

Cannon Beach to combat bacteria

High readings at outfalls

By **BRENNA VISSER**
The Daily Astorian

CANNON BEACH — Ultraviolet light may be the answer to addressing high bacteria readings at some Cannon Beach outfalls.

After almost 10 years of sporadic high readings, the city hired an engineering firm to explore ways to redesign the Gower Street and Chisana Creek outfalls to reduce bacteria readings in the water.

This summer saw high readings through the Oregon Beach Monitoring Program and one health advisory issued for the beach. It's an issue that has drawn ire from environmental groups and perplexed the city for years, given that readings never appeared to have a pattern other than spiking after heavy large rains.

This year, the city again started taking regular water samples from as far east as the Ecola Creek Forest Reserve to the beach to create a baseline, Public Works Director Karen La Bonte said, then purchased a DNA testing tool to confirm whether the bacteria was coming from human waste. All results came back negative except one, which the city attributed to waste going into a drainage ditch from a nearby homeless camp.

'IT'S A TOP PRIORITY AND WE ARE GOING TO DO EVERYTHING WE CAN TO ADDRESS IT. ... IT'S TOO IMPORTANT'

Karen La Bonte | public works director

"We know now it's not human feces, which means there's no infiltration issue from our sewer," La Bonte said. "It's a matter of the bacteria from the pipes."

With human sources ruled out, the city believes bacteria from animal waste and fungi are building up inside the pipes, a majority of which are underground. Engineers are looking at installing ultraviolet light filters at the outfalls, which would kill the bacteria before it goes out to the beach.

The other option would be to open up the pipes and let the stream run through an open system, exposing the runoff to sunlight and accomplishing the same goal.

"We are not as concerned about animal feces as much as human, but that doesn't address the fact we're getting sporadic high readings," La Bonte said. "It's still causing harmful bacteria in these areas where dogs, kids like to play around."

Ingesting bacteria-contaminated water can result in illness, according to the Oregon Health Authority.

While installing ultraviolet light filters would be ideal, engineers are studying whether it's a viable option with the

See Bacteria, Page A7

Landfill capped in place



Photos by Colin Murphey/The Daily Astorian

The Tongue Point Naval Air Station Landfill is just south of the industrial docks owned by Hyak Maritime.

Former Navy site at Tongue Point

By **EDWARD STRATTON**
The Daily Astorian

Just south of the industrial docks at North Tongue Point, behind locked gates, is a vegetated hill filled with liquid and solid waste from mothballed Navy ships, all capped in place in perpetuity.

After more than a decade of cleanup, the U.S. Army Corps of Engineers, the state Department of Environmental Quality and the Department of State Lands have signed an agreement to keep the former Tongue Point Naval Air Station Landfill in passive restoration for the foreseeable future.

Clatsop County originally deeded the Department of Defense land in 1921 for a submarine and destroyer base that never became fully active. The tidal flats around the island were filled in using dredge spoils from the Columbia River before World War II for conversion into the Tongue Point Naval Air Station, which eventually grew to encompass 840 acres.

At the south end of the base, near the mouth of Mill Creek, was a landfill operated by the military until the naval air station was deactivated in 1962. The property was transferred to the state in 1980. Investigation of a cleanup began in 1992 after the discovery of groundwater contaminated with heavy metals and PCBs above limits for safe drinking water.

The site included an estimated 45,000 gallons of oil, fuel, sludge,



The Army Corps of Engineers, using money allocated by Congress for addressing former defense sites, oversaw the cleanup of the former Tongue Point Naval Air Station Landfill.

paints, solvents and other ground contaminants while maintaining and mothballing a fleet of ships after the war. Over the years, it has also taken in metal, wood, building, machine shop and other solid wastes, along with anything from large appliances to dinnerware. The Corps of Engineers was brought on to oversee cleanup of the site.

Cap in place

The Corps and the state eventually settled on a plan to cap the pollution in place, prevent any leaks and restrict access to the site. Over the past decade, contractors for the Corps excavated much of the waste at the landfill and concentrated it into the middle of the property. The shore around the landfill was restored with more than 20,000 cubic yards of new soil and armored

riprap to prevent erosion.

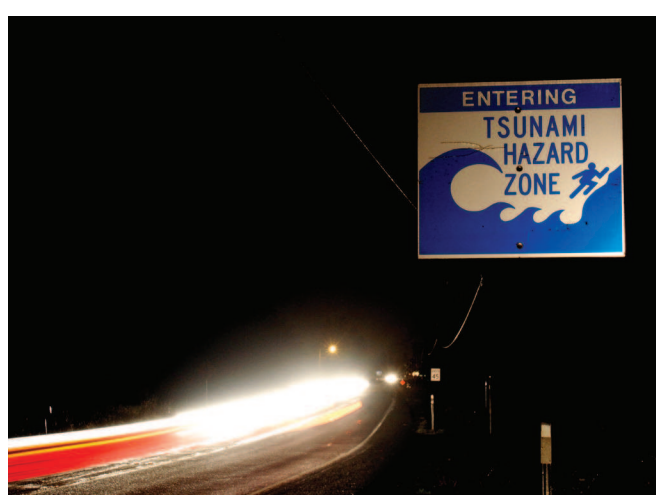
A protective clay wall was built around the landfill, along with a cap over the contaminated soils. A collection of pipes was installed to prevent gas buildup underground, along with monitoring wells.

A series of trenches and sumps had been built into the landfill to collect contaminated liquids and separate them for offsite disposal. The system was designed to recover about one-quarter of the contaminated liquids at the site over the last decade, but gathered less than 1,300 gallons before being removed.

The cost of the cleanup is estimated at \$810,000, funded by Congress through funds the Corps uses to clean up former defense sites. Operation and

See Landfill, Page A5

Oregon gets a new earthquake playbook



AP Photo/Don Ryan

The state has a new playbook for preparing and responding to a major earthquake that dictates what should be tackled over time versus a list of tasks to get done.

State prepares for the worst

By **BEN BOTKIN**
Statesman Journal

SALEM — Oregon has a new playbook for preparing and responding to a major earthquake that dictates what should be tackled over time versus a list of tasks to get done.

The playbook provides a two-week blueprint for the state's response and expectations for prioritizing Oregon's recovery from what would be the deadliest natu-

ral disaster in the U.S.

Oregon faces the threat of a 9.0 magnitude earthquake and tsunami that would hit the 700-mile Cascadia Subduction Zone, rippling from the coastal counties and impacting much of the state and neighboring Washington.

Emergency planners estimate coastal areas would have as little as 15 minutes notice to escape an incoming tsunami, and as many as 25,000 people could die. About a million Oregonians could be impacted in other ways: needing shelter, food and medication while waiting for help.

To prepare for the worst-case scenario, Oregon's Office of Emergency Management has updated and revised its response plan, a 100-page document called the Cascadia Playbook.

Times for responding and recovering are a key change from two previous editions.

Emergency planners have laid out steps they would take after an earthquake based on intervals of time: the first hour, the first six hours, the first 12 hours and beyond.

The shift to focus on time comes after the 2016 Cascadia Rising exercise, a

See Playbook, Page A7

