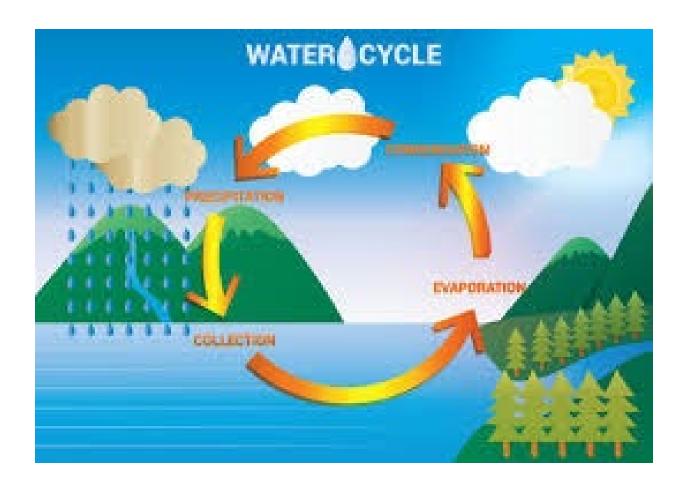


Pat Heins **DEQ** State biosolids & recycled water coordinator

November 16, 2023



# Why allow reuse?





# Oregon's Reuse History

1990 - First regulations in Oregon

2003 - SB 820

2005 - Governor's Executive Order

2008 - Recycled water regulations

2011 - Graywater regulations



Image courtesy of USDA



Image courtesy of US Golf Assoc.



### Recycled water

#### **Recycled Water Regulations**

State: OAR 340-055 — Recycled water use



"Recycled Water" means treated effluent from a wastewater treatment system which as a result of treatment is suitable for a direct beneficial purpose. Recycled water includes reclaimed water as defined in ORS 537.131.

State: OAR 340-053 — Graywater Reuse

"Gray water" means shower and bath waste water, bathroom sink waste water, kitchen sink waste water and laundry waste water.

"Gray water" does not mean toilet or garbage wastes or waste water contaminated by soiled diapers. ORS 454.605.



# Recycled Water Class

|                                   | Class A          | Class B | Class C | Class D          | Nondisinfected |
|-----------------------------------|------------------|---------|---------|------------------|----------------|
| Oxidized                          | Х                | Χ       | Χ       | Χ                | X              |
| Disinfected                       | Х                | Χ       | Χ       | Х                |                |
| Filtered                          | Х                |         |         |                  |                |
| Turbidity (NTU)                   |                  |         |         |                  |                |
| 24-hr mean                        | 2                |         |         |                  |                |
| 5% of time during a 24-hr period  | 5                |         |         |                  |                |
| Maximum at any time               | 10               |         |         |                  |                |
| Monitoring Frequency              | hourly           |         |         |                  |                |
| Total coliform (organisms/100 mL) |                  |         |         |                  |                |
| 7-day median                      | 2.2              | 2.2     | 23      |                  |                |
| Maximum in any sample             | 23               | 23      |         |                  |                |
| Maximum in 2-consecutive          |                  |         | 240     |                  |                |
| Monitoring Frequency              | daily            | 3/wk    | 1/wk    |                  |                |
| E. coli                           |                  |         |         |                  |                |
| 30-day log mean                   |                  |         |         | 126              |                |
| Maximum in any sample             |                  |         |         | 406              |                |
| Monitoring Frequency              |                  |         |         | 1/wk             |                |
| Beneficial Purposes               | More             |         |         |                  | Less           |
| Conditions on use                 | Less Restrictive |         |         | More Restrictive |                |





# Recycled water use in Oregon in 2021

- 142 Wastewater treatment plants
- 10.2 million gallons per day reused
- 6,678 acres of land irrigated

| Class of Recycled Water | Number of facilities |
|-------------------------|----------------------|
| Α                       | 10                   |
| В                       | 7                    |
| С                       | 58                   |
| D                       | 50                   |
| Non-disinfected         | 8                    |
| Industrial              | 14                   |
| Other                   | 1                    |





### Industrial water reuse in Oregon in 2020



- 53 facilities
- 6.9 billion gallons year
  - 26.7 million gallons per day reused
- Crop and landscape irrigation



# Oregon's Reuse Program

#### **2011:** Graywater regulations

Water associated with household use, such water from shower/baths, laundry, sinks, etc.

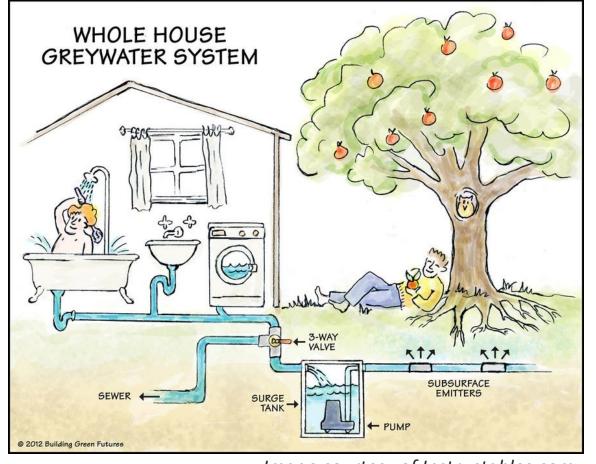


Image courtesy of Instructables.com



#### Recycled Water Program

- Reuse requirements in NPDES or WPCF permit
  - Recycled water use plan details water treatment, monitoring and management
  - Land Application identifies site specific requirements limitations & setbacks
    - Written by facility, reviewed by DEQ
      - Consult with OHA
    - Water right/registration by OWRD
      - Requires: consult with ODFW, DEQ permit, signed confirmation from DEQ
    - Abutting property owners notified
    - County review through Land Use Compatibility Statement



# Public engagement

- Start your outreach early!!
- Stick to the facts
- Keep it easy to understand
- There is a lot of misinformation on social media





