

Engineers stress that Oregon's infrastructure is falling apart

Risks heightened by quake threat

By **CLAIRE WITHYCOMBE**

Oregon Capital Bureau

SALEM — Oregon's pipes, roads, bridges and other structures for moving around the state and to get power and water need significant work, civil engineers say.

Much of the infrastructure is deteriorating with age, and the state must do more to prepare for a potentially major earthquake, according to the Oregon chapter of the American Society of Civil Engineers.

A group of 28 experts from the society pored over data on 10 types of structures from roads to dams, unveiling their findings at the state Capitol Wednesday, in their second such report. The first was done in 2010.

They graded all of the areas C for "mediocre" or D for "poor" and "at risk."

Some of those structures, like pipes, aren't visible.

But what they provide — like clean drinking water — is essential to the state's economy and quality of life.

Nationally, each family loses an average of \$3,400 per year in disposable income due to poorly functioning infrastructure, said Greg DiLoreto, former CEO of the Tualatin Valley Water District and chairman of a national committee within the American Society of Civil Engineers focused on the country's infrastructure.

"That's money they could be saving for retirement, vacations, college educations," DiLoreto said.

Oregon has better infrastructure than the country overall, but not by much.

Older, less reliable

Engineers found that in particular trouble are the state's wastewater systems, dams, levees and the energy grid, including the systems that transmit and distribute electricity and oil.

The engineers say the state's bridges, drinking water systems, inland waterways, ports, rail and roads are middling.

In most cases, the structures that support each of these systems are getting older and less reliable.

The engineers also warn that the state needs to do more to prepare for the Cascadia Subduction Zone earthquake, which could be severe enough to damage power lines, natural gas and oil lines, roads, bridges, water and sewer systems and communications.

"We need strong leadership, extensive planning and robust funding to prepare our infrastructure for being resilient," said Mark Libby, chair of the committee that pre-



Colin Murphey/The Astorian

Several bridges and roads in Seaside have been deemed potentially problematic in an earthquake and tsunami.

pared the Oregon report. "It's important to remember that every dollar spent toward building more resilient infrastructure saves at least \$6 afterwards."

According to the state's Department of Geology and Mineral Industries, there is a roughly 10% to 14% chance of a 9.0 magnitude Cascadia quake in the next 50 years.

Two years ago, lawmakers increased taxes and fees to improve the state's transportation system.

Engineers said that's a step in the right direction, but urged legislators to provide more money for a state program called Connect Oregon, which distributes state money for air, rail, water and bicycle and pedestrian transportation infrastructure projects.

Matt Garrett, the director of the Oregon Department of Transportation, acknowledged during a press conference on the report that "we can do better."

"It's clear our work to enhance the condition and the resiliency of our infrastructure system is nowhere near complete," he said.

In their review, the engineers found that levees, wastewater systems, dams and energy transmission systems are in poor condition.

Oregon has nearly 900 dams, the majority regulated by the state. In the next five years, 70% of them will be more than 50 years old, and they're not ready for an earthquake.

Gov. Kate Brown has requested House Bill 2085, which would update the state's dam safety regulations. When a dam fails — as dams have 39 times in Oregon since 1897, according to engineers' testimony — that poses a risk to roads, bridges, property and life.

A Cascadia earthquake could also damage the physical structures that transmit and store oil, which in some cases are 50 to 100 years old, and

which most Oregonians still rely on as fuel for cars.

The U.S. Army Corps of Engineers estimates that about 100,000 Oregonians live or work behind levees, which protect them from floods.

But 30% of the levees that the Army Corps of Engineers inspects are rated "unacceptable" and 11% are minimally inspected. The condition of the rest of them is unknown, a mystery the engineers find unnerving.

"We need to do more to understand the condition of the remaining levees," Libby said.

Oregon's wastewater systems received a failing grade.

About \$5 billion in replacement and repairs is needed, and it's yet another area where population growth, aging materials and a possible earthquake pose red flags.

That cost could fall in part to consumers. The average customer pays less than one penny per gallon of wastewater treated, Libby said.

"This clearly is not enough to support the modernization and upgrades needed," Libby said.

Aging bridges

The state's bridges are also aging, and although the 2017 transportation funding bolstered bridge repair, the state would need three times the amount of money to adequately update the state's 8,000 bridges and culverts.

Libby, who on Wednesday was wearing a tie emblazoned with the Golden Gate Bridge, said the state should particularly focus on bridges, which are "critical lifelines," especially in a natural disaster.

"We need to shift to a more aggressive replacement program versus the maintenance and repair that we've been doing," Libby said.

That would mean, he said, replacing nearly 100 per year, many times over what the state replaces annually now.

As Oregon's population

grows, the state needs to make sure the drinking water system can treat and distribute enough water to all those people, the society said.

About 80 percent of Oregonians get their drinking water from public systems, Libby said. Century-old cast iron pipes and the possible Cascadia earthquake also pose risks to the system.

Engineers also looked at the state's inland waterways — rivers that are used to help move agricultural products and other goods.

Jetties, locks and pile dikes along the Columbia River and Willamette River need repair or upgrades.

Businesses are turning to larger ships, which on the Columbia River don't have enough turning basins, anchorages and stern buoys.

Oregon has 23 public ports, essentially way stations for goods coming through the state. The condition of the state's ports varies, but maintaining them is also challenge.

State and federal funding for ports has declined, and the engineers say that Congress should protect a special federal trust fund for harbor maintenance, which lawmakers on Capitol Hill have moved to offset other areas of the federal budget.

Oregon trains, meanwhile, are in decent condition. Trains moved nearly 65 million tons of goods, including wood and paper products, farm products and chemicals, on about 2,800 miles of tracks in the state in 2017.

Oregon's 74,000 miles of roads are in fair shape, but could face more wear and tear from significant population growth and the possible Cascadia earthquake.

The Oregon Capital Bureau is a collaboration between EO Media Group, Pamplin Media Group and Salem Reporter.

Legislature OKs environmental 'rollback' bill

By **MATEUSZ PERKOWSKI**
Capital Press

Critics and proponents agree that recently passed legislation intended to shield Oregon from federal "rollbacks" of environmental regulations is meant to send a message.

While supporters claim House Bill 2250 signifies the state government's stand against weakening protections for air, soil and water at the federal level, opponents argue it amounts to an expensive but empty political stunt.

The bill was approved by the state Senate 16-12 on Tuesday after passing the House two months earlier. State Sen. Betsy Johnson, D-Scappoose, voted against the bill.

It's all but assured of being signed into law by Gov. Kate Brown, who requested the legislation's introduction.

Under House Bill 2250, the Oregon Health Authority and Department of Environmental Quality can take or recommend actions to ensure "significantly less protective" federal environmental standards don't undermine protections at the state level.

The status of federal regulations on Jan. 19, 2017 — the day before President Donald Trump took office — will serve as the baseline for comparison.

State Sen. Cliff Bentz, R-Ontario, complained that HB 2250 basically enshrines federal regulations before change in political administrations rather than at a high point in environmental safeguards.

"Why should we do

such a thing? Frankly, I kind of enjoy having a state make its rules, not the federal government," he said during the floor debate. "I don't want to be assuming that as of that particular date everything was great, but that is what this bill does."

Sen. Michael Dembrow, D-Portland, acknowledged the date was "not accidental."

"It coincides with the beginning of a process of rollbacks to what was considered the scientific consensus of rigor that began at that time and that is continuing, frankly," he said.

Critics of HB 2250 also argued the bill will leave Oregon agencies exposed to lawsuits from environmentalists who don't believe revisions to state regulations sufficiently compensate for the reduced protections of federal standards.

State agencies already struggle to keep up with their existing duties and HB 2250 will only add to that burden by requiring them to monitor federal regulations, according to opponents.

Another question raised about the bill was its uncertain effect on applications for environmental permits from the state government that are partly based on federal standards.

Dembrow said this was a "fair question" that wasn't considered during hearings on the bill, prompting Sen. Brian Boquist, R-Dallas, to request that HB 2250 be sent back to the committee level for reconsideration.

The Senate rejected that motion 11-16 and then voted in favor of the bill, largely on party lines.

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