

Investigation: 'Every animal has a different story to tell'

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Another whale caused a stir when Chandler and volunteers transported a dead orca to Fort Stevens State Park for a necropsy.

"I've never seen so many rubbernecking people," Chandler said.

But when the truck driver hauling the whale stopped for a bathroom break in Warrenton, it really got some attention.

"All these people come running out of Buoy 9, Is it Willy? Are you going to free him? Is he alive?" It's hilarious," Chandler said. "Those are moments you don't forget."

A chance to recover

Many of the calls Chandler receives pertain to live animals on the beach. He emphasizes keeping people away from animals so that the animals have a chance to recover or letting nature take its course.

"I'm not a big believer in rehab," Chandler said. "I think Darwin is right. Survival of the fittest."

There is a misconception that marine mammals like seals and sea lions don't belong on land and must be sick or injured if they're out of the water, Chandler said. These animals actually may use the shore to rest, molt or recover from injury or illness.

"We had a problem where people would see seal pups on the beach and they would actually bring them into us," Boothe said. "Like 'save it!' and it was like 'Oh, actually, you need to put it back right where it was.'"

The harbor seal pups sometimes wait on land for their mothers to return and collect them. The pups are dependent on their mothers for about a month. The mother seal must perceive the area as safe before returning, so people and domestic animals have to stay away.

"We don't have those problems anymore. Very rarely do we have someone bring a seal in, just because everybody's more aware," Chandler said. "And they're all well-meaning people that do these things they shouldn't do because they want to help the animal. And then once they're aware that that's the process the animal goes through ... the best thing you can do is leave them alone, they actually tell other people, so it works."

They post signs around pinnipeds warning humans, and their pets, to stay away and leave the animals undisturbed. Marine mammals can also transmit some diseases, like leptospirosis, a bacterial disease that can cause kidney failure, to humans and domestic animals. So staying at least 50 feet away is safer for the marine mammals and their terrestrial counterparts.

After receiving reports of stranded animals, Chandler must make a determination on how to respond. If the animal is sick or injured, he has to make a choice of whether to euthanize the animal or wait and see if the



People stop and watch as Tiffany Boothe, Seaside Aquarium's administrative assistant, right, and research assistant Dalin D'Alessandro, left, collect a feces sample from a sea lion corpse.

animal will recover. Usually, they wait.

"People get — sometimes get — upset with us for not putting animals down, too," Boothe said. "We don't because you can't know whether or not an animal's going to make it, and that's not really our call to make. There are so many animals that I've seen that I'm like, 'that animal's going to be dead the next day, he's horrible.' And then they'll leave the beach and we don't see them again."

There are no rehabilitation centers for marine mammals in the Northwest.

"I've seen animals come back from amazing things," Chandler said. That includes shark bites and bouts of disease.

One group, the elephant seals, can appear to be in the process of dying while periodically undergoing a natural process called "catastrophic molt," replacing their old skin and hair. Chandler said there have been instances of these animals being unnecessarily euthanized during the process because they seemed to be in so much pain.

"The process of molting that they go through is horrible," Chandler said. Horrible, and natural. "They smell, they stink."

But sometimes, the animals really are in trouble and do not recover.

"We had a live whale wash ashore, right out in front of the Turnaround during the last phase of the volleyball tournament, and it was hot, and so you had just tons of people on the beach and you had this live beaked whale thrashing in the surf," Boothe said. "But the beaked whale was already dying, like he was coming in because he was dying, so he was doing all these death throes and thrashes, and then you had a hundred to 200 people in the water with this



Seaside Aquarium Manager Keith Chandler watches as Tiffany Boothe, the administrative assistant at the Seaside Aquarium, and PSU research assistant Dalin D'Alessandro, perform a necropsy on a sea lion corpse that washed ashore on a Seaside beach.

animal trying to push it back in."

"It was amazing that anybody didn't get killed," Chandler said.

Getting people out of the water and out of danger was a priority. There was nothing that could be done for the whale.

Not a fan of necropsies

It wasn't the worst thing he'd ever smelled on the job, but Chandler still tried to stand upwind of a decaying Steller sea lion corpse while Boothe and Duffield's research assistant, Dalin D'Alessandro, got wrist-deep in the animal's body cavity.

Steller sea lions are listed as endangered in their western population, but not their eastern population, which enjoys a range from southeast Alaska to Northern California. Two pickup trucks flanked the necropsy site on the Seaside beach, just above the tide line with a few hours to go until the water reached them. An occasional beachgoer passed by — mostly upwind and away from the dead sea lion.

Maps: 'We want to be able to head this off before a map is produced'

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The latest round of work represents Phase 2 in an ongoing effort to show FEMA the errors of its map-making ways — namely, that FEMA's estimates regarding the wave runup and base flood elevation for the 100-year flood along the Columbia River are based on flawed modeling and overstate the flood risk of North Coast communities.

"We want to be able to head this off before a map is produced," Warrenton Mayor Mark Kujala said. "This is the opportunity to make changes and modifications at this stage, and if we can't get it done now, then we actually have to appeal the maps, and we don't want to get to that point."

Basically, Phase 1 involved reconstructing FEMA's model and pointing out issues with it, and Phase 2 will involve showing FEMA how it may change its methodology to resolve those issues.

As in Phase 1 — which didn't include the Port of Astoria or Diking District No. 9 — Warrenton and the other

participating agencies are consulting with Coast & Harbor Engineering, a firm based in Edmonds, Wash.

Science on their side

After Coast & Harbor reviewed FEMA's work, FEMA concluded "a lot of the issues that we had found were, in fact, legitimate," said Collin Stelzig, the lead engineer for the city of Warrenton, at an Astoria City Council meeting.

FEMA, Stelzig said, seems to agree with Coast & Harbor's assessment that more precise data is needed to predict the behavior of the Columbia River and map flood areas in a way that "will represent our coast the way that we know it is."

"We've got the science on our side, and that's why FEMA's really buying in right now and saying, 'Well, you're probably right,'" he said. Stelzig added that "it's made quite an impact with FEMA, having the county and the city



Mark Kujala

of Astoria involved with the process."

In fact, FEMA asked the parties to do the additional work because the financially strapped agency cannot afford to do it themselves, Warrenton City Manager Kurt Fritsch said. "We're doing their work for

them," he said.

Whereas the first phase cost approximately \$20,000, Phase 2 will cost up to \$27,700. Diking District No. 9 — a rural diking district on the east side of the Lewis and Clark River — will contribute \$500; the other four agencies will split the remaining \$27,200.

Kujala extended his gratitude to Warrenton's partners for taking the extra measure to help Clatsop County residents and businesses avoid the burden of extraordinary hikes in flood insurance rates.

"It is important for insurance payers throughout the county to get this right, and that's what we're determined to do," he said.

Joshua Bessex/The Daily Astorian

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grow on the corpse and the level of decay, D'Alessandro estimated the sea lion had been dead between three weeks and a month before washing ashore.

Boothe and D'Alessandro did what they could to determine the subadult male sea lion's fate at the scene. Their hands gloved, the two women searched for parasites, tumors and hemorrhages. The intestines seemed twisted — a sign of trauma.

Most of the tissues were too far gone to collect, but they did manage to get a stool sample and the sea lion's stomach.

After the beach necropsies, D'Alessandro must make the return drive to Portland.

"Usually on the drive home you're catching those random whiffs," she said. The contents of her pickup truck bed appear innocuous, squirreled away in coolers or wrapped in plastic bags. No hints to fellow drivers that science has hit the road.

"Until they're like, 'What's that smell?'" D'Alessandro said.

What happens to the carcass depends on the locality. Some

places like them taken out of the way or buried, while others leave the animal where it washed up. Chandler and Boothe personally like leaving the dead animals out where they can be recycled back into the food chain.

"There are a lot of eagles out here that help clean these animals up," Chandler said.

In the lab

At Portland State University, Duffield and her team process information from the necropsies.

"Every animal has a different story to tell," she said.

Duffield specializes in genetics of marine mammals and teaches classes on marine mammals at PSU. Coordinating with the stranding network is an extension of her own interest.

"We're trying really hard to track potential diseases that can be transmitted to domestic animals or to humans," she said. She estimates they handle between 140 and 190 cases annually. This year has been busy.

The university is responsible for the necropsies. They collect all they can from the animals; in some cases, they bring the whole animal back to Portland. They look for bullets, pellets and other things that can give clues as to how the animals died. Often, they save the skeletons to evaluate what kind of bones show damage.

The bones are also used in university museum exhibits and student instruction.

With her finger to the pulse of marine mammal strandings, Duffield has noticed a high incidence of sea lion shootings in the region.

"One of our real problems is people don't shoot them nicely," she said. "We see animals that are gut shot, their intestines all twisted."

Shooting the animals is illegal, Duffield said, but if people are going to do it, they should at least be kind.

Fishermen and some conservationists have complained that sea lions are competing for salmon. But a lot of the animals Duffield sees do not even have salmon in their stomachs, she said.

"It just makes me really mad," she said.



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On August 3, 2015, the Astoria City Council approved the following recommendations for Voluntary Water Conservation:

Check faucets and pipes for leaks

A small drip from a worn faucet washer can waste 20 gallons of water per day. Larger leaks can waste hundreds of gallons.

Avoid using the toilet as an ashtray or wastebasket

Every time you flush a cigarette butt, facial tissue or other small bit of trash, five to seven gallons of water is wasted.

Check your toilets for leaks

Place a little food coloring in your toilet tank. If, without flushing, the color begins to appear in the bowl within 30 minutes, you have a leak that should be repaired. Most replacement parts are inexpensive and easy to install.

Install water-saving shower heads, low-flow faucet aerators

Inexpensive water-saving low-flow shower heads or restrictors are easy for the homeowner to install. Also, long, showers can use five to ten gallons every unneeded minute.

Insulate your hot water pipes

It is easy and inexpensive to insulate your hot water pipes with pre-slit foam pipe insulation. You will get hot water faster plus avoid wasting water while it heats up.

Rinse your razor in the sink

Fill the sink with a few inches of warm water. This will rinse your razor just as well as running water, with far less waste of water.

Use your dishwasher and clothes washer for only full loads

Automatic dishwashers and clothes washers should be fully loaded for optimum water conservation. Most makers of dishwashing soap recommend not pre-rinsing dishes which is a big water savings. With clothes washers, avoid the permanent press cycle, which uses an added 20 liters (5 gallons) for the extra rinse. For partial loads, remember to adjust water levels to match the size of the load. Minimize use of kitchen sink garbage disposal units. In-sink 'disposals' require significant amounts of water in order to operate properly.

Consider keeping a bottle of drinking water in the fridge

Running tap water to cool it off for drinking water can be wasteful. Store drinking water in the fridge in a safe drinking bottle.

Consider letting your lawn go dormant

During dry spells, you can stop watering altogether and the lawn will go dormant. Once cooler weather arrives, the morning dew and rainfall will bring the lawn back to its usual vigor. This may result in a brown summer lawn, but it saves a significant amount of water.

Avoid letting the hose run while washing your car and using a broom instead of a hose

Clean the car using a pail of soapy water. Use the hose with a control nozzle for rinsing - this simple practice can save as much as 150 gallons when washing a car. Use a broom instead of a hose to clean sidewalks and driveways.