

Environmental Stewardship Committee Meeting Summary

March 2, 2023, 3:00 - 5:00 PM

JWC Water Treatment Plant Tour



Attendees: Allison Bergseng, Anthony Martin, Naim Ferris, Tina Chang, Mac Martin, Audrey O'Brien, Vinod Singh, Dacia Bakkum

Special Guest: KJ Lewis

Presenters: Jessica Dorsey, Amy Meaut, Malyhea Haghshenas, Chris Wilson

Absent: Allison Puch Cahuich, Fawn Bergen, Hannah Cruz, Jeff Pazdalski, Kieren Sikdar, Laura Trunk, Mia Hocking, Nina Carlson, Steve Callaway, Tasha Johnson, Tina Bailey, Troy Gagliano, Zuly Munoz

Welcome + Council Updates

Councilor Martin welcomed the group and asked for a round of introductions.

After the presentation and tour (description below), he shared information about a joint lawsuit filed against the state with a group of other Oregon cities that have concerns with the new "Climate-Friendly and Equitable Communities Rules" that were announced this year by the Oregon Department of Land Conservation and Development (DLCD). The City and Hillsboro City Council are not opposed to the purpose and outcome of the new rules, which seek to address climate change and housing insecurity, but do oppose the administrative burden the new rules will place on cities. Councilor Martin encouraged ESC members to reach out to him and/or other Councilors with questions or concerns about the new rules and/or lawsuit.

The City's Home Energy Score (HES) Program was adopted by City Council in July 2021 and went into effect in September 2021. More than 2,000 Hillsboro homes have been scored since the program began. The City offers free HES assessments for income qualified homeowners and renters with landlord approval. To date 17 income qualified HES assessments have been completed in partnership with Community Energy Project. Hillsboro currently has a 75% compliance rate for HES. To date, no fines have been issued.

Member Spotlight: Hillsboro Water

Hillsboro Water Department staff shared information about the Joint Water Commission (JWC), water conservation programs and incentives, and provided a tour of the Water Treatment Plant facility. Highlights from presentation and tour include:

Joint Water Commission (JWC) Overview

- The JWC is a partnership agency formed in 1976 between the cities of Beaverton, Forest Grove, Hillsboro, and the Tualatin Valley Water District
- The City of Hillsboro is the managing agency for the JWC and its employees
- Hillsboro wholesale water customers include City of Gaston (since 1941), City of Cornelius (since 1941), and the Laurelwood Academy Water Cooperative (since 1968)
- JWC customers include Westside Lutheran School (since 1983), and the City of North Plains (since 2005)
- The JWC Water Treatment Plant (WTP) runs 24 hours a day, 365 days a year and is currently the largest conventional water treatment plant in Oregon with a peak capacity of 85 million gallons of water per day (MGD). Of that, 41.75 MGD is sent to Hillsboro customers, 18.75 MGD goes to Beaverton, 14.5 MGD goes to Tualatin Valley Water District, and 10 MGD goes to Forest Grove.
- During the rainy months, the WTP pumps water from the Tualatin River to treat for drinking water. During the Summer months, when river flow decreases, the WTP begins releasing water from our stored water sources at Barney Reservoir & Hagg Lake.
- Raw water is taken from the Tualatin River (or Barney Reservoir and/or Hagg Lake) and taken through a series of steps to clean and purify the water before it reaches the tap including coagulation, flocculation, sedimentation, filtration, and disinfection.
- The Slow Sand Water Filtration Plant treats up to 3 MGD to provide water to Upper System residents within Washington County. Filtration occurs as raw water travels to a settling pond, then water percolates through a bed of fine sand. The top layer of the filter, known as the “Schmutzdecke”, is where most of the treatment occurs. This top layer is a community of organisms that naturally filter and trap contaminants. The water is then chlorinated, and a final pH is adjusted to reduce corrosion of lead before being sent to customers through the water distribution system.
- The Willamette Water Supply Project (OurReliableWater.org) is underway. When completed it will include water treatment plant capacity of 60 MGD (plant will be in Sherwood), approximately 30 miles of pipelines, and one initial storage reservoir (15 MGD capacity) to be built near Cooper Mountain Nature Park. The project allows for a diversified water portfolio as well as seismic resilient pipeline. Expected completion is 2026.

Water Conservation

Water Loss Audits: Background + Requirements

Historically, reported annual water loss was calculated by simply subtracting metered uses and other known unmetered uses from the total water produced and reported as the percentage and volume of ‘unaccounted-for’ water.

Many states require the American Water Works Association's free water audit software for annual audit reporting and a third-party validation of the audit. Use of the software is not required in Oregon but is recommended.

Water Loss vs. Non-Revenue Water

Sources of water loss include leaks, main breaks, and meter inaccuracy. In addition to water loss sources, other non-revenue water includes firefighting, water line flushing and Hometown Taps. Short term water loss priorities include creating a Standard Operation of Procedures (SOP) document for all water flushing, providing regular supply meter testing and prioritizing customer meter testing. Longer term water loss priorities include regular and accurate system import and export meter testing and maintenance.

Water Conservation Programs

The Hillsboro Water Department undertakes or offers numerous measures as part of its robust water conservation program. Promotion and funding are required by Oregon Water Resources Department and must be approved in a Water Management and Conservation Plan (WMCP) in order to access water right permits. The Conservation Program Includes: Residential Rebate Program, Industrial, Commercial, Institutional (ICI) Program, Educational Outreach, and Home Water Audits.

Residential Rebate Program

- High-Efficiency Toilet (HET) Rebate – up to **\$75** per toilet, with a limit of two toilets per household
- Washing Machine Rebates – **\$50** for Energy Star certified washing machines
- Weather-Based Irrigation Controller Rebate – up to **\$200** for WaterSense certified irrigation controllers
- Smart Water Meter Rebate – Up to **\$150** for a qualifying smart water meter

Customer Benefits of Smart Water Meters

- Track home water use 24/7 on a smartphone app
- Detects small leaks
- Gain real-time information on water consumption
- Set water usage goals and budgets for households
- Receive push notifications suspicious water activities
- Determine which appliances are using water

Industrial, Commercial, Institutional (ICI) Program

The ICI Program was developed to help non-residential customers improve water efficiency through larger scale water use audits and cost-share funding for water saving measures.

2022-2023 projects to date include funding for irrigation repairs and upgrades for the Minter Bridge HOA and the donation of 87 water efficient matched precipitation (MP) rotators to Sunburst HOA. MP rotator nozzles feature unique, multi-trajectory rotating streams that deliver water at a steady rate. This slower application rate allows water to gently soak in at rates that soils can absorb. Other projects include turfgrass removal, toilet replacements, irrigation audits, mulch, and water efficient plants.

Industrial, Commercial, Institutional (ICI) Future Staff Training

Water conservation staff will be attending the Mimir Water Training in April 2023 where they will gain additional information on tools, technical skills, and operational knowledge to reduce inefficient water use on residential and commercial properties. Training objectives include the ability to provide large commercial audits in-house and evaluate water efficiency of irrigation, cooling and building systems and knowledge on how to install ultrasonic clamp-on submeters.

Educational Outreach

Mad Science

Mad Science (<https://portland.madscience.org/>) provides live assembly programs titled “Where’s the Water Watson” and “What Do You Know About H₂O” to local elementary students. Mad Science has performed at four Hillsboro schools to date, reaching nearly 500 students. Additional shows have been scheduled in 2023.

Children’s Clean Water Festival

The Children’s Clean Water Festival will be in-person this year. The event will take place at Portland Community College’s Sylvania Campus on Tuesday, April 25. Four 4th grade classrooms from McKinney and Brookwood Elementary Schools were selected to attend this year. The virtual website created during the pandemic will remain available for those who are unable to attend in person. Volunteers are needed to help guide classes around the campus to make sure students successfully get from activity to activity. Please reach out to event volunteer coordinator Amy Meaut (Amy.Meaut@Hillsboro-Oregon.gov) for more information or visit CleanWaterFestival.org.

Annual Calendar Contest

Each year (for the last 17 years) the Water Department partners with local elementary schools to illustrate a water theme calendar. The 2023 theme “Go with the Flow”. 3,000 calendars are distributed to schools and City facilities. Calendars are available in English and Spanish. Other City departments have asked to create their own calendars so after this year, the Water Department will be transitioning to other outreach opportunities and projects with local students.

Home Water Audits

To date, 76 water audits have been completed. **Indoor water audits** include assessing the type of plumbing fixture and appliances that are installed, a review and explanation of the customer's water bill, supplying free high-efficiency showerheads and faucet aerators via the mail or delivery, and offering tips and resources for water conservation. **Outdoor water audits** include teaching customers how to use their water meter to check for leaks, reviewing home irrigation schedules, addressing broken sprinkler heads to prevent excessive runoff, and providing winterization information.

Hometown Tap

The Hometown Tap was designed and built by Hillsboro Water Department operators and is a sustainable water filling station, which includes spigots to refill water bottles with clean, high-quality local Hillsboro tap water. New seasonal Hometown Taps will be available at Shute Park and Jerry Willey Plaza.

Water Efficient Landscaping

The Hillsboro Water Department provided funding to establish a demonstration garden at the Jackson Bottom Wetlands Education Center and continues to provide funding for ongoing maintenance of the garden. The demonstration garden incorporates native plants, wildlife features, and water-wise techniques. The garden is located near the Education Center and is open to the public for viewing.

Member Announcements/Public Comment

- Next ESC meeting: Thursday, May 4, 3-5pm, location TBD
- All Partner Celebration: Thursday, June 9, 4-6pm, Hidden Creek Community Center