
Oregon Health Authority and Drought

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Drinking Water Services

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PUBLIC HEALTH DIVISION

Center for Health Protection

Oregon Health Authority, Public Health Division

- Drinking Water Services (DWS)
 - Regulates water quality from health perspective
 - Provides technical assistance to public water systems
- Environmental Public Health
 - Harmful algae blooms / Cyanotoxins
 - Domestic well safety program
 - Climate change and Health program

Protecting Drinking Water Quality

- US EPA
 - SET standards to protect health (SDWA)
 - Oversee state programs – “Primacy”
- State DWS & Partner Agencies
 - ASSURE health standards are met
- Public Water Systems
 - PROVIDE safe water
 - Test water, report, act to meet standards

Regulated drinking water contaminants

- 6 microbials (bacteria, viruses, *Giardia*, *Cryptosporidium*)
- 9 disinfection by-products (trihalomethanes, haloacetic acids)
- 21 inorganic chemicals (**nitrate**, arsenic, lead)
- 51 organic chemicals (solvents, pesticides)
- 4 radiologic contaminants (uranium)

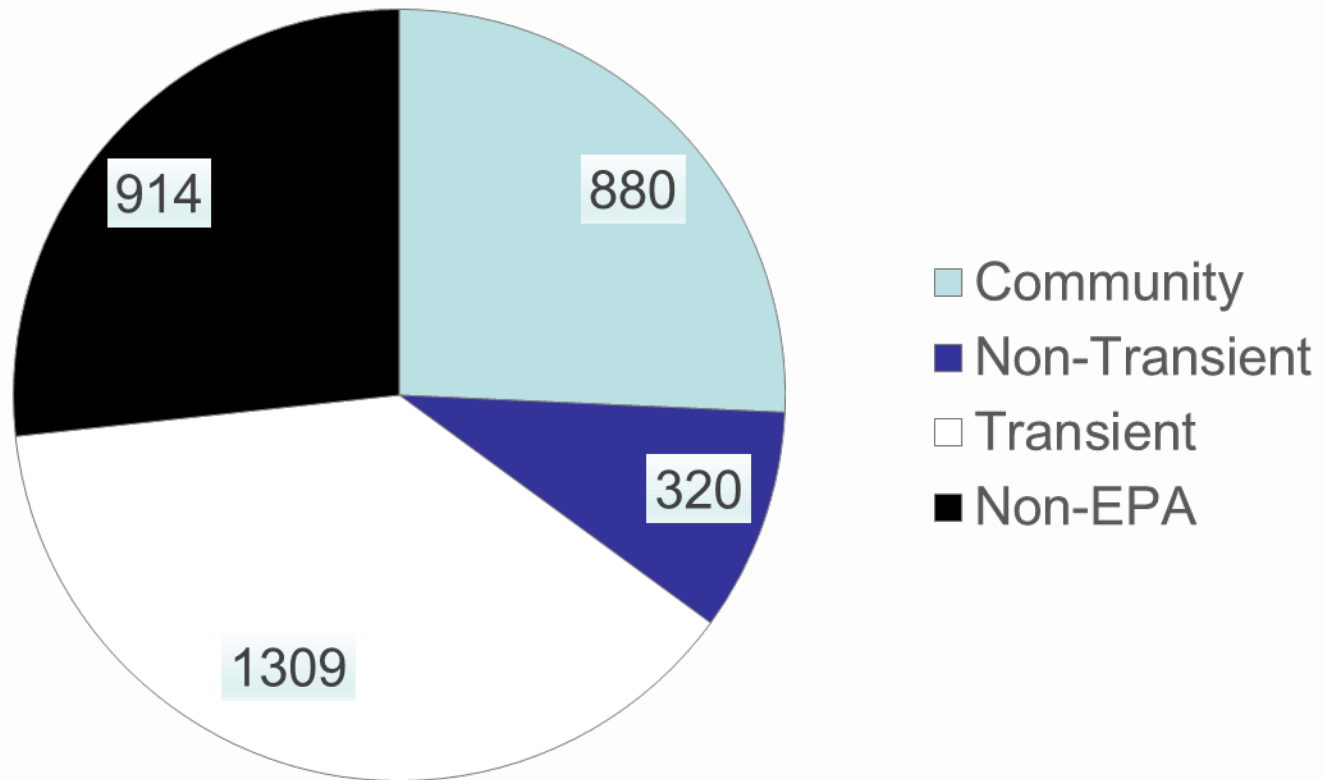
Some have **short-term acute** health effects, most have long-term chronic effects

Public Water System Definitions

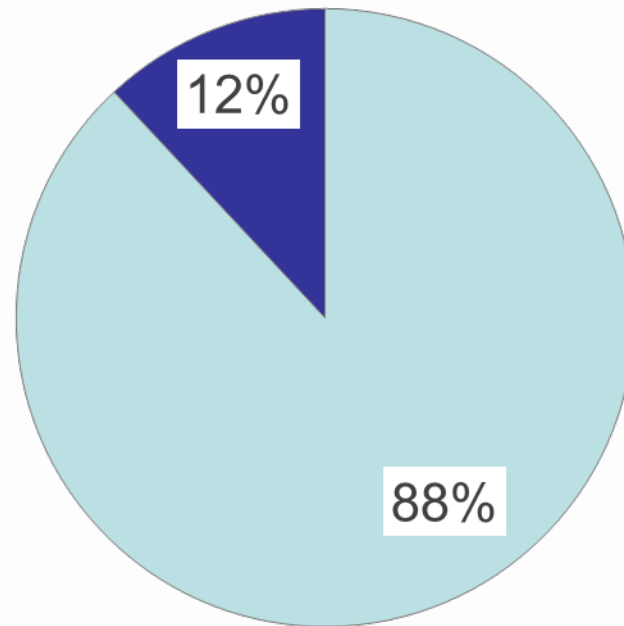
- Community water system:
 - 15 or more connections by year-round residents, or 25 or more year-round residents.
- Non-Transient water system:
 - Regularly serves 25 or more of the same people for more than 6 months per year.
- Transient water system:
 - Serves a transient population of 25 or more people per day for at least 60 days per year.
- Non-EPA water system:
 - Serves 4-14 service connections or 10-24 people.

Public Water Systems by Classification

Total PWS in Oregon = 3,423



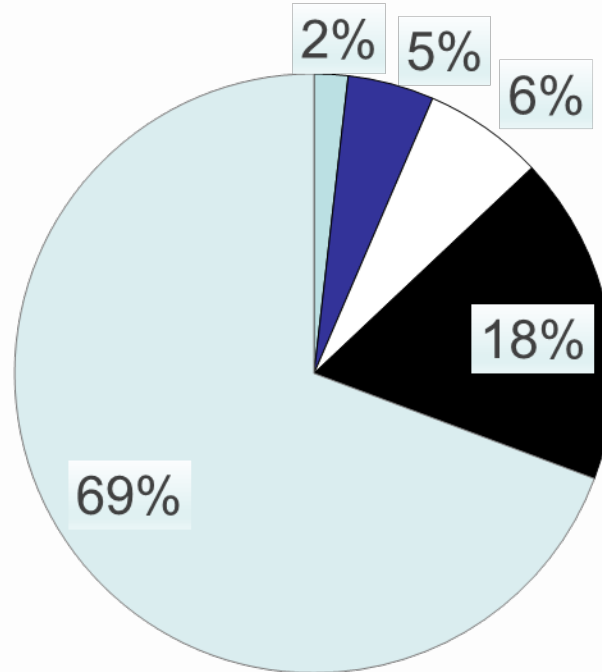
Water systems and source type (n=3423)



■ Groundwater ■ Surface water

Community Systems (n=880)

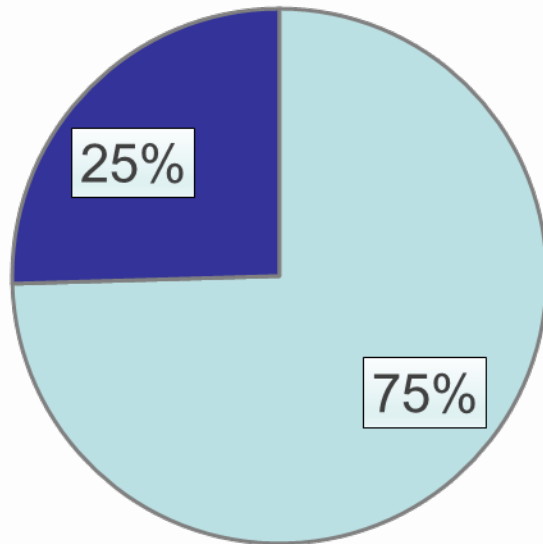
of Systems, by system size



■ > 50,000 ■ 10,000-49,999 □ 3,300-9,999 ■ 500-3,299 ■ <500

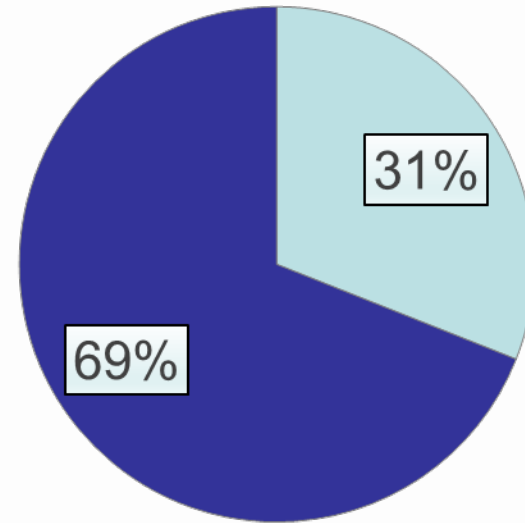
Community systems only (n=880)

of PWS, by Primary Source Type



□ Groundwater ■ Surface water

% Population by source type



□ Groundwater ■ Surface Water

Planning requirements

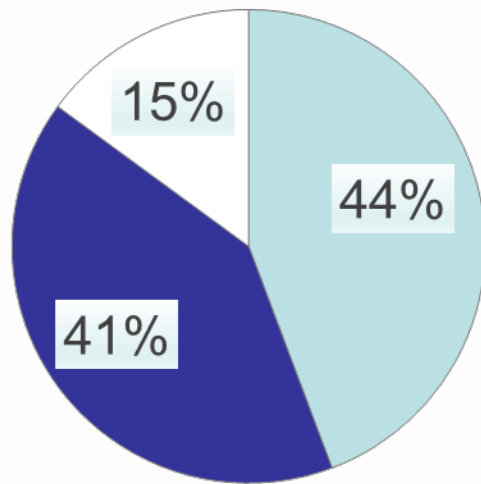
- Master plans for Community system serving >300 connections, must evaluate:
 - Adequate source, facilities for next 20 years
 - Engineering solutions
 - Financing
- Major modifications must have plans approved prior to construction
- **All** systems must have an emergency response plan
 - Spectrum of quality / depth
 - No required “emergencies” to consider

Drought Impacts 2015

- No apparent change in tap water quality
- Several systems were impacted but able to handle it on their own:
 - Conservation / Curtailment
 - Interties with other PWS
 - Use of alternate sources
 - Hauling of water



Source vulnerability in Community systems (n=880)



- Multiple active sources
- Single source only
- Single source with Emergency source on record

- Communities with a single source only:
 - 71% are groundwater
 - Serve 31% of the population
 - 84% of the systems serve less than 500 people

State Revolving Loan Fund

- DWS partners with Infrastructure Finance Authority
- Fund has been revolving for 15+ years, also get annual grant from EPA
 - Provides low-interest loans for projects with a health and/or compliance component
- Planning grants
 - Focus on sustainable infrastructure planning
 - Priority given to small systems
- Newly expanded eligibility criteria
 - Includes: ASR, new source or alterations, interties

Harmful Algae Bloom Program

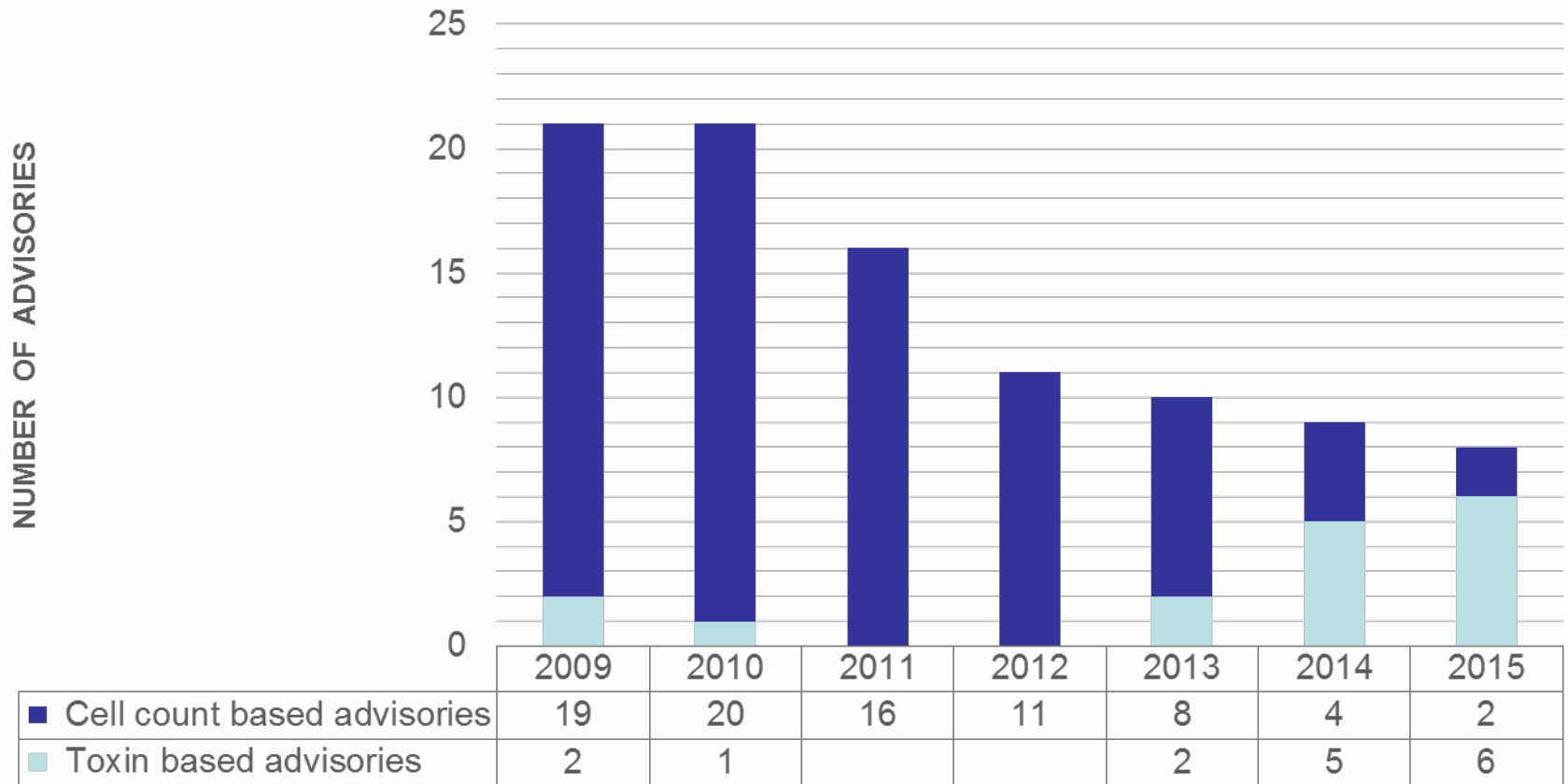
- Issues advisories on water bodies based on EPA recommended levels of cyanotoxins (reactive).
- Water body testing is not consistently conducted
- PWS supplies are tested – toxins found in raw but not treated water
- CDC-funded program until 2013 (now funded by Drinking Water Services).
- Typical treatment processes are not guaranteed to remove cells or toxins.



David Stone, Oregon State University

Figure 1. Cyanobacteria scum along an Oregon lakeshore.

HAB advisories over time



Domestic Well Safety Program

- 23% of Oregon population uses a private well as their primary drinking water source
- No regulatory oversight or requirements
- When selling a property, seller must sample for Coliform bacteria, Nitrate, and Arsenic
- Data is entered into database and analysed
- Provides informational resources



Learn More:

- Websites:
 - www.healthoregon.org/DWP
 - <http://www.healthoregon.org/hab>
 - <http://www.healthoregon.org/wells>
- Contact:

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