

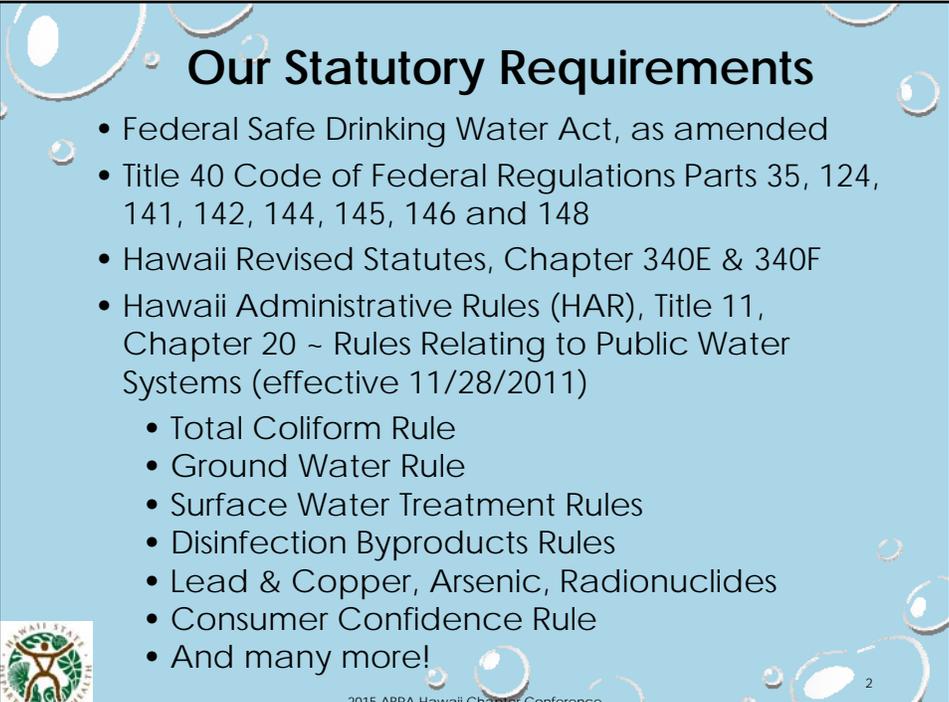
Hawaii Safe Drinking Water Branch's Role in Backflow Prevention

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Our Statutory Requirements

- Federal Safe Drinking Water Act, as amended
- Title 40 Code of Federal Regulations Parts 35, 124, 141, 142, 144, 145, 146 and 148
- Hawaii Revised Statutes, Chapter 340E & 340F
- Hawaii Administrative Rules (HAR), Title 11, Chapter 20 ~ Rules Relating to Public Water Systems (effective 11/28/2011)
 - Total Coliform Rule
 - Ground Water Rule
 - Surface Water Treatment Rules
 - Disinfection Byproducts Rules
 - Lead & Copper, Arsenic, Radionuclides
 - Consumer Confidence Rule
 - And many more!



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Other SDWB Administrative Rules

- Title 11, Chapter 19 ~ Emergency Plan for Safe Drinking Water
- **Title 11, Chapter 21 ~ Backflow and Cross-Connection Control**
- Title 11, Chapter 23 ~ Underground Injection Control
- Title 11, Chapter 25 ~ Certification of Operating Personnel in Water Treatment Plants
- Title 11, Chapter 65 ~ Environmental State Revolving Funds



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What is a Public Water System (PWS)?

- A system which provides water for human consumption, through pipes or other constructed conveyances, if the system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- Human consumption includes:
 - drinking, bathing, showering, cooking, dishwashing, and maintaining oral hygiene
- The PWS may be privately or publicly owned or operated.



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Where does backflow prevention come in?

- HAR Chapter 11-21 ~ Cross Connection and Backflow Control (effective 12/26/1981)
 - Defines: basic terminology, certified tester, etc.
 - Basis for approved devices
 - Installation and location requirements
 - Maintenance requirements
 - Violations and penalties
 - Effect of County ordinances



Update of HAR Chapter 11-21

- What should be included?
 - Updated terminology
 - Clarify County roles with respect to approving authority, reciprocity, etc.
 - Input received from the various backflow prevention organizations, Counties and individuals.



HAR Section 11-20-29.5(c)(6)(A)

(c) A public water system with adequate managerial capacity has at least the following items:

(6) Adequate internal policies, including:

(A) A policy to inform customers or water users adequately about water quality as necessary, the public water system's operation as it may affect them, and the customers' or water users' duties, including any need for disinfection or alternate sources, cooperation with public water system personnel during service interruptions or emergencies, compliance with rules, help with water quality monitoring, water conservation, **cross connection and backflow prevention**, infrastructure changes, meter reading, rates, payment, and complaints;



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HAR Section 11-20-46.1(g)(2)(A)

(2) Significant deficiencies are defined as any defect in a system's design, operation and maintenance, as well as any failure or malfunction of any system component, that the director determines to cause, or have the potential to cause, an immediate sanitary risk to health.

(A) The director has determined that the following conditions meet the definition in this paragraph:



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HAR Section 11-20-46.1(g)(2)(A)

(continued)

- (iii) Drainage, sewer, chemical, or raw water line **cross connections** that may allow contaminants to enter the drinking water system
- (iv) Potential backpressure and backsiphonage conditions, including those observed outside the PWS system (i.e. private property), which could impact the PWS' water system quality. As a minimum, a PWS must contact private property owners to resolve potential **cross connection** hazard to their distribution system.



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HAR Section 11-20-46.1(g)(3)

Community PWSs meeting the *criteria* in the subparagraphs (A) through (E) may be eligible for sanitary surveys to be performed on their systems at a reduced frequency of no less than every five years. ...

- (A) No significant deficiencies identified in the system's most recent survey performed in compliance with this subsection;
- (B) No waterborne disease outbreaks attributable to the system during the past five years;
- (C) No violations of chapter 11-20 during the past five years;
- (D) Evidence of an active **cross connection control program**; and
- (E) Evidence of an up-to-date operator training and certification program.



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Significant Deficiency Fact Sheet Distribution & Transmission Section

Un-protected cross-connections, including connections to irrigation or other non-potable systems, wastewater treatment plants, etc.

- The following unprotected cross-connections were observed during the sanitary survey: hose bibb without a vacuum breaker, connection to irrigation or other non-potable water system, water service to wastewater treatment plant.
- Install a vacuum breaker on the hose bibb or install a reduced pressure principle backflow preventer at all other cross-connections. Backflow preventers shall be tested annually by a certified tester.

<http://health.hawaii.gov/sdwb/files/2014/04/Significant-Deficiency-Fact-Sheet.pdf>



What our inspectors consider to be a potential cross-connection



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Final Words...

**Be Vigilant!!
Prepare for the worst!!**



More Information

- USEPA Office of Ground Water and Drinking Water:
 - Cross-Connection Control Manual, February 2003, EPA 816-R-03-002
<http://nepis.epa.gov/Exe/ZyPDF.cgi/2000262T.PDF?Dockey=2000262T.PDF>
 - Cross-Connection Control: A Best Practices Guide, September 2006, EPA 816-F-06-035
<http://nepis.epa.gov/Exe/ZyPDF.cgi/2000ZB8.PDF?Dockey=2000ZB8.PDF>
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Mahalo!

