

Report: Climate change bringing problems to Northwest

A whole chapter on the region

By CASSANDRA PROFITA
Oregon Public Broadcasting

The Northwest is already seeing the effects of climate change, according to a new national climate assessment.

The 1,600-page report outlines dire consequences across the country as global temperatures continue to rise.

In the Northwest, the changes threaten much of what the region holds dear — from ski seasons to salmon runs.

Who put the assessment together?

It was assembled by 13 federal agencies. It's a report that's put together for Congress every four years. This edition contains the most comprehensive evaluation to date on climate impacts to economy, health, agriculture and the environment.

The 2018 assessment includes a whole chapter on the Pacific Northwest, providing a vivid picture of what's in store. The findings aren't just about



Oregon Department of Fish and Wildlife

The Eagle Creek Fire last year as seen from the Cascade Locks Hatchery. To keep hatchery fall Chinook from dying because of the fire, Oregon officials released them early.

future predictions but impacts we're already seeing in the region.

What are some of the key findings for the Pacific Northwest?

They add up to bad news for Oregon, Washington state and Idaho: More extreme weather creating more landslides, flooding, drought and wildfires. The report notes that the region's

way of life is connected to the environment and natural resources and that the impacts are profound. The Northwest's economy depends in large part on natural resources in sectors like forestry, fisheries, agriculture and outdoor recreation. Climate change threatens all of them.

Winter recreation, for example, would be hit hard; the report predicts a lack of snow from cli-

mate change could cut all snow-based recreation revenue by 70 percent. And with spring starting earlier, crops could start blooming before insects come around to pollinate them.

Then there are the things we might not think about as related to climate change, like our health. Warmer temperatures bring more mosquitoes, and as a result we're going to see more mosquitoes carrying the West

Nile virus. That means more people getting infected and even dying from that virus.

The report says we're already seeing some of these effects in the Northwest. What kinds of climate change impacts are we seeing?

The report zeroes in on a recent year when we saw a lot of them: 2015, a year of severe drought for the Northwest. The report presents that year as a preview of our future with climate change. Temperatures were several degrees above normal with record low snowpack, rampant wildfires and smoky skies, and huge agricultural losses.

Toxins from harmful algal blooms closed fisheries along the coast in 2015 and we saw salmon die-offs because of the warm water temperatures in rivers and streams.

Does the report include recommendations for how we should prepare?

Yes. And one of the big themes for those recommendations is reducing risk from extreme weather. It says we should prepare our infrastruc-

ture for more stress in the future from stronger storms, hotter heat waves and bigger wildfires.

It will be important to develop backup plans for when things go wrong because of global warming. So, if a landslide or drought takes out a key source of groundwater, we need a second source to turn to.

Farmers can start planting crops that are better suited to hotter summers and wetter winters and springs.

The Northwest can develop water markets so that people who have water could sell it to people who need it.

And we can start growing more of our own seafood using aquaculture instead of catching wild species in the ocean to help offset the threat of extinction for fish and other species that will struggle to survive with warmer water and ocean acidification.

The report acknowledges that much remains unknown about how the risk of climate change can be offset. But anything that reduces carbon emissions that trap heat — contributing to the greenhouse effect — will reduce the severity of that risk over time.

Red Cross to hold two local blood drives

The Daily Astorian

The American Red Cross will hold two blood drives in Clatsop County in December. One will take place at

Knappa High School on Dec. 3 from 10 a.m. to 3 p.m., and another will be held at the Cannon Beach fire station Dec. 4 from 1 p.m. to 6 p.m. Blood and platelet donors will

receive a \$5 Amazon gift card. Eligible donors can make an appointment on the American Red Cross Blood Donor App, RedCrossBlood.org or by calling 1-800-Red-Cross.

Oregon, California crabbers sue fossil fuel companies

Associated Press

SALEM — Commercial crabbers in Oregon and California are suing 30 fossil fuel companies, claiming they are to blame for climate change, which has hurt their industry.

The Pacific Coast Federation of Fishermen's Associations filed the lawsuit last week in California State Superior Court in San Francisco against companies including Chevron and Exxon Mobil, news outlets reported.

"The scientific linkage between the combustion of fossil fuels and ocean warming, which leads to domoic acid impacts in our fisheries, is clear," Noah Oppenheim, executive director of the Pacific Coast Federation of Fishermen's Associations, told the San Francisco Chronicle. "We know it, and it's time to hold that industry account-

able for the damage they've caused."

West Coast crabbers experienced significant losses starting in the 2015-16 season when massive algal blooms caused by warm ocean temperatures resulted in a domoic acid outbreak that reduced the length of the crabbing season.

The season was cut short again in 2016-2017 for the same reason.

In California, Dungeness crab brought in over \$47 million in 2017 and \$83 million in 2016; the amount was down to \$17 million in 2015, during the industry's first major problem with domoic acid.

Crab is the most valuable single species commercial fishery in Oregon, with an average harvest of 16 million pounds per season, the Statesman Journal reported.

There are nearly 1,000 Dungeness crab permit hold-

ers in California and Oregon.

Scott J. Silvestri, corporate media relations manager of Exxon Mobil Corp., said in an email to the Chronicle that reducing greenhouse gas emissions is a global issue and requires global participation and actions.

"Lawsuits like this — filed by trial attorneys against an industry that provides products we all rely upon to power the economy and enable our domestic life — simply do not do that," he said.

In California, the cities of San Francisco and Oakland also filed lawsuits against five oil companies earlier this year, seeking to recoup the cost of paying for seawalls to fend off sea-level rise. A federal judge tossed those lawsuits in June, saying courts couldn't decide who should be held accountable for an issue as big as climate change.

FIVE-DAY FORECAST FOR ASTORIA AccuWeather DOWNLOAD THE FREE APP

Tonight	Wednesday	Thursday	Friday	Saturday
45	52 / 41	52 / 38	50 / 38	49 / 33
Cloudy with a little rain	Cloudy with a touch of rain	A thick cloud cover	Rain at times	Cloudy with a little rain

ALMANAC Astoria through Monday.

Temperatures
 High/low 61°/47°
 Normal high/low 51°/38°
 Record high 62° in 2017
 Record low 24° in 1896

Precipitation
 Monday 1.06"
 Month to date 5.31"
 Normal month to date 9.56"
 Year to date 52.04"
 Normal year to date 55.78"

SUN AND MOON
 Sunset tonight 4:33 p.m.
 Sunrise Wednesday 7:34 a.m.
 Moonrise today 9:20 p.m.
 Moonset today 11:51 a.m.

REGIONAL WEATHER
 Shown is tomorrow's weather. Temperatures are tonight's lows and tomorrow's highs.

UNDER THE SKY
 Tonight's Sky: Mercury at inferior solar conjunction.

Source: Jim Todd, OMSI

TOMORROW'S TIDES
 Astoria / Port Docks

Time	High	Time	Low
5:33 a.m.	7.9 ft.	11:03 a.m.	3.2 ft.
4:41 p.m.	8.6 ft.	11:47 p.m.	0.0 ft.

NATIONAL CITIES

City	Today	Wed.	City	Today	Wed.
Atlanta	43 25 s	46 32 s	Olympia	55 41 r	51 39 r
Boston	48 35 pc	46 36 c	Pendleton	53 42 r	52 36 c
Chicago	25 12 pc	27 25 pc	Portland	57 46 r	53 43 r
Denver	59 38 pc	59 29 c	Roseburg	55 44 r	53 43 r
Des Moines	27 15 pc	32 25 pc	Salem	58 47 r	53 42 r
Detroit	33 26 sf	36 26 c	Seaside	56 46 r	52 43 r
El Paso	64 39 s	72 42 s	Spokane	45 37 sh	44 33 c
Fairbanks	23 16 c	20 13 pc	Springfield	56 43 r	52 42 r
Honolulu	82 73 s	82 68 sh	Vancouver	56 46 r	52 43 r
Indianapolis	27 18 c	33 26 pc	Yakima	49 28 sh	47 32 c
Kansas City	27 16 pc	41 30 c			
Las Vegas	64 45 pc	68 52 c			
Los Angeles	76 54 pc	68 57 pc			
Memphis	42 27 s	53 45 s			
Miami	75 48 pc	66 49 pc			
Nashville	36 20 pc	44 32 pc			
New Orleans	55 39 s	63 53 pc			
New York	46 34 pc	44 36 pc			
Philadelphia	44 29 pc	42 32 pc			
Phoenix	54 31 pc	62 36 s			
Portland	54 31 pc	42 32 pc			
St. Louis	30 18 pc	39 33 pc			
Salt Lake City	47 35 c	48 35 r			
San Francisco	61 55 r	61 54 r			
Seattle	56 47 r	53 43 r			
Washington, DC	46 32 s	44 31 s			

TOMORROW'S NATIONAL WEATHER
 Shown are noon positions of weather systems and precipitation. Temperature bands are highs for the day.

ON THE RECORD

Assault
 • At 1:10 p.m. Saturday, Shannon Alison Zinzer, 44, of Astoria, was arrested by the Clatsop County Sheriff's Office on the 84390 block of Nordmark Drive and charged with fourth-degree assault.

• At 6:47 p.m. Friday, a 16-year-old Seaside boy was arrested on the Prom and charged with second-degree assault. He allegedly grabbed someone, lifted him over his back and slammed him to the ground, a wrestling move known as a suplex.

DUII
 • At 11:58 p.m. Friday, Brad A. Miller, 41, of Warrenton, was arrested by Astoria police on 17th Street and Irving Avenue and charged with driving under the influence of intoxicants. His blood alcohol content was 0.13 percent.

DEATHS

Nov. 26, 2018
HARTILL, Charles Jr., 99, of Astoria, died in Longview, Washington. Hughes-Ransom Mortuary & Crematory of Astoria is in charge of the arrangements.

SHINABERY, Willard "Bill" Edwin, 77, of Hammond, died in Hammond. Ocean View Funeral & Cremation Service of Astoria is in charge of the arrangements.

TARABOCHIA, Eileen Fay, 76, of Astoria, died in Longview, Washington. Caldwell's Luce-Layton Mortuary of Astoria is in charge of the arrangements.

PUBLIC MEETINGS

TUESDAY
Clatsop County Human Services Advisory Council, 4 to 5:30 p.m., 800 Exchange St., Room 430.
Astoria Library Board, 5:30 p.m., Astoria Library Flag Room, 450 10th St.
Warrenton City Commission, 6 p.m., City Hall, 225 S. Main Ave.

Seaside Airport Advisory Committee, 6 p.m., City Hall, 989 Broadway.
Astoria Planning Commission, 6:30 p.m., City Hall, 1095 Duane St.
Gearhart City Council, 7:15 p.m., joint work session to discuss emergency supply storage, City Hall, 698 Pacific Way.

THURSDAY
Clatsop County Recreational Lands Planning and Advisory Committee, 1 to 3 p.m., fourth floor, 800 Exchange St.
Clatsop Soil and Water Conservation District Board, 6 p.m., annual meeting, Grace Community Baptist Church, 1195 Irving Ave.

LOTTERIES

OREGON
Monday's Pick 4:
 1 p.m.: 8-9-7-4
 4 p.m.: 7-8-1-7
 7 p.m.: 5-4-6-1
 10 p.m.: 1-1-6-9
Monday's Lucky Lines: 4-7-12-14-19-22-28-29

Estimated jackpot: \$20,000
Monday's Megabucks: 6-11-17-23-31-41
 Estimated jackpot: \$4.2 million

Estimated jackpot: \$100,000
Monday's Keno: 07-09-10-15-19-24-25-27-30-37-40-46-47-50-53-54-60-77-78-80
Monday's Lotto: 04-18-36-40-42-49
 Estimated jackpot: \$1.9 million
Monday's Match 4: 06-14-17-20

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