# WATER

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from Business Oregon, saw the proposal as a "positive job-making project."

"The DEQ was glad to see John Day looking at innovative ways to handle wastewater management," Allison said.

Allison and Lohan said the DEQ had well developed standards compared to other states, which showed that Oregon is prepared to see more wastewater reclamation plants built

## An aging plant

John Day's wastewater collection system began in 1948, with major additions in 1970 and 1978. Since then, it has been expanded several times and currently handles up to 240,000 gallons per day, or 87.6 million gallons per year.

The city contracted with Anderson-Perry in 2008 to develop a new wastewater facilities plan, and the city council approved construction of a new treatment plant at the same site after reviewing the plan.

Anderson-Perry estimated the cost of the new plant in 2011 at about \$8.29 million, but according to City Manager Nick Green's city council memo five years later, several assumptions about the plan no longer applied. The city's population had declined, and emerging technology warranted an update to the plan, he said. On top of that, the DEQ did not issue a 10-year discharge permit for the existing wastewater treatment plant.

The plant "may be unable to meet future permit requirements for biochemical oxygen demand, total suspended solids and chlorine residuals," Green said in an Oct. 14, 2016, application for a state feasibility study grant. "Therefore, water that is allowed to percolate adjacent to the John Day River has the potential at times to degrade the water quality of the river.'

The city was awarded the \$50,000 grant, which will help fund a feasibility study estimated to cost about \$110,000.

### New type of treatment

Allison said a rough figure he'd heard for a new John Day waste-



A cutaway diagram from Sustainable Water of Richmond, Virginia, of a facility with four reactors using plants to reclaim wastewater.

water treatment plant was around \$10 million. A more exact figure depended upon what level of treatment was expected and how the reclaimed water would be used, he said.

estimated that 10,000-square-foot facility could handle John Day's needs, with much of it enclosed in glass. Wastewater would run from one "reactor" to another - opentopped tanks with a plant rack on top. Wastewater to be treated would only contact the roots of the

Each reactor would be different, and the building would resemble a botanical garden. Sustainable Water's facilities have attracted more than a thousand tours, Allison said.

Among the plants that would be grown in the reactors include the umbrella plant (cyperus alternifolius), lilies from the canna species, taro (colocasia esculenta) and elephant ear (alocasia odora), Lohan said. These plants are not for consumption, but they require monthly harvesting as they grow quickly,

Wastewater would first encounter a mechanical self-cleaning screen to remove nonfecal solids and then go to two outdoor reactors. The partially treated water would then go to two reactors in the greenhouse portion of the plant, followed by filtration to remove bacterial biomass that had accumulated in the process.

Lastly, devoid of nutrients, the clean discharge water would be disinfected in a two-step process by ultraviolet light and chlorine to ensure no regrowth of pathogens, Lohan said.

The treatment plant would be completely automated and controlled using internet-based software, Allison said. John Day's state-certified treatment plant operator could run the plant, he said.

"The new plant will have less overall operational costs than the current plant, where crews are trying to maintain aging equipment," Allison said.

### Reclaimed water uses

While reclaimed water can be used to cool the treatment plant in summer, heat from the incoming wastewater would be used to warm the facility in winter. In addition to a generator for emergencies, the plant would have backup electric or gas-fired heaters to keep the plant warm on cold winter days.

But some demand for reclaimed water will cease during winter, including irrigation for farms or parkland and industrial uses from businesses such as Malheur Lumber. As a result, a storage reservoir might be needed to hold treated water in winter. A ballpark figure of 20 acres 7-feet deep was mentioned at the city council's Nov. 14 meeting.

There are several classes of reclaimed water, but producing the highest, Class A, would provide the most options for reuse, Moore

Class A water would be the bare minimum for use in a greenhouse growing produce for human consumption, Lohan told the Eagle.

The majority of use for reclaimed water is industrial," Lo-

The city will look for long-term users, Green told the city council. With all the timber mill closures, Grant County has lost a lot of industrial demand, he said.

#### **Human health risks**

Potential contaminants in reclaimed water include microbial pathogens, heavy metals and "contaminants of emerging concern" trace constituents from household products such as caffeine, insect repellent or cleaning chemicals, from personal use products such as antibacterial soap and toothpaste and from pharmaceuticals such as antibiotics.

A 2012 study by the National Research Council found that the risk of exposure to certain microbial or chemical contaminants from drinking reclaimed water did not appear to be any higher than the risk found in some municipal drinking water treatment plants.

Allison noted that drinking water systems in many U.S. cities routinely use river water downstream from another city's wastewater treatment plant's discharge pipe. In any case, John Day has no plans to use its reclaimed water for drinking water.

Water quality sampling is conducted five times a week for Class A water, Allison told the Eagle. But design of the John Day facility will depend upon the big picture, and what kinds of uses can be found for the city's reclaimed water.

"Part of our challenge is to look at the project holistically what are the most economical first steps?" Allison said.

Lohan said it was possible ground-breaking for the new plant could take place in 2020-2021, and the plant could complete commissioning and be fully operational by 2022. At that point, the current treatment plant could be shut

### **KIOSK**

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websites that provide weather, traffic and agency information. The idea of the kiosk originated with former Forest Service employee Cameron Sanders, according to a Forest Service press re-

"Sanders' efforts played a crucial role in moving this project forward and coordinating with the chamber during the early stages of the project," the press release said.

Sanders, who no longer works with the Forest Service, told the Eagle he developed the kiosk and applied for and secured a grant for it. He said he was happy to see the kiosk up and running.

"I worked on a national pilot program for digital kiosks for the Park Service and the Forest Service for years across the country and was particularly proud of this model," he

The Blue Mountain Ranger District purchased the \$7,149 kiosk using a portion of funds from a diversity and inclusion grant provided by the regional office in Portland, Malheur National Forest spokesman Mike Stearly told the Eagle. The kiosk was manufactured by I&E Co., which produces a wide range of automation products, including All-in-One Touch stations and kiosks.

Stearly said, although the John Day kiosk has some unique aspects, a variety of similar kiosks are available to Forest Service visitors across the Pacific Northwest and the nation. 'We have made it a priority to try

and find ways to share information, and with this kiosk we are hoping that we will reach more people within our community and our visitors," Blue Mountain District Ranger Dave Halemeier said. "We look forward to seeing how this develops." Future plans include providing

links on the kiosk screen to the chamber's website and Facebook page to keep visitors informed about community events and attractions. The Forest Service is also considering selling maps at the chamber office.

Former Chamber President Jerry Franklin noted that the convenient and visible location of the chamber's office on Main Street will benefit visitors and residents.

"This chamber is looking forward to a long-term relationship with the forest and the valuable assets this project will provide," he said.

# **PATROL**

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with \$15,000 already budgeted by the sheriff's office for rescue coordinator, a posiforest patrol, \$5,000 from an Oregon State Snowmobile Association grant and \$7,000 from the Forest Service for forest patrols.

That last figure was not correct, Beverlin told the Eagle. The Forest Service had agreed to provide \$6,000 to the sheriff's office for assisting with the Rainbow Gathering this past summer.

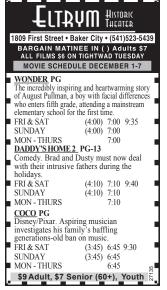
Myers told the Eagle that after the meeting Mobley spoke to Capt. Bob Field, a Forest Service law enforcement official based in Pendleton, and was told that the \$6,000 in funding for the Rainbow Gathering still existed and was earmarked for Grant County.

But Beverlin also told the court that the Forest Service contract with the sheriff's office terminates at the end of the

"There's been no talk about extending the contract because the Rainbow event is over," he told the court.

Beverlin told the Eagle that finding Forest Service funding for a Grant County forest patrol deputy may not be easy, especially in the near term because budgets have already been completed.

'We're already working on our fiscal year 2019 budget," he said.



# Request tabled

Mobley told the court the forest patrol deputy also would serve as the search and tion he currently holds. The part-time deputy would be responsible for handling reimbursements as well as all search and rescue training and documentation, he said.

The sheriff's office would initially advertise the position in-house, Mobley said, and the person hired to fill the position would undergo the same level of training expected of a full-time deputy.

Mobley, who's served as undersheriff for about two years, didn't respond to the issues raised by Beverlin.

"I can't speak to things that happened before I came on," he said

Commissioner Boyd Britton thanked Mobley for "trying to bridge a big gap" but suggested approval of the request would be "premature

Myers and Commissioner

Jim Hamsher also thanked Mobley for his request.

"Kudos to Zach for getting Sheriff Palmer to agree on this," Myers said.

Frances Preston asked the court to disregard any politics brought up at the meeting and focus on the request as proposed by Mobley.

Billy Jo George called some of the comments about "overly Sheriff Palmer harsh."

"To say that he does not participate with the Forest Service is a stretch," she said.

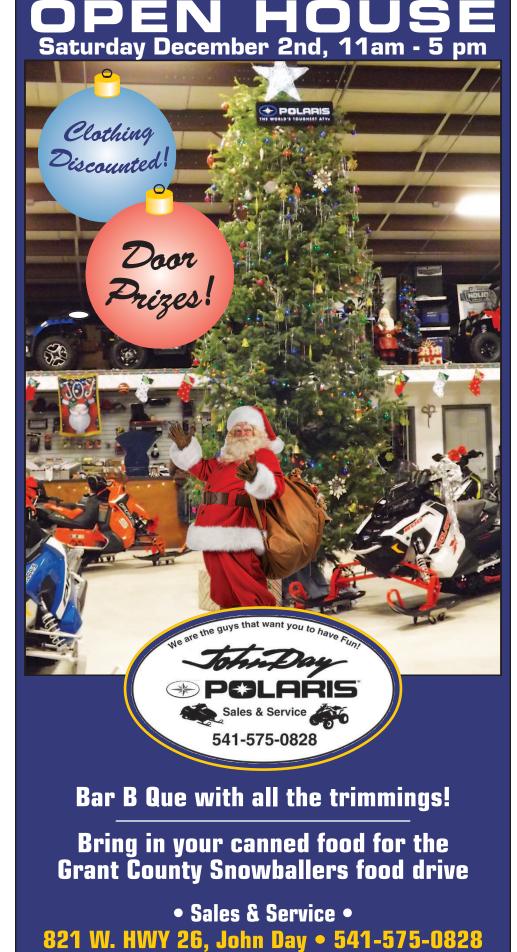
Jim Sproul told the court that Mobley represented the sheriff's office and politics should not be introduced into this discussion.

Beverlin said he appreciated Mobley's working with Field and hoped that the foundation of this interagency cooperation would grow.

Myers agreed with Britton that a decision on the matter would be premature, and the court unanimously tabled Mobley's request.







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