section 552. Operating Criteria For Public Water Systems.

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58.01.08 - Drinking Water Rules:

- Requires established authority and enforcement capability for cross connection control.
- Defines minimum elements of a program.
- Establishes assembly approval requirements.
- Defines program administrator and tester requirements.
- Defines certification requirements.

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Section 543. – Facility Design Standards -Cross Connection Control:

- States that no cross connections allowed.
- Describes testable assemblies.
- Denotes approval of an AVB.
- Specifies minimum replacement parts.
- Recommends assembly selection.

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Section 552.06 – Operating Criteria - Cross Connection Control Programs:

- Required for community and non-community water systems.
- Establish authority for program and enforcement actions.
- Program run by certified water operators.
- Idaho licensed Backflow Assembly Tester (BAT) must perform testing.
- Annual inspections and testing.
- Reports due in 10 business days.

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Idaho Reporting:

- Stipulates that test reports must be submitted within 10 business days.
- Failed assemblies must be reported in 2 days and repaired/replaced in 10 days.
- A backflow incident must immediately be reported to the Department.
- No annual reporting requirements.
- Program reviewed during sanitary survey.

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Idaho Recap:

- IDOPL covers operator/BAT certification.
- IDEQ covers Drinking Water/CCC Rules.
- Program for community/non-community.
- No annual reporting requirements.
- Reports due in 10 days.

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Similarities of CCC programs:

- Administrated by licensed operators:
 - Cross Connection Specialist (CCS) in Washington and Oregon (requires specific training).
 - Certified drinking water operator in Idaho (no specialist certification or specific training).
 - Testers cannot run a program unless possessing the certifications mentioned.

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Similarities of CCC programs:

- Testing by licensed testers:
 - Approved training required by each state.
 - Basically is the same training but must be approved by each state.
 - Testers submit report to purveyor.

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Differences of CCC
programs:

- Minimum program requirements.
- Program administrators.
- Annual reporting only required by Washington and Oregon.
- Tester certification and recertification requirements differ state to state.

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How does this affect operators?

- Operators must be certified in each state to run a program.
- Must be familiar with respective testing and reporting requirements.
- Must have a working knowledge of the Rules of the state(s) they are licensed in.
- Applicable operator (and CCS) training differs from state to state.

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How does this affect
testers?

- Testers must also be certified in each state to perform tests.
- Must be familiar with state approved testing and reporting requirements.
- Must have a working knowledge of the Rules of the state(s) they are licensed in.
- Applicable tester training differs from state to state.

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Uniform Plumbing Code, Chapter 6:

- Why would Plumbing Code have anything to do with the public water system?
- Does your responsibility end at the meter?
- In residential services, irrigation backflow assembly is usually located between meter and house.
- Who tracks these? Usually up to purveyor but regulated by plumbing code.

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Uniform Plumbing Code, Chapter 6:

- Section 603.5.6 declares that lawn irrigation systems are essentially a high health hazard.
- This contradicts PNWS CCC 7th Edition manual that indicates lawn irrigation is a low health hazard.
- Washington and Oregon have enacted exceptions to the plumbing code to allow a DC for lawn irrigation.
- Idaho removed this exception a few years ago.

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Uniform Plumbing
Code, Chapter 6:

- Plumbing Code allows up to 8% lead content in pipe and fixtures.
- This contradicts NSF 61 lead free requirements for public water systems.
- Purveyor needs to decide if they will require lead free assemblies after the meter.
- Installers and plumbers need to know systems requirements.

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How does Plumbing Code affect testers?

- Testers need to know who will track assemblies on internal plumbing.
- Testers will need to be aware of no lead requirements for certain applications.
- Need to be familiar enough with plumbing systems to determine if proper application.
- As mentioned earlier, a Specialty Plumber's license is required in Washington to test interior assemblies.

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Fire Sprinkler Assemblies

- Fire code specifies that fire sprinkler systems start at the valve at the water main connection.
- This means that backflow assemblies on fire sprinkler systems technically fall under fire code.
- Most jurisdictions regulate them under their own program, though testers for fire systems must be properly trained and carry hefty insurance.

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Review of Similarities:

- All states require a CCC program for public water systems.
- Program must be run by a certified operator.
- Testing must be performed by a certified Backflow Assembly Tester.
- All backflow assemblies must be tested annually.
- Test reports must be submitted to the water purveyor.

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Review of Differences:

- Operators and Testers must be certified in each state.
- Certification training must be approved by each state.
- Idaho does not have a CCS certification.
- Washington and Idaho certifications are managed by a separate agency.
- Idaho does not require an Annual Summary Report.
- Idaho has additional requirements for fire sprinkler system testing.

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Recent Backflow Incidents:

- A Broken CO2 regulator at a gas station. The CO2 back-pressured through a soda machine at a gas station and entered the distribution system. There was no backflow protection at the soda machine or the meter.

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Recent Backflow Incidents:

- Hydroseed back-pressured into the distribution system through a fire hydrant. A hydroseed company illegally hooked up to a fire hydrant and inadvertently injected hydroseed into the distribution system.

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Recent Backflow Incidents:


- Compressed air injected into the distribution system through a lawn irrigation system. Irrigation company incorrectly hooked an air compressor to a backflow assembly to winterize a lawn sprinkler system.

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Recent Backflow Incidents:

- Compressed air injected into the building plumbing at a dentist office. A poorly repaired air operated valve at a dentist office allows compressed air to enter the building plumbing. Also found an unprotected by-pass around the premises isolation backflow preventer.



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- Thank you for joining me today!
- Questions?

Conclusion! 😊

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