

Cross Connection Control

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Presentation Overview

- CCC Rule Overview and Implementation
- Who is Responsible for What
- Questions on Rules
- Case Study of Highland Flats Water Association
- Questions on Case Study

CCC Rule Overview

- Idaho Rules prohibit inadequately protected cross connections on ALL Public Water Systems. Purveyor required to protect water system from cross connections (effective 1977).
- Idaho Rule Definition - Cross connections include **actual or potential** piping arrangements.
- Assemblies must pass performance test by USC-FCCCHR and be **installed in USC approved orientation**.
- Free access to USC approved assembly listings at: <http://www.usc.edu/dept/fccchr/>

CCC Rule Overview continued

- AVBs must be approved by IAPMO or ASSE (stamp on top).
- All backflow prevention assemblies must be **USC approved**.
- Replacements parts and components must meet original manufacturer's specifications or otherwise be approved by USC as replacement parts or components for DCA, RP, PVBs. **The design material or operational characteristics of any assembly may not be altered.**
- Backflow Prevention Assembly selection from **PNWS AWWA CCC Manual "Yellow Book"**, UPC, AWWA M14 or USC Manual of CCC (guidance documents-not incorporated by reference).

Community PWS required to implement CCC Program – Idaho Rule July 1980

- Inspection program to locate CC's and require suitable protection.
- Required installation and operation of approved backflow protection.
- New service connections require backflow protection prior to providing water service.
- Annual inspection and testing of all assemblies as per USC test procedures by Idaho licensed backflow assembly tester. *Timeline not established by Rule – purveyor discretion – keep seasonality in mind for assemblies protecting irrigation, etc.*
- Discontinuance of service where suitable backflow protection is not provided. *Timeline not established by Rule - commensurate w risk.*
- Assemblies that cannot pass backflow test shall be repaired, replaced or isolated within 10 business days or water service shall be discontinued (Rule -2013). *Awareness of service may be critical.*

Who is responsible for what?

- Rule of thumb: PWS responsible for protecting water in the main from cross connections (*premise isolation vs. in-premise isolation*).
- Rule of thumb: Plumbing Bureau and/or local municipality regulates CC within building served. *Plumbing Bureau Statute of Limitations*.
- Idaho DW Rules requires PWS protect water in the main from cross connection contamination. IDEQ regulates Idaho DW Rules. *CCC reviewed during sanitary survey*.

Backflow Prevention Assembly - Installation and Testing

- Installation within premise under authority of Plumbing Bureau or municipality- permit required and work completed by licensed plumber. Annual testing by licensed backflow assembly tester (BAT).
- At the service connection - permit may or may not be required check with local ordinances. Annual testing by licensed BAT.
- Assemblies protecting fire sprinkler/suppression systems - testing must be conducted by an individual holding BAT license AND fire sprinkler contractor license as per Idaho Fire Marshal.



Questions on CCC Rules?

Which lead to more clues *and* more questions

<http://maps.idwr.idaho.gov/locator/>

IDAHO Department of Water Resources
Geographic Information Services
Well Drillers' Locator

Home Contact Us

IDWR Home
Well Drillers' Help
Map Help
Print Map
Hide Restriction Areas
Find Location

Photo Topo

The lat/long you provided was
48° 35' 34.86" N; 116° 27' 53.31" W
NE quarter of the SE quarter of Section 33,
Township 61N, Range 01W
IDTM NAD83 coordinates:
Easting=2318261; Northing=1935371.9
Computed coordinates:
Longitude=116° 27.8880'
Latitude=48° 35.5812'

Layers
 None
 Wells
 Water Rights
 Water Rights Permits
 Adjudication Claims
 Adjudication Recommendations
* Positions of wells/headgates may be based upon the center of a quarter-quarter section.

Drilling restrictions may apply to the following areas:
 Areas Drilling Concern
 Contamination Areas
 Nitrate Priority Areas
 Critical Ground Water Areas
 Ground Water Management Areas

Details for Water Rights
4/10/1909 ERICK LUNDEN
9/23/1963 HIGHLAND FLATS WATER ASSN

Highland Flats Water Association

- Located west of Naples – 3~4 miles SW Ruby Creek
- Rural residential w some agriculture.
- Served by creek (later learned untreated - could explain E.coli) since 1963
- Regulated? > 15 service connections/25 people >60 days

Data Gathering

- Cabinet Mountains: ~ 60 psi at services in vicinity (chlorinated)
- IDWR:
 - Water Right Highland Creek 0.5 CFS ~ 224 GPM
 - Domestic Right priority date : 1963
- Google Earth:
 - Elevation of water right: 2515 ft
 - Service area elevation: 2300 ft.
 - Estimate 92 psi at gravity supplied Highland Flat service connections

“Who’s On First?”

Public Health Concerns & Regulatory Roles

- DEQ: Is Highland Flats selling untreated surface water as a PWS (>15/25/60)?
- Cabinet Water District: Unprotected cross connections?

Silver Lining: Approved Potable Water at the Curb

Data Gathering Continues...

- DEQ contacts Realtor. Realtor provides contact information for HF Secretary. DEQ shares contact info with Cabinet.
- Cabinet receives list of HF irrigation customers ONLY from HF Secretary.
- DEQ sends census request letter to HF 6/24/14 - response 7/7 indicates:
 - No treatment of surface water supply – no reports of illness.
 - 32 irrigation connections which use Cabinet for potable.
 - DEQ regulation over irrigation only – NO
 - Cabinet authority to provide CCC at service where HF irrigation is connected - YES
 - 2 potable connections with “UV filters”.
 - 1 potable connection uses bottled water for drinking/cooking.
 - Selling water; unmetered.

Puzzled... HF response \neq Cabinet's records:

DEQ and Cabinet conduct joint site visit .

- Identify is HF a PWS?
- Field scout locations of Cabinet Mountain potable services for signs of HF irrigation connection.
- Identify water users served by other sources (private wells or springs).
- Identify parcel ownership at Boundary County Courthouse.

Operator Safety, Preserving Cabinet's Customer Relationships

- Cabinet CCC Ordinance defines purveyor access permissions.
- Unlawful trespassing is not safe nor will it help in a legal case.
- DEQ & “The Fed Ex Rule.”



site visit leads to second census request to HF:

- Request outlines findings of August 26th site visit :
 - 15 residential properties in Highland Flats service area do not have potable connection to Cabinet, nor do the properties reflect driller's report or water right through IDWR.
 - Provided parcel owner, parcel number and address of 15 properties to HF and requested clarification.

Highland Flats response to “15”

- 6 parcels serving 15 individuals receiving potable from Highland Flats (3 more connections than originally reported - not a PWS).
- 3 parcels (with 1 of parcels “sharing”) potable connection from Cabinet. Irrigation from Highland Flats.
- 2 parcels utilize private wells.
- 3 homes sharing 1 parcel on separate spring source.
- 2 parcels - no water service.
- Learning opportunities expressed by HF secretary.
- Effects of census inquires on property transactions, brokers and lending agencies.

Cabinet's Cross Connection Evaluation Process

- Reviewed water usage of each customer that have both HF and CMWD accounts.
- Phone audit of each customer on list.
- Letters to each customer.
- Tracked customer contacts.
- Side notes:
 - CMWD bylaws allow for immediate disconnection of any account with an inadequately protected CC.
 - New meters installed in HF service area.

Case Study Questions?

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