



the Pipeline

Oregon Drinking Water News

Volume 28 • October 2013

Cryptosporidiosis outbreak in Baker City

by Dave Leland

In late July, residents of Baker City (pop. 9,828) began presenting in unusual numbers with gastrointestinal illness symptoms at the local emergency department and to health care practitioners. Eight of these illnesses were confirmed as cryptosporidiosis, and a disease outbreak investigation began, conducted by the Baker County Health Department assisted by the Oregon Public Health Division and the federal Centers for Disease Control and Prevention. Attention turned to the city’s drinking water, in particular its unfiltered surface water sources located in the Elkhorn Mountains, which are chlorinated, but not treated for cryptosporidium. The city is on schedule for ultraviolet disinfection treatment installation in fall 2016 to meet the requirements of the EPA LT2 rule.

On July 31, the city collected cryptosporidium samples from the multiple surface water sources and in the distribution system, and

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Program update

by Dave Leland

EPA gave final approval to Oregon’s drinking water primacy program revisions for all the newer federal rules on August 26! These include: Long Term 2 Enhanced Surface Water Treatment Rule, Stage 2 Disinfectants and Disinfection Byproducts Rule, Ground Water Rule, Lead and Copper Short Term Regulatory Revisions and Clarifications Rule, and the Variance Rule. This culminates a long process begun in 2006, and Oregon now has Primacy for all federal rules except for the very new Revised Total Coliform Rule.

EPA continues to labor on its regulatory agenda, and dates of future rule promulgations are starting to slip, reflecting both budget and capacity shortfalls. Rule proposals for Perchlorate, Carcinogenic VOCs, Long Term Lead and Copper Rule Revisions, and the third Regulatory Determination have been delayed from 2013 to at least 2014. We will keep you informed on those developments.

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issued a city-wide boil water advisory as a precaution. On August 3, six out of seven of those water samples showed the presence of cryptosporidium. Additional samples collected August 4 and 5 included a very high result of 913 oocysts in a 10L sample from Elk Creek, one of the surface water sources. That source was disconnected. By August 20, after three weeks of boil advisory, two consecutive negative cryptosporidium samples were obtained from the water sources in use and the distribution system, and the boil advisory was ended.

Drinking Water Services served as a key part of an interdisciplinary public health team responding to the outbreak. The team developed the criteria for ending the boil advisory, and for reissuing the notice should two consecutive positive results be obtained from ongoing twice-weekly cryptosporidium sampling from the combined surface water sources prior to treatment. A household survey of the community conducted by the public health team revealed an estimated illness attack

rate during the outbreak of 20%, or about 2,000 cases. Numerous samples of wild animal scat, particularly from mountain goats, did not show *Cryptosporidium*; however, evidence of cattle intrusion into the Elk Creek drainage from nearby grazing allotments were evident. The city is now engaged in improving its watershed control program to exclude cattle as it continues with UV disinfection installation.

This is the first municipal waterborne disease outbreak in Oregon since the one in 1992 in Jackson County and the first municipal cryptosporidiosis outbreak nationally since Las Vegas in 1994. It reminds all of us of the importance of federal drinking water standards, and of continued vigilance over drinking water sources and treatment systems.

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Emergency awareness apps

Following is a list of websites to assist in knowing where to seek shelter and how to find loved ones after a disaster. *The list is excerpted from ASDWA weekly update June 14, 2013, "New Technologies Support Personal Awareness for Emergencies":*

FEMA alert app for iPhone and Android: www.fema.gov/smartphone-app

Earthquake alert app for iPhone and Android: www.redcross.org/mobile-apps/earthquake-app

Hurricane tracker app for iPhone and Android: www.redcross.org/mobile-apps/hurricane-app

Shelter finder/locator app: www.redcross.org/mobile-apps/shelter-finder-app

Tornado warning app for iPhone and Android: www.redcross.org/mobile-apps/tornado-app

Wildfire alerts app for iPhone and Android: www.redcross.org/mobile-apps/wildfire-app

In June, the 2013 Legislature adjourned, passing all three Public Health Division agency bills. While there were no agency bills directly relating to the Center for Health Protection, the Legislature passed 16 bills with direct bearing on the center, with 14 requiring the center to adopt rules or conduct other work:

HB2094A – Public health technical fixes (rulemaking on home health and in-home care);

HB 2131A – Bedbugs (no rulemaking);

HB 2216B – Hospital assessment and long-term care facilities (Certificate of Need review expansion and 120-day timeframe);

HB 2896 – Prohibits minors from using commercial tanning beds (rulemaking);

HB 3109A – Forest fire impacts (report on 2012 Pole Creek fire with DEQ, ODOF, others);

HB 3330A – Electronic fingerprint capture (rulemaking and study of current process);

HB3331A – Voluntary Central Criminal Records Check Registry (rulemaking);

HB 3345B – Non-transplant anatomical donations (rulemaking, establish licensing program);

HB 3364A – Integrated pest management (coordinate with Pesticide Analytical Response Center);

HB 3460B – Registration of medical marijuana facilities (rulemaking, establish regulatory program);

SB172 – Infant screening for congenital heart defects (rulemaking);

SB 281 – Add PTSD to list of qualifying conditions for medical marijuana (rulemaking);

SB 420A – Dense breast tissue (rulemaking);

SB 569B – Credentialing providers of telemedicine services (rulemaking);

SB 631 – Regulation of government facilities that provide food service (inspections and licensing);

SB 683B – Health care practitioner referrals (rulemaking on manner/form of notice).

This is a level of rulemaking effort by the Center for Health Protection that is unprecedented in recent times. Although none of these impact the drinking water program directly, rulemaking assistance will likely be needed by other programs in the center.

The 2013 Legislature also approved the budget for the 2013–2015 biennium, which began July 1. Drinking Water Services is funded by Federal Funds (70%) and Other Funds and fees (30%), and no state General Fund moneys. The program funding will therefore be dependent on the outcome of federal budget wrangling due to begin in Congress soon. On a positive note, we were collectively successful earlier this year in the National Infrastructure Needs Survey, moving from a 1% share of the national State Revolving Fund allocation for Oregon to a 1.42% share! Thanks to our contractor, HBH Engineering, and the utilities that graciously provided needed capital project data. The successful result will help the program weather the federal budget wrangling ahead.

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On the leadership front, I continue to serve as interim administrator for the Center for Health Protection, pending selection of a new administrator. Thanks to our Drinking Water unit managers, who have been filling in as interim Drinking Water Services manager on a rotating basis. With the departure of our Public Health Division Director and Deputy Director earlier this year, we also have Suzanne Hoffman and Bobby Green from the OHA Director's Office filling those key leadership positions respectively as interim Director and Deputy Director, pending recruitment and selection now underway.

In addition, the Public Health Division leadership team is making some needed adjustments to the division organizational structure implemented a year ago. The Research and Education Services Section (environmental public health tracking, lead paint programs, beach monitoring, hazardous algae blooms, etc.) moved organizationally in September from our Center for Health Protection to the Center for Prevention and Health Promotion in order to take fuller advantage of close ties to chronic disease prevention programs. Emergency Medical Services and Trauma will soon move from the PHD Director's Office to the Center for Health Protection, since these programs are regulatory in nature. Finally, Health Security and Preparedness will move from the PHD Director's Office to the Center for Health Practice.

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100-foot setback requirement for wells and springs

by Carrie Gentry, Jay MacPherson and Russell Kazmierczak

Oregon Administrative Rules (OAR) 333-061-0050(2)(a)(B) require that the area within 100 feet of a groundwater source (i.e., wells and springs) be owned by the water system or have a recorded "perpetual restrictive easement" for all land within 100 feet of the well or spring not owned by the water system (with the exception of public rights-of-way). Sometimes water systems are not able to meet the property control requirement for various reasons, such as the public water supply well is on a tax lot less than 200 by 200 feet and is not adjacent to a public right-of-way. Even for lots larger than 200 by 200 feet, existing infrastructure and the land surface variability may result in impractical placement within this 100-foot setback.

The purpose of this 100-foot setback is to help prevent contamination of the well. If a public water system controls land use over that 100 feet, there is less chance contamination will reach the well. If ownership ends 50 feet from the well, and a perpetual restrictive easement exists over the next 50 feet, then control is maintained. The types of contaminant sources that a perpetual restrictive easement would address are listed in OAR 333-061-0050(2)(a)(E). Some examples are: pit privy; sewage drain field; cesspool; solid waste disposal; pressure sewer line; buried fuel tank; animal yard/feedlot/waste storage; untreated storm or gray water disposal; chemical storage/usage/application; fuel transfer; mineral extraction; vehicle/machinery maintenance; junk yard; cemetery; unapproved or improperly abandoned well; and

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source of pathogenic organisms. Basically, this includes just about anything that would have the potential to contaminate your water supply.

Typically, the property setback requirement is reviewed and addressed during the plan review process. If ownership is less than 100 feet, the reviewing engineer will ask for a perpetual restrictive easement. Sometimes, even when the property control requirement is met, well construction is complete, and the well has received final plan review approval, at a later date the Drinking Water Services (DWS) technical field staff or our regulatory partners (county health department or Department of Agriculture) occasionally encounter a contaminant source within the setback. Such contaminant sources include, but are not limited to, chemicals in storage buildings,

emergency fuel storage, septic leach lines, animal husbandry, or storm water disposal (e.g., retention ponds, swales, dry wells, etc.). These examples point to why the perpetual restrictive easements are so important when land ownership setbacks are <100 feet. If owners of public water supply wells or springs sometimes forget the rules and place a contaminant source within the setback, their neighbors are even more likely to forget.

If a water system needs to put something within the setback, such as an emergency generator for a well, or has a question about an existing installation, please contact the DWS technical staff member assigned to your county.

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Gutter-drain style hatches for reservoirs

by Carrie Gentry and Jay MacPherson

Oregon Administrative Rules (OAR) 333-061-0050 (6)(a)(J) require that reservoirs with roof hatches have curbing around the opening and a lockable watertight cover that overlaps the curbing. For a number of years, the engineers in Drinking Water Services interpreted that rule such that gutter-drain style hatches were equivalent to the construction standard. However, water system survey inspections during the past few years found gutter-drain style hatches that are not watertight, even though they are fully functional as designed. Additionally, some of these hatches have harbored pathogen vectors such as mice. DWS no longer considers gutter-drain style hatches to be equivalent.

As long as existing hatches do not lead to contamination, they are grandparented. However, new or replacement hatches shall be non-gutter-drain style hatches with appropriate curbing and overlapping covers. Water systems that currently have gutter-style hatches should conduct routine maintenance. An appropriate maintenance schedule will depend on the rate at which gutters gather debris. Maintenance should include checking the drains for obstructions. Ideally there should be no hindrance of flow through the gutters and out the drain(s). Screens for drain outlets should also be considered as a means to prevent animal entry.



Gutter hatch = example of hatch no longer accepted



Curbed hatch = example of hatch that is acceptable

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MEETING CALENDAR

Drinking Water Advisory Committee

Oregon Health Authority
Public Health Division
Diane Weis / 971-673-0427

October 16, 2013
January 15, 2014

All meetings are held at the Public Utility Commission Office, 3930 Fairview Industrial Dr., S.E., Salem, Oregon 97302

Cross Connection Advisory Board

Go to: public.health.oregon.gov/HealthyEnvironments/DrinkingWater/CrossConnection/Pages/advisoryboard.aspx

Oregon Environmental Services Advisory Council

Go to: www.oesac.org/meeting_schedule.aspx

Cross Connection/Backflow Courses

Backflow Management Inc. (B)
503-255-1619
Clackamas Community College (C)
503-594-3345
Eugene Water & Electric Board (E)
541-685-7000

Backflow Assembly Tester Course

Oct. 21-25	Redmond (B)
Dec. 9-13	Oregon City (C)
Jan. 13-17	Portland (B)
Jan. 27-31	Eugene (E)
Mar. 24-28	Portland (B)
Apr. 7-11	Redmond (B)

Backflow Assembly Tester Recertification

Dec. 3-4	Portland (B)
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Cross Connection Inspector Course

Nov. 4-7	Oregon City (C)
Dec. 2-5	Eugene (E)
Feb. 10-13	Portland (B)

Cross Connection Inspector Recertification

Nov. 8	Oregon City (C)
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Basics for Small Water System Training Course

503-837-1212

Oct. 29	Tillamook
Nov. 12	St. Helens
Nov. 19	Cornelius

Advanced Small Water System Training Course

541-726-2587 X 25
Four classes are being held in 2013 – location TBA.
Check online by going to healthoregon.org/dwp, then Operator Certification, Small Water System Operator, Advanced Course.

TRAINING CALENDAR

CEUs for Water System Operators

Check www.oesac.com for new offerings approved for drinking water

OAWU

503-837-1212

Nov. 4-7	Small System Operator's Conference
Nov. 20	Water Operators Review
Dec. 9-12	15th Annual End of Year Operator's Conference
Dec. 17	Developing Your O&M Manual
Dec. 18	Excavation Safety & Confined Space Entry

Oregon APWA Training Program

541-994-3201

Oct. 22-25	Oregon APWA Fall Conference
Nov. 12-15	Public Works Leadership
Dec. 10-13	Public Works Essentials



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Send address changes to PIPELINE, P.O. Box 14450, Portland, OR 97293-0450

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