## **NORTHWEST**



EO Media Group

Gov. Kate Brown's office says she will propose legislation to maximize state investment returns, including reducing costs by ending the outsourcing of some investment management.

## **Brown plans bill** to maximize state investment returns

#### Capital Bureau

SALEM — Oregon Gov. Kate Brown plans to advance a bill in the upcoming legislative session aimed at maximizing returns on the state's investments, according to her office.

The Oregon State Treasury oversees the state's investments, although it outsources some investment work to outside firms. It appears Brown would bring some of that work back to Salem to reduce costs.

Kristen Grainger, the spokeswoman for governor, said in an email Tuesday that the treasury "needs to be resourced adequately to expand the amount of funds they manage internally."

In previous legislative sessions, Treasurer Ted - who will be Wheeler replaced by state Rep. Tobias Read, D-Beaverton, come January - introduced similar legislation aimed at reducing the cost of investing by bringing more outsourced functions in-house.

Wheeler's effort, referred to as the Investment Modernization Act, stalled out several times after meeting opposition from lawmakers on both sides of the aisle who voiced trepidation about the proposal.

Read, in an interview

Tuesday, said that he would support the Governor's Office in its efforts and emphasized communication with the public and the Oregon Legislature about the state's investing.

"I expect we will be supportive and helpful to the extent that we are asked, but I'm also cognizant of the fact that Treasurer Wheeler and the Treasury have made specific efforts a number of times," Read said.

Reducing investment costs might be one small way investment to address the \$22 billion unfunded liability facing the state's public employee retirement system.

PERS is managed independently and has its own board, but the Oregon Public **Employees Retirement Fund** is managed by the treasurer, under the direction of the Oregon Investment Council, according to the treasury. The investment council is required by state law to get the highest possible return on its investments.

In 2015, the Oregon Supreme Court struck down most of the legislature's recent PERS reform efforts. A bipartisan legislative work group is now looking at other ways to address the PERS issue.

The governor is expected to release her balanced budget Dec. 1.

# Scientists go all out with first aquatic species map for U.S. West

#### By KEITH RIDLER

**Associated Press** 

BOISE, Idaho - It sounds like a big fish story: a plan to create a biodiversity map identifying thousands of aquatic species in every river and stream in the western U.S.

But scientists say they're steadily reeling in that whopper and by next summer will have the first Aquatic Environmental DNA Atlas available for the public.

Boise-based U.S. Forest Service fisheries biologist Dan Isaak is leading the project and says such a map could help with land management decisions and deciding where to spend limited money and resources.

"It's kind of the Holy Grail for biologists to know what a true biodiversity map looks like," he said. "To have that formatted digitally so you can do lots of science with it will be transformative in terms of the quality of information we'll have to conserve species."

Isaak said annual surveys could provide snapshots so scientists can see how biodiversity and ecosystems change over time. Because of the project's immense scale, he said, sample collecting likely will require help from many entities, including citizen scientists.

The map eventually will include everything from insects to salmon to river otters. It's possible because of a new technology that can identify stream inhabitants by analyzing water samples containing DNA. The technology also can be used to identify invasive species.

That technology is evolving, said Michael Schwartz, the Forest Service's director of the National Genomics Center for Wildlife and Fish Conservation in Missoula, Montana. Currently, he said, scientists can detect only one species at a time in a stream sample. He said the goal is to identify multiple species in a single test from one sample. A rough estimate for when that might be possible is about a year, he said.

The trove of information has the potential to be so vast that questions not presently imagined might arise.

'Any time science undertakes large projects like this, the payouts can be in directions you don't expect," Schwartz said

Ultimately, he said, the publicly available information could be used by someone with an iPad or other device



This 2014 photo provided by the U.S. Forest Service shows Michael K. Schwartz in the process of filtering 5 liters of water to concentrate DNA on a filter to be analyzed at the National Genomics Center for Wildlife and Fish Conservation, on Rattlesnake Creek near Missoula, Mont. Scientists are aiming to create a biodiversity map that identifies thousands of aquatic species in every river and stream in the western United States. They say that by next summer, the first Aquatic Environmental DNA Atlas will be available to the public.

## "It's kind of the Holy Grail for biologists to know what a true biodiversity map looks like."

#### – Dan Isaak,

U.S. Forest Service fisheries biologist

who could go to a section of river and see what species it contains.

The Aquatic Environmental DNA Atlas for the western U.S. has its genesis in a smaller-scale project called the Bull Trout Environmental DNA Atlas involving five states — Idaho, Montana, Nevada, Oregon and Washington — where the federally protected fish is found. That effort, Isaak said, has discovered bull trout in areas where they were thought not to exist.

Isaak also has been working on something called the Cold Water Climate Shield to identify streams that could serve as a refuge for cold water species, such as bull trout, if global warming continues. That map uses

millions of temperature recordings going back decades and has expanded to include most of the western U.S. Stream temperatures in lower elevations have risen several degrees over the past 30 years, Isaak said. The DNA Atlas has been confirming the kind of species present as predicted by the Cold Water Climate Shield, Schwartz said.

What scientists ultimately hope to do is combine all the information from stream temperatures, DNA Atlas sampling, topography and weather patterns to get more insights into species distribution patterns and even how entire ecosystems function.

'The data sets can be bigger because computers are bigger," Isaak said.

Even for Isaak, who is called a visionary by his colleagues, the leaps in technology that make his ideas possible can be mind-boggling.

"It's just been an ongoing revelation," he said, recalling 15 years ago using pencil and paper to make streamside observations. "It still seems like magic to me that you can go take a water sample and you have instruments powerful enough to discern what species are present."

#### Corrections

The East Oregonian works hard to be accurate and sincerely regrets any errors. If you notice a mistake in the paper, please call 541-966-0818.

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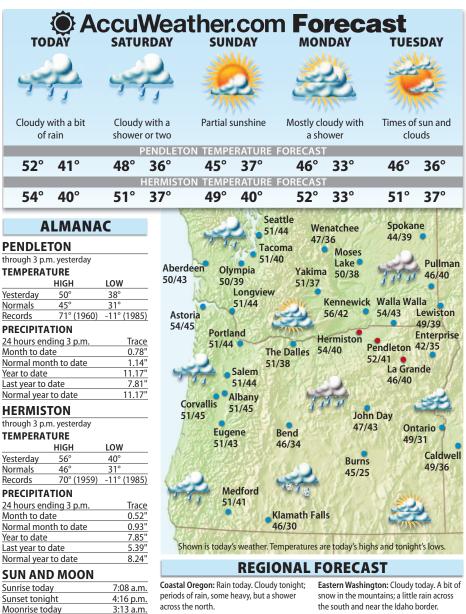
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ber, the greater the need for eye and skin protection.

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Los Angeles 77 51 s 64 49 r Wichita 58 31 s 63 45 s Weather (W): s-sunny, pc-partly cloudy, c-cloudy, sh-showers, t-thunderstorms, r-rain, sf-snow flurries, sn-snow, i-ice.

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Billings 51/32

El Paso 61/45

Denv 59/30

B

Mont 75/56

30s 40s

National Summary: A little rain will approach the coastal Northeast today, while a little snow extends from the Great Lakes to the northern Appalachians. Showers will dampen Texas. Rain and snow will affect the Northwest.

NATIONAL WEATHER TODAY

Shown are noon positions of weather systems and precipitation. Temperature bands are highs for the day

Winnipeg 39/25

Chicag 44/28

Kansas City 52/33

10US1

50s

cold front

Montr 37/32

45/35

Atlant

New 54/4

61/42

81/68

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Yesterday's National Extremes: (for the 48 contiguous states) High 88° in Edinburg, Texas Low -3° in Bodie State Park, Calif.

#### NATIONAL CITIES

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Atlanta	72	43 s	65	38	рс	Memphis	63	39	рс	61	36	S		
Atlantic City	57	45 c	54	39	рс	Miami	81	68		81	66	рс		
Baltimore	58	37 c	55	32	рс	Milwaukee	46	30	С	47	33	рс		
Billings	51	32 pc	53		рс	Minneapolis	39	26	-	44	29	рс		
Birmingham	68	39 s	63	32		Nashville	60		рс	58	30			
Boise	50	39 pc	54	32		New Orleans	73		рс	69	48			
Boston	50	41 r	50	36		New York City	54	44		52		рс		
Charleston, SC	79	52 pc	68	40	рс	Oklahoma City	58		рс	64		рс		
Charleston, WV	53	34 c	47	27	рс	Omaha	51	31		58	34	рс		
Chicago	44	28 c	47	33	рс	Philadelphia	58	43		55	38	рс		
Cleveland	45	36 c	45	32	рс	Phoenix	78	56	-	75	52	С		
Dallas	63	43 s	67		рс	Portland, ME	45	37		49	33			
Denver	59	30 s	60	34	-	Providence	53	40		52	33			
Detroit	46	34 r	46		рс	Raleigh	71		рс	61	31	-		
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Houston	75	54 pc	71	52		Salt Lake City	52	32		55	38			
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# **UV INDEX TODAY**