

## IN BRIEF

## ODOT plan could fund improvements to Highway 101

SEASIDE — The Oregon Department of Transportation's capital improvement program could bring several important projects to Seaside.

- Nearly \$8 million for construction of a new center turn lane and enhanced bicycle and pedestrian facilities along Avenue A to Avenue K along U.S. Highway 101.

- \$1.2 million for repaving on U.S. Highway 26 from Necanicum Junction to Jewell Junction.

- \$360,000 to rehabilitate and replace five small culverts and one large culvert along Highway 101.

The projects are under review for the Statewide Transportation Improvement Program, also known as the STIP, from 2021 to 2024.

— *The Astorian*

## State Route 4 closed by landslide

SKAMOKAWA, Wash. — State Route 4 between Naselle and Longview remains closed following a significant landslide on Thursday. It is unlikely to open sooner than next week.

The slide near KM Mountain's eastern foot followed several days of intense rainfall, including 7 inches during one 24-hour period. The deluge resulted in significant flooding, several other landslides and a power outage caused by downed trees.

The highway is closed to all but local traffic from milepost 19 near Shannon Road to milepost 26 near Mullen Road.

— *Chinook Observer*

## Washington state bill would beef up label law

OLYMPIA, Wash. — Makers of veggie burgers, soy sausages and other vegetarian or vegan meat substitutes would have to prominently label packages with a disclaimer that their products sold in Washington state have no meat under legislation sponsored by state Sen. Judy Warnick.

Senate Bill 6329 is similar to legislation proposed or passed in other states to regulate the advertising of plant-based products that use terms associated with meat. Warnick, R-Moses Lake, said she doesn't want consumers to be misled.

— *Capital Press*

## ON THE RECORD

### Rape

- Allen J. Chetwood, 19, of Seaview, Washington, was arrested Sunday at Young River Falls in Astoria for rape in the third degree.

### Assault

- Johnny Theodore Loke, Jr., 48, of Seaside, was indicted Friday for assault in the second degree, unlawful use of a weapon and unlawful possession of methamphetamine.

- Levi Trent Smith, 32, was arrested Saturday on W. Marine Drive in Astoria for assaulting a public safety officer, harassment, disorderly conduct and resisting arrest.

### Theft

- Kayla Marie Sandoval, 27, was arrested Saturday in Seaside for theft in the second degree.

- Frank Kenneth Nimz, 38, was arrested Thursday at the Warrenton Police Department for theft in the second

degree, criminal trespass in the first degree and criminal mischief in the third degree.

### Reckless

#### endangerment

- Richard S. Smith, 54, of Astoria, was indicted Friday on two counts of recklessly endangering another person, unauthorized use of a vehicle, fleeing or attempting to elude a police officer and reckless driving.

### Criminal mischief

- Michael Meeuwesen, 28, of Warrenton, was arrested Friday on N.W. Gardenia Avenue in Warrenton for criminal mischief in the second degree.

### DUII

- James Edward Blaylock, 68, of Astoria, was arrested Sunday on 31st Street and Marine Drive in Astoria for driving under the influence of intoxicants. His blood alcohol content was 0.12%.

## PUBLIC MEETINGS

### TUESDAY

**Seaside Community Center Commission**, 10 a.m., Bob Chisholm Community Center, 1225 Avenue A.

**Clatsop County Human Services Advisory Council**, 4 to 5:30 p.m., Room 430, 800 Exchange St., Astoria.

**Astoria Library Board**, 5:30 p.m., Flag Room, 450 10th St.

**Knappa School Board**, 5:30 p.m., Knappa High School Library, 41535 Old U.S. Highway 30

**Seaside Airport Advisory Committee**, 6 p.m., City Hall, 989 Broadway.

**Warrenton City Commission**, 6 p.m., City Hall, 225 S. Main Ave.

**Astoria Planning Commission**, 6:30 p.m., City Hall, 1095 Duane St.

### THURSDAY

**Clatsop County Recreational Lands Planning and Advisory Committee**, 1 to 3 p.m., fourth floor, 800 Exchange St., Astoria.

# NEW HEIGHTS



The public had an opportunity on Saturday to check out the Seaside Fire Department's latest addition — a nearly \$1.2 million tractor-drawn aerial quint with a 100-foot ladder, designed to reach the city's tallest buildings.

R.J. Marx/The Astorian

# Ocean acidification damages crabs

## New study released on West Coast conditions

By HAL BERNTON  
*The Seattle Times*

Ocean acidification is damaging the shells of young Dungeness crab in the Northwest, an impact that scientists did not expect until much later this century, according to new research.

A study released this week in the journal *Science of the Total Environment* is based on a 2016 survey of Oregon, Washington state and British Columbia coastal waters that examined larval Dungeness. The findings add to the concerns about the future of Dungeness crab as atmospheric carbon dioxide — on the rise due to fossil-fuel combustion — is absorbed by the Pacific Ocean and increases acidification.

"If the crabs are affected already, we really need to make sure we start to pay attention to various components of the food chain before it is too late," said Nina Bednarsek, the lead author among 13 contributing scientists. The study was funded by the National Oceanic and Atmospheric Administration.

Dungeness crab sustains West Coast commercial seafood harvests typically worth more than \$200 million annually, and are a mainstay for tribal and recreational crabbers. They have thrived in coastal waters that in recent years



Maddie Meyer/The Seattle Times

**Dungeness crab sustains West Coast commercial seafood harvests typically worth more than \$200 million annually.**

have been found to have hot spots of ocean acidification. This is due to periodic strong upwellings of deeper ocean water rich in carbon dioxide and surface waters that also have absorbed gas released by fossil-fuel combustion and other human activity.

"This makes our region very unique," said Richard Feely, a senior scientist at NOAA's Pacific Marine Environmental Laboratory, who was one of the co-authors of the new study.

Research published in 2014 showed ocean acidification harm to West Coast pteropods, small free-swimming snails that are food for Dungeness crab. And a laboratory study of Dungeness crab larvae released in May 2016 by the NOAA North-

west Fisheries Science Center showed that increased ocean acidification could also jeopardize the crab.

Bednarsek, Feely and their colleagues — for the first time — documented that some Dungeness larvae in the wild already had pitted and folded shells, described in their journal article as "severe carapace dissolution," and that these larvae were typically smaller in size.

"We were really surprised to see this level of dissolution happening," Bednarsek said.

They also found damage to hairlike structures that act as sensory receptors, and the researchers hypothesize this could lead to slower movements, impaired swimming and other problems.

A 2017 study, based on expected declines in some Dungeness food as ocean-acidity levels change, forecast these West Coast crab stocks could be about 30% lower by 2063, although they would fluctuate from year to year.

The authors of this new study say more research is needed to understand what the new findings may mean for the future of the Dungeness crab as the Pacific coastal waters continue to absorb more carbon dioxide.

"This sets us off in a new direction," Feely said.

The larvae they sampled did not include any from Puget Sound, which Feely says has areas that are particularly vulnerable to ocean acidification.

# Oregon's unemployment rate dropped to historic low

By DONALD ORR  
*Oregon Public Broadcasting*

Oregon's unemployment rate dropped to 3.7% in December, the lowest on record dating back to 1976, according to the Oregon Employment Department.

Nick Beleiciks, an economic analysis manager at the department, said the latest estimates suggest there are fewer unemployed Oregonians now than at any point since comparable records began.

"That's especially striking considering Oregon's labor force is twice as large

as it was 44 years ago," Beleiciks said in a statement.

State economist David Cooke said the unemployment rate has been around 4% for the past three years — it was 3.9% for November. As a result, Cooke said Oregon's economy is experiencing an increasingly tight labor market.

"The number of people who have been unemployed for less than half a year dropped to 64,300 people in December, the lowest on record dating back almost 20 years," Cooke said.

"That figure had been up to as high as 180,000 during

the recession."

Oregon saw payroll employment jump by 800 jobs overall in December, following a gain of 3,800 jobs in November as revised by the department. Jobs in the leisure and hospitality industry saw the biggest gain with over 2,000 jobs.

Industries that took a loss were professional and business services, cutting 1,600 jobs, and health care and social assistance, cutting 900 jobs in the course of the month.

While health care and social assistance jobs were cut in December, the indus-

try is rapidly growing, adding 7,000 jobs over the past 12 months in Oregon at a 2.7% gain. Some of the fastest-growing industries in Oregon over the past 12 months were private education, services, transportation, warehousing and utilities. Retail trade, mining and logging saw a net loss of jobs over the year.

Oregon's over-the-year job growth in 2019 was 1.4%, matching the rate of national job growth. Most of Oregon's major industries expanded between 1% and 3% since December 2018.

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