



Bull Run Dispatch

Newsletter of the Portland Water Bureau

Randy Leonard, Commissioner • David G. Shaff, Administrator

Upcoming Events!

Bull Run Watershed Tour

Friday, July 20
8:30 AM - 4:30 PM
Location: Bull Run Watershed
For more information and to register, call or email Jody Burlin at 503-823-7437; Jody.Burlin@ci.portland.or.us

13th Annual Columbia Slough Regatta

Sunday, July 29,
9:00 AM - 1:00 PM
Location: Multnomah County Drainage District #1, 1880 NE Elrod Drive, TriMet #10

Veterans Memorial Proposal

Tuesday, July 31
4:30 PM - 6:00 PM
Discussion of Veterans Memorial Proposal for Mt. Tabor Reservoir 6
Location: Mt. Tabor Presbyterian Church
5411 SE Belmont,
TriMet # 20, 15

Water Bureau Employee Picnic

September 9
3:00-6:30 PM
Location: Hazelwood HydroPark

An Unusual Event

We recently had a "first of its kind" event in the history of the Portland Water Bureau, at least in anyone's memory.

Last Monday, a computer that controls water levels in the Council Crest tank did not function properly. The tank emptied, and the mains near these homes lost water and experienced loss of pressure. Although we have had a similar circumstance elsewhere in our system before, this time the State of Oregon (Department of Human Services Drinking Water Program) directed the Water Bureau to ask affected customers to boil their drinking water to ensure that all state and federal health standards were maintained. Other properties in the vicinity experienced loss of water service or reduced water pressure but were not subject to the boil water notice because water remained in the mains while we quickly refilled the Council Crest Tank.

That evening, Water Bureau staff hand-delivered boil water notices to 24 homes near Council Crest in Portland's southwest hills. Along with the required boil water notice, we gave each family five gallons of bottled drinking water and took the time to answer questions from both affected customers and those who lived nearby but who weren't subject to the notice. Fortunately, we were able to deliver an end-of-boil water notice just 24 hours later, which reassured customers that their water was perfectly safe and clean. Although it was an inconvenience, and perhaps a bit unnerving, many of our customers responded with thanks and appreciation for the great customer service our staff delivered. They were also grateful and pleasantly surprised that we are making an adjustment to the water bill of every impacted household.

At the same time, the Water Control Center managed three main breaks in the city that required a call out of crews to respond. They were busy all night, ensuring that we had enough water coming into town, that we were sending it to the right places, and fielding hundreds of calls from customers who suddenly found themselves out of water or with low pressure on a warm summer evening due to the main repair work.

We have had our initial after-action meeting to discuss what went wrong, our response, and how we can improve upon it. We will also be talking more with the state Drinking Water Program staff about the impact of their requirement to issue a boil water notice and what it means for the future. No matter what directions those conversations take us, protecting public health and safety will always be our top priority.

We managed this difficult and challenging situation well. I appreciate the commitment to the hard work, professionalism and dedication to our customers that you demonstrated.


Administrator

Tank Vandalism



This month, Water Bureau public outreach staff met with more than 25 members of the Lents Neighborhood Association to get their input to a proposed project to install an eight-foot security fence around the Kelly Butte storage tank. The 10 million gallon drinking water tank is located on the bluff near SE Powell Boulevard and SE 99th Avenue where it has been the target for graffiti vandals.

The City has spent more than \$10,000 over the past year and a half repainting the tank that's often covered with expletive words and pictures. Coincidentally, an officer with the Police Bureau also attended the meeting to talk to neighbors about the growing problem of "tagging" buildings in their community.

Painting tanks to maintain them is part of the bureau's routine work; repainting the tanks due to tagging need not be.

*Tim Hall
Public Outreach*

The Seven Wonders of the Portland Water Bureau

Seven magnificent elements of our water system, each illustrating the ingenuity, foresight, craftsmanship, and stewardship of the Portland Water Bureau and our employees.

This list of Seven Wonders was selected from a popular vote by Water Bureau employees. Nominated elements had to meet the criteria of (1) man-made and (2) unique to the Portland water system.

#1 Bull Run Dam 1

Before the Bull Run reservoirs and well fields were built, the Water Bureau depended solely on "run of the river" stream flow at Headworks for its water supply. As the city's population grew, the run of the river was not enough.



In 1929 the bureau built Dam 1 as a storage facility in Bull Run, creating Reservoir 1 (also known as Lake Ben Morrow). Total storage capacity of Reservoir 1 is 9.9 billion gallons.

Hundreds of employees worked to build the dam.

#2 Thumper

The hydraulic pump affectionately known as "Thumper" is thought to be the oldest operating piece of city



equipment. Thumper was installed in 1894 in Pump House 1 at Washington Park. Thumper has faithfully pumped water from Reservoir 4 into the West Hills.

#3 Open Reservoirs

Distribution storage reservoirs at Mt. Tabor and Washington Parks receive water from the terminal storage reservoirs by gravity flow or pumping. This water then is delivered directly to customers.

The reservoirs range in size from 1,000 gallons to 10 million gallons. They are constructed of concrete or steel, and include ground-level reservoirs, standpipes, and elevated tanks.

With their picturesque structures and decorative wrought iron fences and lamp posts, the reservoirs are popular in the community.



#4 Conduits



Thirty miles of supply conduits carry water from the Bull Run Watershed into town. This critical element of our water supply and distribution is elegantly simple, flowing downhill by gravity. Continuous

inspection and maintenance is performed by highly skilled employees.

#5 Benson Bubblers

Simon Benson was a turn-of-the-century lumber baron, philanthropist and tee-



totaller. To provide fresh drinking water downtown - and discourage his workers from drinking alcohol in the middle of the day - Benson commissioned 20 elegant freshwater

drinking fountains, now known as the Benson Bubblers. Beer consumption in the city reportedly decreased 25 percent after the fountains were installed, and the water fountains still bubble invitingly on Portland's downtown streets.

#6 Groundwater Complex

The Portland Water Bureau's Columbia South Shore Well Field is the second largest water supply in Oregon after the Bull Run Watershed.

The Well Field consists of about 27 groundwater wells that pump water from three aquifers located in a five square mile area on the south shore of the Columbia River.



Development of the well field started in 1975. The wells began serving drinking water customers for the first time in the summer of 1985.

Groundwater wells supplement drinking water supply in summer and early fall as needed depending on weather. During drier than normal summers, the groundwater supply helps ensure that we have enough water for customers and also enough to release clean, cold water into the river when fish are spawning.

The Well Field is an emergency backup supply when the Bull Run water becomes unavailable. For example, four large storms in the last two decades have resulted in increased turbidity (suspended sediment) levels in the Bull Run reservoirs.

#7 Bull Run Dam 2

Bull Run Dam 2 was completed in 1962. Total storage capacity in Reservoir 2 is 6.8 billion gallons.

Below the dam on Reservoir 2 is the chlorination facility. The water isn't filtered, but disinfected in case of pathological bacteria that might be present.



Personnel CHANGES

New Hires:

Michael Johnson as
Engineering Tech II in
Engineering Services

Seasonal Maintenance
Workers In Maintenance
& Construction

Zachery Barckmann

Perry Gardner

Bryson Hampton

Lawrence Johnson

Dana Marquez

Micah Reafsnyder

Crystal Schwartz

Marina Sprinker

Sarah Szabo

Samuel Woodard

At the Nearest Tap: World's Best Water

By Spencer Heinz

July 5, 2007

The Oregonian

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Portland calls its drinking water the best in the world. Others might say the best is whichever's in their glass. Today we will try to experience the elusive flavors of Portland's through the taste buds of Mike Sheets.

He's an upbeat gentleman who manages the city Water Bureau program that answers public queries and who also once served on a water-flavor panel. He approaches the faucet. A shot patters into his cup, the end of a journey that started about four days before and 30 miles east of downtown Portland.

The water probably started as rainfall in a lake within the city's protected Bull Run watershed inside the Mount Hood National Forest. Then it spilled into a nearby reservoir, took a shot of chlorine, angled through a pipe wide enough for a man to stand, rippled some two-dozen miles to a reservoir on Powell Butte and another on Mount Tabor. Finally, it flowed into part of a 2,000-mile squiggle of mains that sent it beneath Northeast Tillamook Street, up a pipe, out of the spigot and into his paper cup.

"Can you smell the paper?" he asks. The time-consuming rigors of scientific tasting -- using unscented glass containers and specialized techniques -- are for another place and time. He's just pointing out the care that testing takes in a place with a goal:

"From forest to faucet," the bureau's mailers say these days, "the Portland Water Bureau delivers the best drinking water in the world."

To pursue that thought, Tricia Knoll, a public information officer for the

bureau, arrives with brochures and a glimpse of history.

"No body," she says, quoting reports of Gov. Sylvester Pennoyer's literally tasteless toast to Portland's Bull Run water on Jan. 2, 1895, the day the city's first gallons arrived by pipeline from Bull Run.

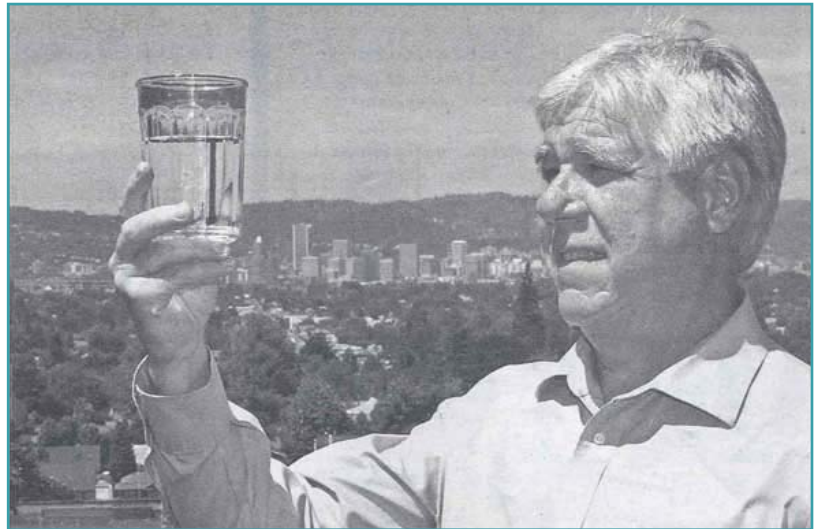
No body, no flavor. Exactly. Generally the less flavor water has, the fewer other things -- including minerals -- it has gathered on its run from sky to Earth to tongue. Given that, Portland remains one of the last few large U.S. cities to serve unfiltered water. In the mid-1980s, one century later, Mayor Frank Ivancie promoted that fairly neutral flavor by seeing it bottled and calling it the nation's best.

"Bull Run Water," Ivancie proclaimed, "will prevail."

A half-dozen years later, in 1990 and 1991, Sheets was among a panel of employees and residents who'd volunteered to learn a taste-testing technique known as Flavor Profile Analysis. They learned to detect and describe shadings along a spectrum of flavors and odors as part of testing treatment options. In the fashion of quality controllers in the beer and wine industries, they met weekly around small "flavor wheels" with pie-shaped sectors that went from "earthy/musty/moldy" through "fishy" and "salty" and "sweet."

For old times' sake, Sheets takes a sip. So does Knoll.

"Maybe a little sour," she says, and he agrees. This, they add, does not automatically reflect on the source itself. They say it's spent a weekend in the pipes inside this building, a meeting room at the bureau's Interstate plant; and that the taste of Bull Run water usually comes not from the lake itself, but from the temperatures, required treatments and pipes in place where the water is served. They note that the city occasionally augments its Bull Run



"Bull Run Water will prevail," proclaimed former Mayor Frank Ivancie. Here, Mike Sheets takes a look at a glass of the good stuff.

with drinking water from the city's Columbia South Shore Well Field. For taste, they say, it's best to let any tap water flow until it runs clear and cool.

They speak of Portland's continuing legal challenge of a new federal rule requiring some cities, including those that serve unfiltered water, to introduce more treatments. The issue is complex, but generally Portland seeks less costly ways of complying. Oral arguments have been set for this fall.

They also point out the city's recent achievement -- winner, last spring, of the American Water Works Association's Best-Tasting Water Competition for the Northwest Oregon Subsection.

Roll out the flavor wheel.

Subsection by subsection, global conquest starts at home.