

- Dave Miller, 3509 NW 3rd Ave Camas, WA 98607 davem98607@yahoo.com
- I would like to speak for the wildlife and habitats of the gorge, especially the wildlife of the Steigerwald Lake, Franz Lake and Pierce National Wildlife Refuges, where I volunteer.
- My concerns:

- Wildlife are frequently killed by trains in the gorge.
 - I have done GPS surveys along the tracks at the Pierce refuge. In just 2-1/2 miles I found the remains of at least 45 large animals killed by trains – mostly elk, but also deer, raptors, coyote, etc.

Increasing train traffic will also increase the amount of wildlife killed by trains.

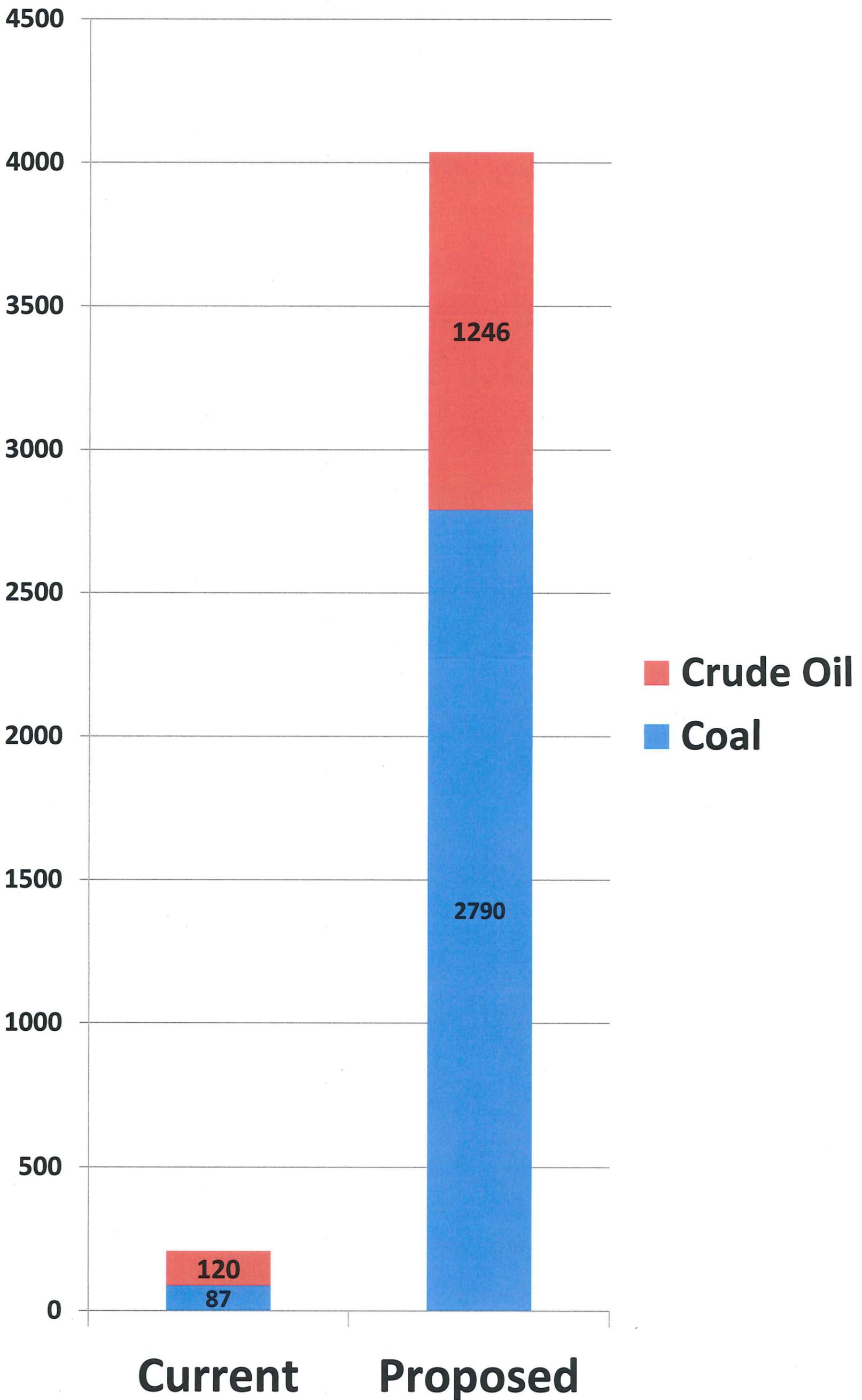
- This project would increase the oil train traffic through the gorge from about 120 cars per day to 1,246 cars per day – which is more than **10 times** the current oil train traffic.
- When combined with all the coal export proposals, the number of cars for coal & oil goes from 207 per day to 4,037 per day – **20 times** the current coal & oil traffic.
- And of course there are other freight and passenger trains using the tracks.
- Increased train traffic will severely impede or stop wildlife migrations.
 - This amount of train traffic will mean that there will be a train on the tracks nearly ^{all the} of time. This will prevent wildlife from migrating across the tracks like they do currently. **The tracks in effect become a 1200 mile long wall.**
- Cumulative effects
 - The cumulative impact of ALL of these proposals needs to be considered together – not each one individually.

ENERGY FACILITY SITE
EVALUATION COUNCIL

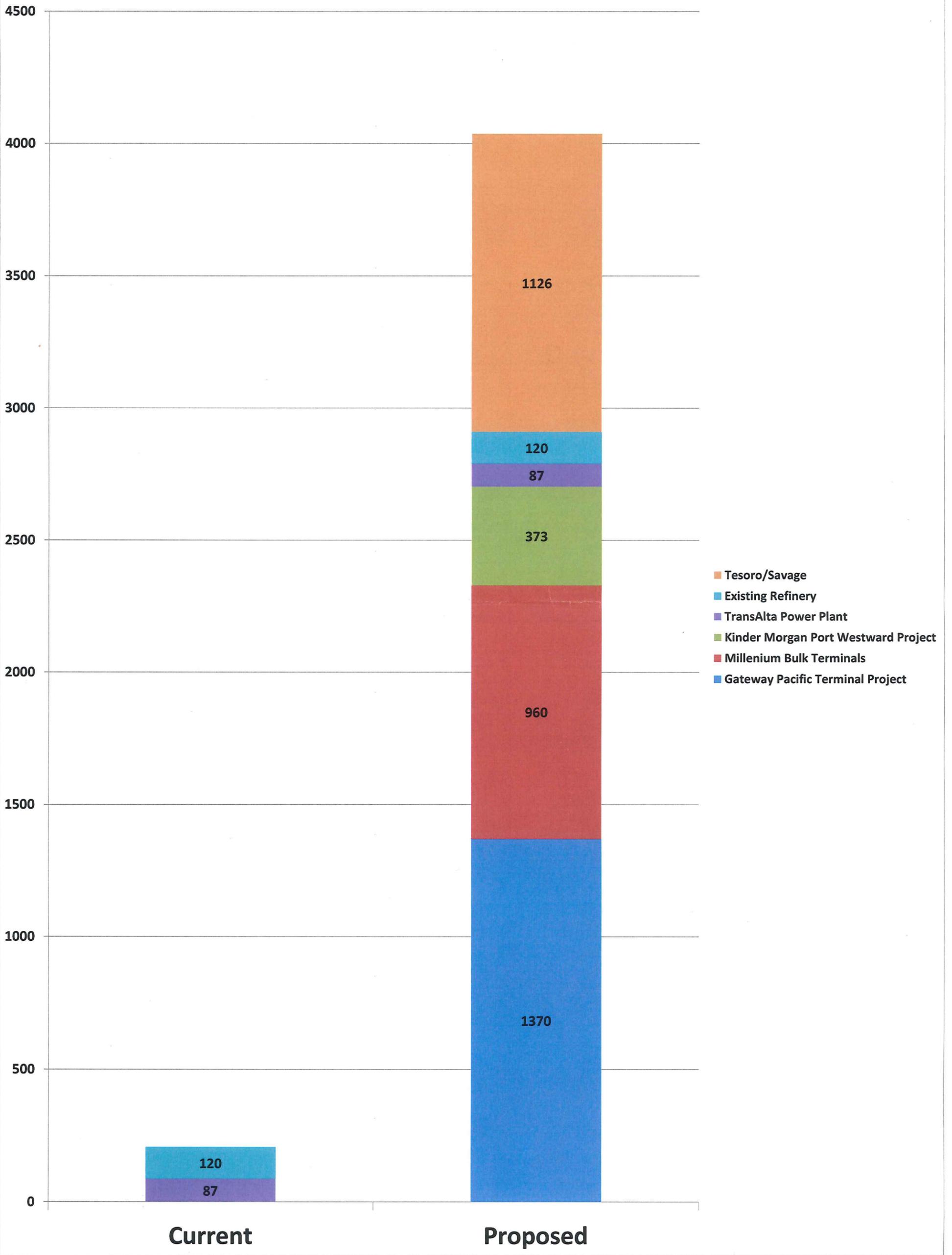
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Train Cars per Day



Train Cars per Day





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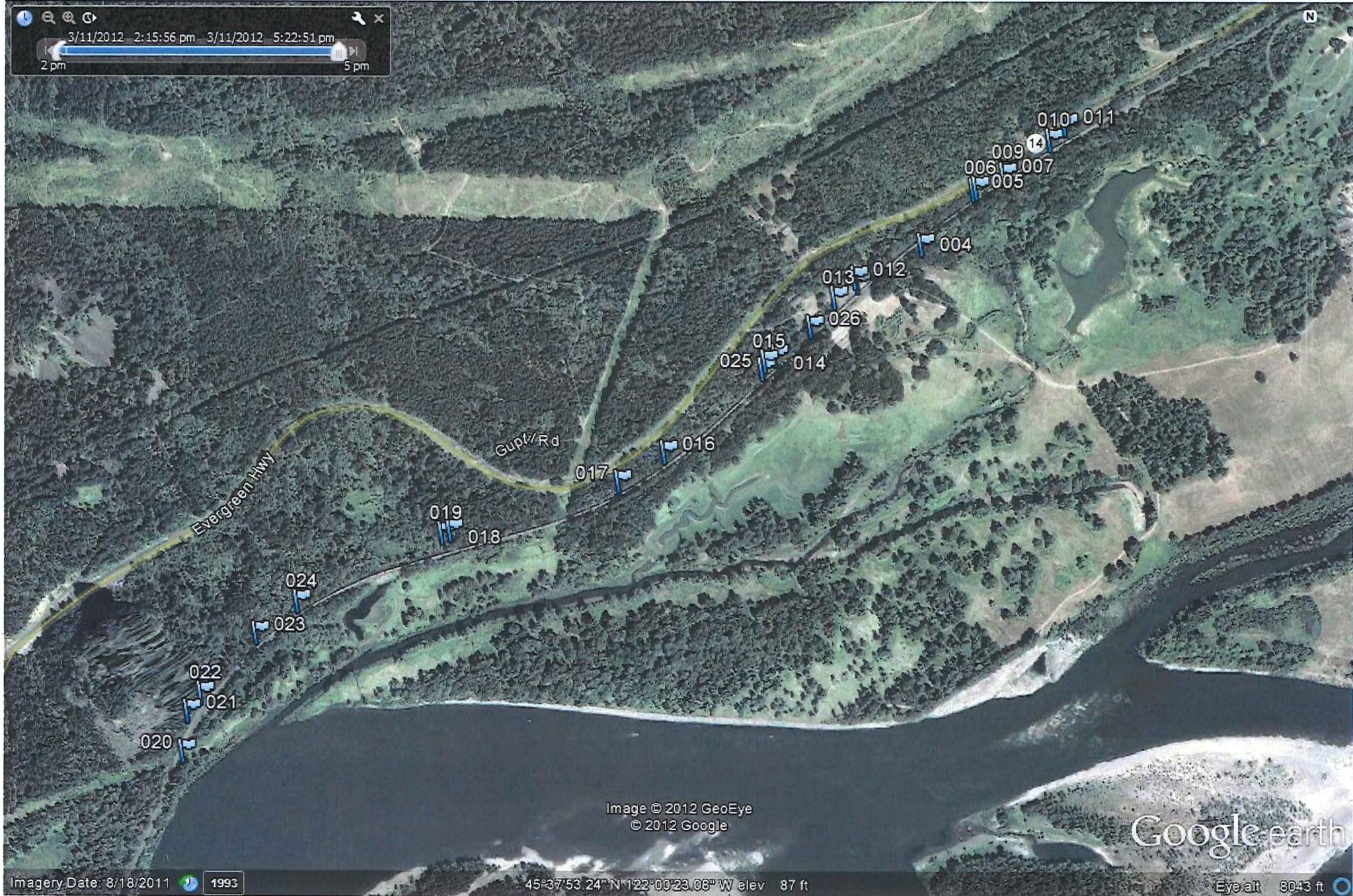


Image © 2012 GeoEye
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Google earth

Imagery Date: 8/18/2011 1993

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How can we explain to future generations that we selfishly destroyed a marine ecosystem that took 30 million years to evolve?

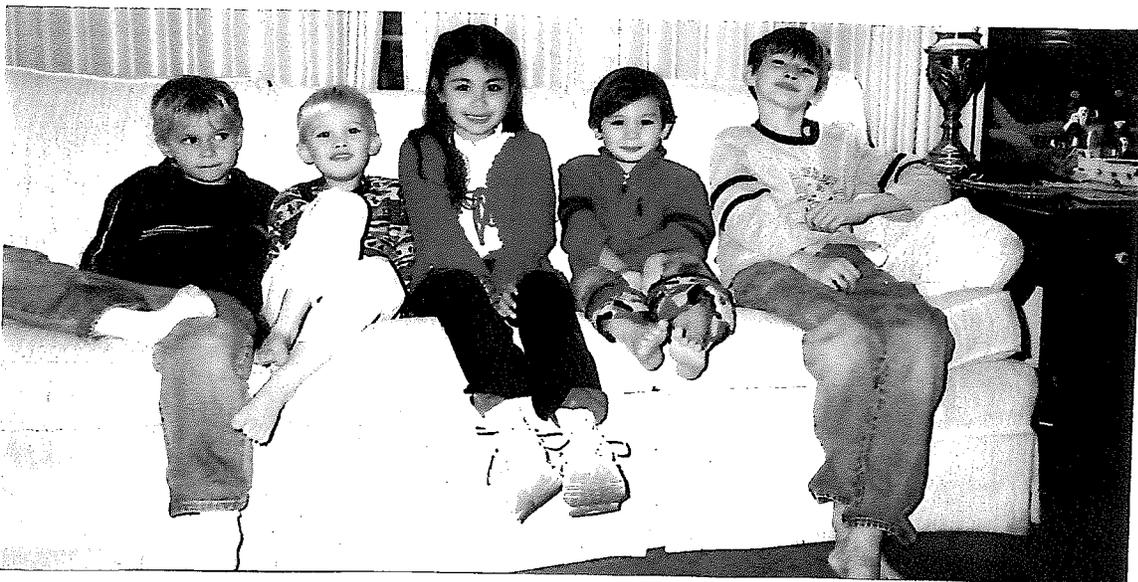
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OCT 29 2013

ENERGY FACILITY SITE
EVALUATION COUNCIL

Our state is at a crossroads. We can continue using fossil fuels, "business as usual" and build a crude oil terminal here in Vancouver. But at what cost? Ocean acidification will increase and our oceans will be dead in less than 100 years. Even worse, climate change will get worse and the human race will become extinct. Long before humans finally die off, they will be fighting over land, food and water.

I believe your choice is clear. You must study the impact this oil terminal will have on our oceans and climate change. Future generations are counting on you to do the right thing.



Date: October, 29, 2013

To: The Energy Facility Site Evaluation Council (EFSEC)

Public Comment on the proposed: Port of Vancouver Tesoro Savage Crude Oil Terminal

From: Virginia Nugent 5111 NE 125th St Vancouver WA

To back up my public comments I am submitting the following information for your thoughtful consideration:

1. A copy of my oral public testimony October 29th Scoping Hearing for the Port of Vancouver oil terminal proposal.
2. April 16, 2013 article, Panel: Ocean Acidification Threatening Sea Life Here, published in the Peninsula Daily News.
3. Christine O. Gregoire's November 27, 2012, Executive Order 12-07 Washington's Response to Ocean Acidification.
4. An Article titled, Threat To Oceans Isn't Fiction, by **Representative Jay Inslee**.
5. A fact sheet from the video, Acid Test: The Global challenge of Ocean Acidification. Produced by the Natural Resources Defense Council.
7. An article titled, Ocean Acidification Threatens Marine Life. The Seattle Times, 10-2013
6. Fast Facts: Coral Reefs are being Lost Twice as Fast as Rainforests.

Date: October, 29, 2013

To: The Energy Facility Site Evaluation Council (EFSEC)

Public Comment on the proposed: Port of Vancouver Tesoro Savage Crude Oil Terminal
From Virginia Nugent 5111 NE 125th St Vancouver WA

As a mother and grandmother I'd like to speak on behalf of future generations and urge you to study the impact that a crude oil terminal in Vancouver will have on climate change, ocean acidification, and our state's shellfish industry. I have always been awestruck by the vastness of the ocean and the beauty of the life it contains. I thought this treasure on earth, would last forever. Sadly, I was wrong.

Three hundred million years ago, the ocean became too acidic, and sea life worldwide, was wiped out. This became known as the Great Mass Extinction. It could happen again. Burning fossil fuels, releases CO₂, causing our oceans to become more acidic. Ocean acidity is increasing at the fastest rate in at least 300 million years. In 100 years our oceans could be dead. How can we possibly explain to future generations that we destroyed a marine ecosystem that took 30 million years to evolve?

Increased ocean acidity prevents oyster larvae from forming their shells. In 2005, oyster larvae started dying by the billions along the Pacific Northwest Coast. Are we willing to sacrifice our state's \$270,000,000 shellfish industry that provides 3,200 good jobs, for a crude oil terminal?

Our state should set an example to the nation and the world by saying "NO", to increased use of fossil fuels, and instead lead the way toward a green energy future.

Thank you.

Virginia Nugent

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Article published Apr 16, 2013

Panel: Ocean acidification threatening sea life here

By Rob Ollikainen

Peninsula Daily News

PORT ANGELES — Acidification of the world's oceans could have a profound effect on the North Olympic Peninsula, a panel of experts told Clallam County commissioners Monday.

Caused by carbon dioxide from the burning of fossil fuels, ocean acidification can destroy shells of crabs, clams, oysters and scores of creatures at the bottom of the food chain.

The Strait of Juan de Fuca, Puget Sound and outer coast of Washington are particularly vulnerable because acidic water is upwelled off the coast every spring and summer.

The state supports 42,000 jobs in the seafood industry.

“There is no silver bullet,” said panelist Eric Swenson, Seattle-based communications and outreach director for the Global Ocean Health Program.

“It's a whole number of lead bullets that are going to make this happen.”

Swenson was joined by members of the Washington State Blue Ribbon Panel on Ocean Acidification, which recently reported that 80 percent of the oyster larvae in some hatcheries were killed by acidification.

The Clallam Marine Resources Committee invited the governor-appointed panel to speak at the commissioners' work session.

The same panel was scheduled to make a presentation at the Port Angeles Senior Center Monday night.

After the work session, Swenson said that raw sewage from Victoria is not contributing to acidification in the Strait.

“There is no real effect on the quality of ocean water that comes out of Victoria,” he said.

“If there were 10 Victorias, maybe there would be a problem. But the power of the currents and what comes through, they've got a good cause for the fact that they're not causing any harm to the ocean.”

Ed Bowlby, a marine resource committee member and research coordinator for the Olympic Coast National Marine Sanctuary, said that “it may be a different story” on the north side of the Strait, adding: “We haven't seen any effects here.”

Brad Warren, director of the Global Ocean Health Program, used his time to summarize the panel's work and present its recommendations.

Swenson said there is little doubt that ocean acidification is being caused by humans.

"Just like DNA evidence, there are fingerprints left on the isotopes, and the ratio between carbon 12 and carbon 13 is definitive," he said.

"It shows that this came from burning fuel, and therefore our fingerprints are all over the carbon."

The water being upwelled off the coast came from the surface of the South China Sea about 40 years ago.

"We've got 40 years or so of bad water ahead of us, or increasingly bad water, because of our increasing emissions of CO²," Swenson said.

"We can't do anything about that except strive to protect the resources we have, and try and adapt to what we know is coming our way. What we must do, on the big problem, is reduce our CO² significantly."

Acidification is measured on a pH scale of 0 to 14, with neutral water being a 7 and battery acid rating 0.

"We're are [at] about 8.1 right now," Swenson said.

"Before they started out with the industrial revolution, they were about 8.2. That seems like a minuscule drop, but this is a logarithmic scale. So that drop of 0.1 percent equals a 30 percent increase in acidity."

A University of Washington professor began studying the effects of acidification at Tatoosh Island about 30 years ago.

In 2000, the work was passed onto researchers from the University of Chicago, who became "alarmed at what they're finding," Swenson said.

The panel found that more than 30 percent of the marine species in the Strait of Juan de Fuca and Puget Sound are vulnerable to acidification.

"The calcifiers are the first to be hit," Swenson said.

"In addition to the disruption of the food chain, there is a direct effect on fin fish."

Among the vulnerable species is the pteropod, a shelled snail whose demise would cause "important ripple effects on the wider food chain," said Nina Bednarsek, a National Oceanic and Atmospheric Administration scientist.

"This would be one of the first species to be severely affected by the ocean acidification,"

Bednarsek said, while showing slides of rapidly deteriorating pteropod shells.

Other speakers included Betsy Peabody, founder of the Puget Sound Restoration Fund, and John Forster, a Port Angeles consultant who is exploring seaweed aquaculture as a means to “make a meaningful contribution to the food supply” while reducing local carbon levels.

Former Gov. Christine Gregoire appointed the 28-member panel on ocean acidification in February 2012.

To see its findings and 42 recommendations, which were presented in November in Seattle, visit <http://tinyurl.com/oceanacidificationreport>.

Reporter Rob Ollikainen can be reached at 360-452-2345, ext. 5072, or at rollikainen@peninsuladailynews.com.

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CHRISTINE Q. GREGOIRE
Governor



STATE OF WASHINGTON
OFFICE OF THE GOVERNOR

P.O. Box 40002 · Olympia, Washington 98504-0002 · (360) 753-6780 · www.governor.wa.gov

EXECUTIVE ORDER 12-07

WASHINGTON'S RESPONSE TO OCEAN ACIDIFICATION

WHEREAS, acidification of the world's oceans, measured by the lowering pH numbers and caused primarily by increasing levels of carbon dioxide in the atmosphere, has arrived on the West Coast sooner than predicted and is already reaching levels that are corrosive for shellfish and other marine organisms; and

WHEREAS, Washington's marine waters are particularly vulnerable to ocean acidification because they experience the effects of global carbon dioxide absorbed by the oceans in addition to regional and local factors. One of the most important regional factors is coastal upwelling, which occurs when strong northerly winds blow across the Pacific Ocean, bringing deeper water up to the surface, along the Washington coast, into coastal estuaries like Willapa Bay and Grays Harbor, and the Puget Sound basin. Today's upwelled water is rich in carbon dioxide and low in pH and oxygen, and was in contact with the atmospheric concentration of carbon dioxide from 30 to 50 years ago, meaning we will continue to see acidification for several decades after global carbon dioxide emissions begin to fall; and

WHEREAS, acidification near the coasts, and particularly in highly populated and developed areas, is often exacerbated by local sources of pollutants, such as nutrients and organic material, that generate additional carbon dioxide in marine waters; and

WHEREAS, between 2005 and 2009, the Pacific Northwest oyster hatcheries experienced disastrous production failures when billions of their youngest oysters, the larvae, died due to acidified seawater that dissolved shells or prevented their formation; and

WHEREAS, Washington is the country's top provider of farmed oysters, clams, and mussels. Our shellfish growers employ directly and indirectly more than 3,200 people around the state and provide an annual total economic contribution of \$270 million statewide. The increasing levels of acidification in Washington's marine waters pose serious and immediate threats to our shellfish resources, and the revenue and jobs supported by the shellfish industry; and

WHEREAS, ocean acidification has important implications to Washington's tribal communities and fishermen who increasingly depend on shellfish species to support their families; and

WHEREAS, increasing levels of acidity also have implications for the broader marine ecosystem because many organisms that are important food sources for species such as salmon, whales, and seabirds, are dependent on their ability to form and maintain shells, skeletons, or other hard parts; and

WHEREAS, Washington is a national leader in addressing the problem of ocean acidification. World-class scientists are already working on ocean acidification; state agencies, businesses, tribes, and others are implementing innovative approaches to reduce carbon dioxide and nutrient runoff; federal partners are engaged on solutions to ocean acidification; the shellfish industry is committed to protecting ecosystems and cultivated resources; and diverse nonprofit organizations are ready to give voice to the problem; and

WHEREAS, to chart a course for addressing the effects of ocean acidification on Washington's shellfish resources and other marine organisms, I convened the Washington State Ocean Acidification Blue Ribbon Panel comprised of scientific experts, industry representatives, public opinion leaders, and state, local, federal, and tribal policy makers; and

WHEREAS, the Panel produced a *Scientific Summary of Ocean Acidification in Washington State Marine Waters* and a set of recommended actions in a document titled *Ocean Acidification: From Knowledge to Action – Washington's Strategic Response to Changing Ocean Chemistry*, documenting the understanding of ocean acidification in Washington, and recommending actions to reduce contributions to the problem, help the shellfish industry adapt to changes, advance our knowledge about acidification in Washington's marine waters, and educate and engage stakeholders, the public and decision makers in addressing the problem; and

WHEREAS, it is critical to our economic and environmental future that effective and immediate actions be implemented in a well-coordinated way and that we work collaboratively with federal, tribal, state, and local governments, universities, the shellfish industry, businesses, the agricultural sector, and the conservation/environmental community to address this emerging threat.

NOW, THEREFORE, I, Christine O. Gregoire, Governor of the state of Washington by virtue of the power invested in me by the Constitution and statutes of the state of Washington do, effective immediately, hereby order and direct:

1. The Office of the Governor and the cabinet agencies that report to the Governor to advocate for reductions in emissions of carbon dioxide at a global, national, and regional level. The Office of the Governor and cabinet agencies shall work on this effort with federal and regional partners (including at a minimum Oregon, California, and the Province of British Columbia) and shall consult with affected public and private entities.

2. The Director of the Department of Ecology to:

- a) Coordinate effective implementation of the Blue Ribbon Panel's recommendations. In doing so, the Department shall work with other state agencies, the Commissioner of Public Lands, the University of Washington, the National Oceanic and Atmospheric Agency (NOAA), the Environmental Protection Agency (EPA), Tribes, non-governmental organizations, and the shellfish industry. This effort will require coordination of numerous activities at the national and regional level aimed at protecting and restoring the health of our marine waters.

- b) Work with the University of Washington (UW), the Commissioner of Public Lands, NOAA and other state agencies to establish a coordinating mechanism to: continue the focused and productive interaction between scientists and decision makers to enhance Washington's ability to respond to the problem of acidification; promote sharing of scientific information; and secure efficiencies in implementing the Panel's recommendations. In doing so the Department shall build on existing efforts such as the Puget Sound Strategic Science Plan, the UW coastal and marine research programs, NOAA Ocean Acidification Program, California Current Acidification Network, Pacific Shellfish Institute, and other related efforts.
- c) Craft and execute a memorandum of understanding or other mechanisms among key state and federal agencies, including Departments of Natural Resources and Fish and Wildlife, NOAA, EPA, and U.S. Department of Interior, to support data sharing, collaboration, and leveraging and prioritizing of funds.
- d) Work with the University of Washington to deliver the technical analysis recommended by the panel on the relative importance to ocean acidification of local land-based sources of nutrients and organic carbon and local air emissions.
- e) Reduce nutrients and organic carbon in locations where these pollutants alone, or in combination with other pollutants, are causing or contributing to multiple water quality problems in our marine waters. This effort shall be coordinated with the Directors of the Department of Agriculture and Department of Health, and the Executive Director of the Conservation Commission. In implementing this directive, Ecology with its partners shall prioritize watersheds with the most significant water quality problems, regardless of the source(s) – urban storm water, septic tanks, large and small sewage treatment facilities, or rural runoff from agricultural lands. This effort shall be carried out in consultation with other agencies, affected local and tribal governments, federal agencies, landowners, and the environmental community. These efforts shall:
 - i. build on existing programs;
 - ii. utilize, where appropriate, the voluntary stewardship program established by RCW 36.70A.710; and
 - iii. utilize other approaches, including technical assistance, funding, permitting and enforcement, where most appropriate and effective.
- f) Formally request that EPA begin the assessment of water quality criteria relevant to ocean acidification and encourage EPA to work with scientists from NOAA, Ecology, and other agencies in carrying out this effort.
- g) In consultation with the Department of Commerce and Department of Transportation, review unimplemented actions recommended by the Climate Action Team and identified in the State Energy Strategy and, where appropriate, propose a path forward to implement additional actions to reduce atmospheric

carbon dioxide. In developing the proposed actions, the Department of Ecology shall consult with affected stakeholders.

- h) Work with other agencies, NOAA, universities, the Puget Sound Partnership, WA Sea Grant, shellfish growers, Tribes, non-governmental organizations, and various education and outreach networks to increase understanding of ocean acidification and its consequences among policymakers, interested organizations, and the public.
 - i) Work with other state agencies, the Commissioner of Public Lands, and appropriate federal agencies to engage agricultural, business, and other stakeholders; coastal communities; shellfish and fishery interests; and other affected or interested groups, in developing and implementing local solutions.
3. The Executive Director of the Puget Sound Partnership to work with its partners to advance the implementation of the Panel's recommendations by incorporating the scientific findings, and strategies and actions into the Puget Sound Action Agenda, the Biennial Science Work Plan, and ecosystem monitoring programs, by December 1, 2014.
4. In implementing this Executive Order, the state and its agencies shall invite consultation, on a government-to-government basis, with affected and interested Indian Tribes and Nations in Washington State.
5. The Director of the Department of Ecology, in cooperation with affected agencies, shall provide a progress report to the Governor by December 31, 2013.

Signed and sealed with the official seal of the state of Washington on this 27th day of November, 2012, at Olympia, Washington.

By:

/s/

Christine O. Gregoire
Governor

BY THE GOVERNOR:

/s/

Secretary of State

Threat to Oceans Isn't Fiction

by Representative Jay Inslee

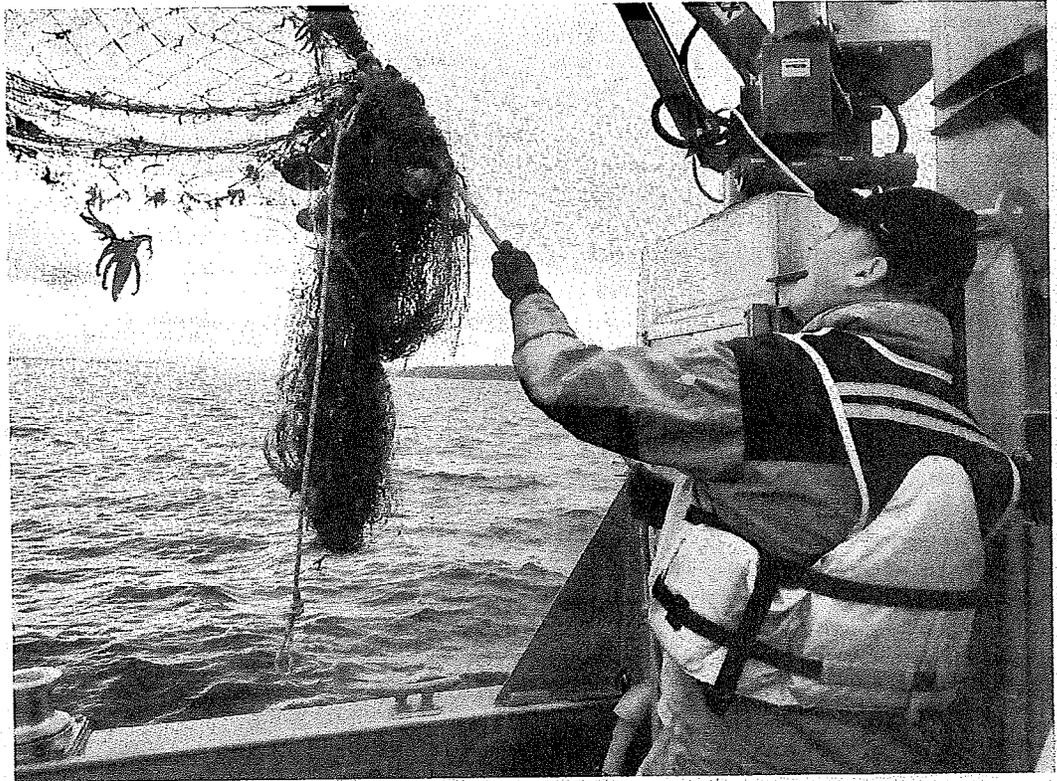
Mark Twain famously noted that truth can be stranger than fiction. A corollary to that notion would be those who work in fiction are often the best truth tellers. Recently, a brilliant physicist and a famous movie star offered their views on threats to our planet Earth. Amazingly, it turns out the movie star was more accurate than the physicist.

Renowned physicist Steven Hawking talked about the risk aliens might someday pose to earth. In contrast, Sigourney Weaver stood before Congress and warned of rising ocean acidification. In this case, we best heed the warning of the movie star rather than the science star, because the actress and her documentary, *Acid Test*, show the immediate threat to our planet if we do not act on carbon pollution – the oceans will die.

Ms. Weaver eloquently narrates *Acid Test*, a tale much more terrifying than her movie *Aliens*. This new documentary explains what is now happening in our oceans: the unrelenting and accelerating acidification of the seas, a disturbing 30% increase in acidity that is already on a path to make the seas so acidic in this century that healthy coral may no longer be able to live anywhere on the planet. This acidity is created as carbon dioxide is spewed from our smoke stacks and tail pipes, carbon dioxide which is then absorbed into our oceans and creates acid by the gigatons.

Thousands of species form their very body structures by precipitating calcium carbonate out of the seas to form their shells, their spines, and their bodies. As the oceans become more acidic, more acidic than they have been for 400,000 years, these citizens of the deep can no longer take up that calcium and form their bodies.

This bright but acidic sea water is more dangerous to humans than the creepy creations in James Cameron's *Aliens* because the sea is a significant source of protein.



Representative Jay Inslee removes derelict gear on a recent NW Straits Initiative outing

That vast food supply is threatened because it is built upon a food chain that could collapse as the bottom links of the chain disappear. The most basic link of that chain are the pteropods, little plankton that swim about by the gazillion, that have begun to show signs of melting in the most acidic waters of the Arctic already.

No bill in Congress can shield us from aliens from a distant galaxy, but there is a bill ready to go that can build a clean energy economy, reduce carbon pollution, and thus save us from ocean acidification. When that bill passes, we will ignite a revolution in clean energy technology that will help wean us from our oil addiction so that we do not destroy the oceans with the carbon pollution we now so needlessly inject into the air, and thus, the waters.

If you'd like to help reduce ocean acidification and climate change, please contact Sarah Rasmussen, Coal-Free Washington Campaign, 206-378-0114 x 316.

Acid Test

The Global Challenge Of Ocean Acidification

Produced by Natural Resources Defense Council

“One hundred years ago our ocean was inexhaustible. You couldn’t touch it. You couldn’t harm it. Now, in 100 years it might be dead”

- **Our oceans are rapidly becoming more acidic due to CO2 emissions caused by burning fossil fuels.**
- **“Since the Industrial Revolution, the oceans acidity has increased by 30%. If we continue to emit CO2 at these rates, we will double the oceans acidity by the end of the century.”**
- **“Science models show that in just a few decades we will profoundly change the ocean’s chemistry. Such conditions haven’t existed since the age of the dinosaurs. This is happening so quickly that many ocean species will be unable to adapt and become extinct.”**
- **The bottom of the food chain, plankton and other species are having difficulty making their shells due to the increase in ocean acidity. Their shells are becoming thinner and dissolving away.**
- **“If the food chain is disrupted at the smallest level it will have a ripple effect and hurt the largest creatures in our ocean”.**
- **“Once the food chain is broken, the ability for all species to survive is threatened. Our oceans could be dead, “a Sea of weeds” in 100 years.”**
- **Warmer ocean temperatures and increasing acidity threaten coral reefs. Coral reefs are home to millions of species. We have ten years to reduce emissions or our coral reefs will be gone in 20-30 years.**
- **We caused this problem and we need to solve it. The solution is to reduce our CO2 emissions. We need to stop burning fossil fuels, and make a transition to green energy.**

Ocean acidification threatens marine life

Sea chemistry changing at record pace due to CO₂

By CRAIG WELCH
The Seattle Times

NORMANBY ISLAND, Papua New Guinea — Katharina Fabricius plunged from a dive boat into the Pacific Ocean of tomorrow. A bleak portrait emerged: Instead of tiered jungles of branching, leafy corals, Fabricius saw mud, stubby spires and squat boulder corals. Snails and clams were mostly gone, as were worms, colorful sea squirts and ornate feather stars.

Instead of a brilliant coral reef like the one living a few hundred yards away, what the

OCEAN HEALTH

A three-part Seattle Times series on the effects of ocean acidification

The cause: carbon dioxide

PART ONE
In this volcanic region, pure CO₂ escapes naturally through cracks in the ocean floor, altering the water's chemistry the same way rising CO₂ from cars and power plants is changing the marine world.

As a result, this isolated bay offers a chilling view of the future of the seas under



Photos by STEVE RINGMAN/Seattle Times
Katharina Fabricius swims through carbon-dioxide bubbles off Papua New Guinea in January. The waters here offer a glimpse of how acidification is likely to transform the seas.

attack what fish eat. Those changes pose risks for food supplies, from the filets used in McDonald's fish sandwiches to the crab legs sold at seafood markets. Both are brought to the world by a Northwest fishing industry that nets half the nation's catch.

Sea-chemistry changes are coming as the oceans also warm, and that's

comes at a price. Reefs are just one way shifting ocean chemistry can harm fish.

In 2007, American biologist Danielle Dixon, then a graduate student at Australia's James Cook University, was studying the important ways clownfish use their noses to navigate the ocean. Then she bumped into James Cook professor Philip Munday.

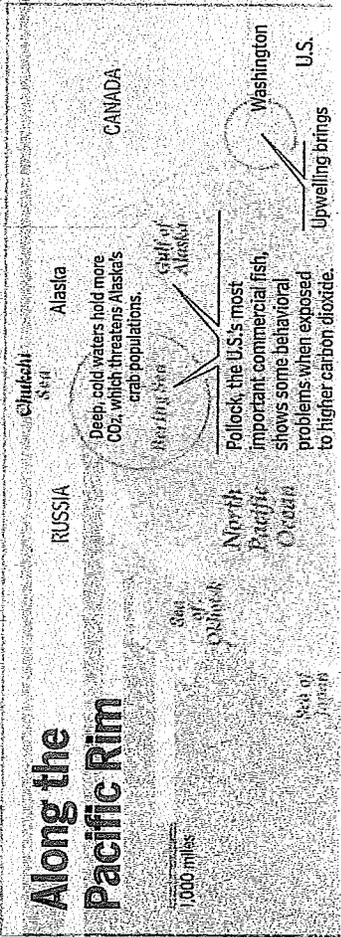
Munday had been trying to see if carbon dioxide hurt fish. The pair decided, on a whim, to see if CO₂ altered how fish use their noses. Their findings were a shock.

Exposed to high CO₂, the fish lost their ability to distinguish among odors. Since clownfish use smell to stay safe, the scientists then exposed baby fish in high-CO₂ water to bigger fish that eat young clownfish.

Normal clownfish always avoided the danger. The exposed fish lost all fear. They swam straight at predators.

Over the next few years, scientists learned CO₂ changed many reef fishes' senses and behaviors: their sight, hearing, the propensity to turn left or right. Most important, that caused them to die two to five times more often.

Last year, researchers figured out why. Elevated CO₂ disrupts brain signaling in a manner common



Along the Pacific Rim

1000 miles

U.S.

Upwelling brings

ocean acidification.

As the burning of coal and natural gas belches carbon dioxide into the air, a quarter of it gets absorbed by the seas, changing ocean chemistry faster than at any time in human history.

To understand how that will alter the seas, The Seattle Times crisscrossed the Pacific Ocean from Papua New Guinea to Alaska, interviewed nearly 150 experts and people

most likely to be affected, and reviewed most of the peer-reviewed studies. The Times found that ocean acidification is helping push the seas toward a great unraveling that threatens to scramble marine life on a scale almost too big to fathom — and far faster than first expected.

Already, it has killed billions of oysters along the Washington coast and at nearby hatcheries. It's helped destroy mussels on some Northwest shores. It is a suspect in the softening of clam shells and in the death of some baby scallops. It already is dissolving tiny plankton, called pteropods, in Antarctica that are eaten by many ocean creatures — and that wasn't expected for 25 years.

The problem: When carbon dioxide mixes with water, it takes on a corrosive power that erodes some animals' shells or skeletons. It also robs the water of ingredients animals use to grow shells in the first place. New science shows ocean acidification also can bedevil fish and the animals that eat them, from sharks to whales and seabirds. Shifting sea chemistry can cripple the reefs where fish live, rewire fish brains and

expected to frequently amplify the impacts. This transformation — once not expected until the end of the century — will be well under way, particularly along the West Coast, before today's preschoolers reach middle age.

"I used to think it was kind of hard to make things in the ocean go extinct," said James Barry, of the Monterey Bay Aquarium Research Institute in California. "But this change we're seeing is happening so fast it's almost instantaneous. I think it might be so important that we see large levels, high rates of extinction."

Globally, the world can arrest much of the damage by bringing down CO2 emissions soon. But the longer it takes, the more permanent these changes become.

"There's a train wreck coming, and we are in a position to slow that down and make it not so bad," said Stephen Palumbi, a professor of evolutionary and marine biology at Stanford University. "But if we don't start now, the wreck will be enormous."

The country isn't doing much about it. Combined nationwide spending on acidification research for eight federal agencies, including grants to university scientists by the National Science Foundation, totals about \$30 million a year — less than the annual budget for the coastal Washington city of Hoquiam, population 10,000.

The federal government has spent more some years just studying sea lions in Alaska. Species' reaction to high CO2 can vary dramatically. Acidification can kill halibut

abalone and some crabs, deform squid and weaken brittle stars while making it tough for corals to grow. It tends to increase sea grasses, which can be good, and boost the toxicity of red tides, which is not. It makes many creatures less resilient to heavy metal pollution.

Roughly a quarter of organisms studied by researchers in laboratories do better in high CO2. Another quarter seem unaffected. But entire marine systems are built around the remaining half of susceptible plants and animals.

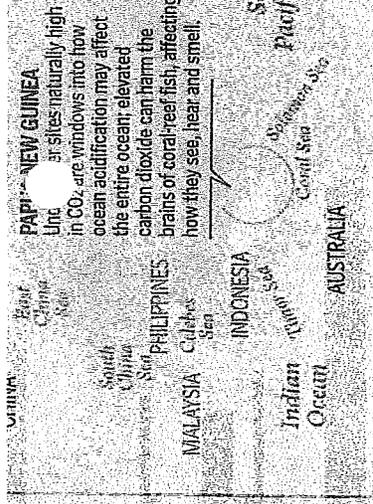
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Graphic: Mark Nowlin, The Seattle Times © 2013 MCT

to save its business, one family moves part of its oyster operation from Willapa Bay in Washington to Hawaii.

clownfish story in other words, was not just about clownfish. So scientists have been testing the most important fish in America: pollock. Fishermen in Alaska catch roughly 3 billion pounds of pollock a year in the North Pacific. It gets carved into fish sticks, sold overseas as imitation crab or packed in blocks. Seafood companies reel in \$1 billion a year from that catch.

After tracking clownfish research, government scientists in Oregon exposed young pollock to high CO2 and introduced the scent of what they eat. The fish struggled to recognize their food.

"In some of the very early work, it looks like pollock may show some of the same kinds of deficits that are seen in coral-reef fishes," said NOAA biologist Thomas Hurst.

To understand the future of the marine food web, government computer modelers have been studying how sea-chemistry changes could reverberate through the ocean.

Their initial results, looking at just the U.S. West Coast, are disturbing. "Right now, for acidification in particular," said Isaac Kaplan, a NOAA researcher in Seattle, "the risks look pretty substantial."

Kaplan's early work projects potentially significant declines in sharks, skates and rays, some types of flounder, rockfish and sole, and Pacific whiting, also known as hake, the most frequently caught commercial fish off the coasts of Washington, Oregon and

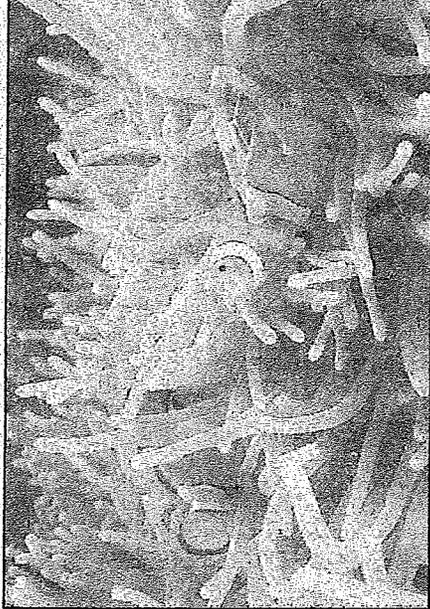
grown 30 percent more acidic since the dawn of the industrial revolution — 15 percent since the 1990s. By the end of this century, scientists predict, seas may be 150 percent more acidic than they were in the 18th century.

In fact, the current shift has come so quickly that scientists five years ago saw chemical changes off the U.S. West Coast that hadn't been expected for half a century.

Meanwhile, the Arctic and Antarctic are shifting even more rapidly because deep, cold seas absorb more CO2. The West Coast has seen consequences sooner because strong winds draw its CO2-rich water to the surface where vulnerable shellfish live.

Sea chemistry in the Northwest already is so bad during some windy periods that it kills young oysters in Washington's Willapa Bay. In less than 40 years, scientists predict, half the West Coast's surface waters will be that corrosive every day. These chemical changes threaten to reduce the variety of life in the sea.

Study after study shows the same thing — the more reefs collapse and fleshy algae spreads, the more fish



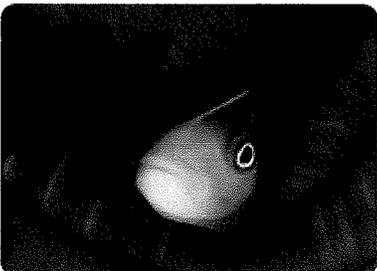
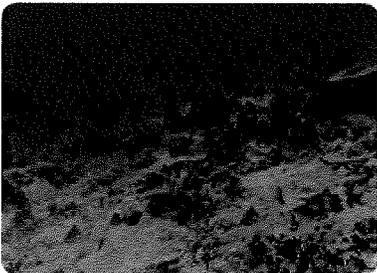
Clownfish swim through an anemone near Dobu Island, Papua New Guinea. Carbon dioxide can alter how clownfish see, hear and smell.

[Home](#) > Fast Facts

Fast Facts

Coral Reefs are being lost twice as fast as Rainforests

- One third of all **carbon dioxide emitted by humanity** has been **absorbed by the world's oceans**. This is making them more acidic than they have been for tens of millions of years.
- One of the greatest impacts that Ocean Acidification is having is on **reef building corals**, which are known as a 'framework species'. Without corals, reefs cannot exist. Ocean Acidification is already **slowing their growth rates**. Left unchecked they will soon stop growing and erode away.
- Direct effects on some important species of plankton and the sensitive larval stages of many marine organisms are now being reported in **globally respected scientific literature**.
- Ocean plankton **provide 50% of the oxygen that we breathe**. Due to Global Warming, that capacity to provide oxygen and support the fundamental food chains of the ocean has **decreased by 6%** over the last three decades.
- As oceans have warmed, oceanic nutrient deserts have **expanded by 6.6 million square km's** over the past two decades.
- There are approximately 10,000 Coral Reefs and **we are destroying one every other day**.
- Coral Reefs are being lost **more than twice as fast as the rainforests**. Current estimates reveal that we will lose the other 50% over the next 40 years.
- The Great Barrier Reef generates **over 6.5 billion dollars in tourism** revenue and 63,000 jobs.
- Left unchecked Ocean Acidification **could trigger a Great Mass Extinction Event**. Growing evidence suggests that four of the five Great Mass Extinctions have been associated with rapidly acidifying oceans – due to spikes in the concentration of atmospheric CO₂.



Date: 10-29-13

To: The Energy Facility Site Evaluation Council (EFSEC)

Public Comment on: Proposed Tesoro Savage Port of Vancouver Oil Terminal

From: Virginia Nugent, 5111 NE 125th ST. Vancouver WA 98686.

EFSE Council,

To back up my public comments I am submitting the following information for your thoughtful consideration.

1. A copy of my 10-29-2013 oral public comment.
2. An article from Wikipedia, titled, DOT -111 tank car.
3. An article titled, Industries fight Safety Retrofit of Rail Cars. The Columbian, 7-30-2013.
4. An article titled, Michaud, Pingree push for Lac-Megantic Tanker REdesign. Bon Maine Politics 7 31,2013.
8. An article titled, Rail safety advocate calls for DOT-111 the "Ford Pinto" of Rail Cars.. Bon Maine Politics 8-28-2013.
9. An article titled, Report: Design Flaws in Rail Tankers Involved in the Quebec disaster first discovered in 1991. Bon Maine Politics 7-29-2013.

RECEIVED

OCT 29 2013

**ENERGY FACILITY SITE
EVALUATION COUNCIL**

Date: 10-29-13

To: The Energy Facility Site Evaluation Council (EFSEC)

Public Comment on: Proposed Tesoro Savage Port of Vancouver Oil Terminal

From: Virginia Nugent, 5111 NE 125th ST. Vancouver WA 98686.

EFSE Council,

I have serious concerns about the safety of the DOT-111 rail tank cars that were involved in the 2013 fiery, fatal, explosion of a runaway train derailment in Canada and other derailments.

The soda can shaped DOT-111 tank car used for transporting a wide spectrum of dangerous goods, has a tendency to split open during derailments. This design flaw has been known since 1991 and nothing has been done about it. Sixty nine % of US rail tank cars are of the DOT-111 type.

The rail industry is fighting the government's newly proposed safety requirements to retrofit these poorly designed tankers, because it would cost too much. The railroad industry's desire to put profits, above public safety should be a deep concern for all of us.

It will only take one derailment along the Columbia River Gorge to cause devastating damage to our beautiful Columbia River and the adjacent communities along the way. It will cost billions to clean up the mess of a crude oil spill, and perhaps cause irreversible damage to the environment.

I am requesting that you prohibit the use of DOT -111 tanker cars in Washington state unless they have been retrofitted to appropriate safety standards. To do anything less, is a risk we simply can't afford.

Thank you,

Virginia Nugent

DOT-111 tank car

From Wikipedia, the free encyclopedia

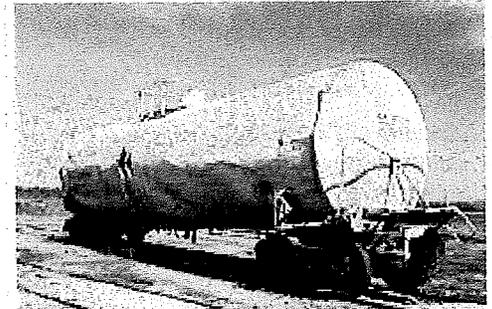
For rail transport, the U.S. **DOT-111 tank car**, also known as the **CTC-111A** in Canada,^[1] is a type of non-pressure tank car in common use in North America. Tanks built to this specification must be circular in cross section, with elliptical, formed heads set convex outward.^[2] They have a minimum plate thickness of $\frac{7}{16}$ inches (11.1 mm)^[3] and a maximum capacity of 34,500 US gallons (131,000 L; 28,700 imp gal).^[4] Tanks may be constructed from carbon steel, aluminum alloy, high alloy steel or nickel plate steel^[5] by fusion welding.^[6]

Up to 80% of the Canadian fleet,^[1] and 69% of U.S. rail tank cars are DOT-111 type.^[3] DOT-111A cars are equipped with AAR Type E top and bottom shelf Janney couplers designed to maintain vertical alignment to prevent couplers from overriding and puncturing the tank end frames. Many of these transport a wide spectrum of dangerous goods, including 40,000 cars in dedicated service carrying 219,000 car loads of ethanol fuel annually in the U.S.^[3]

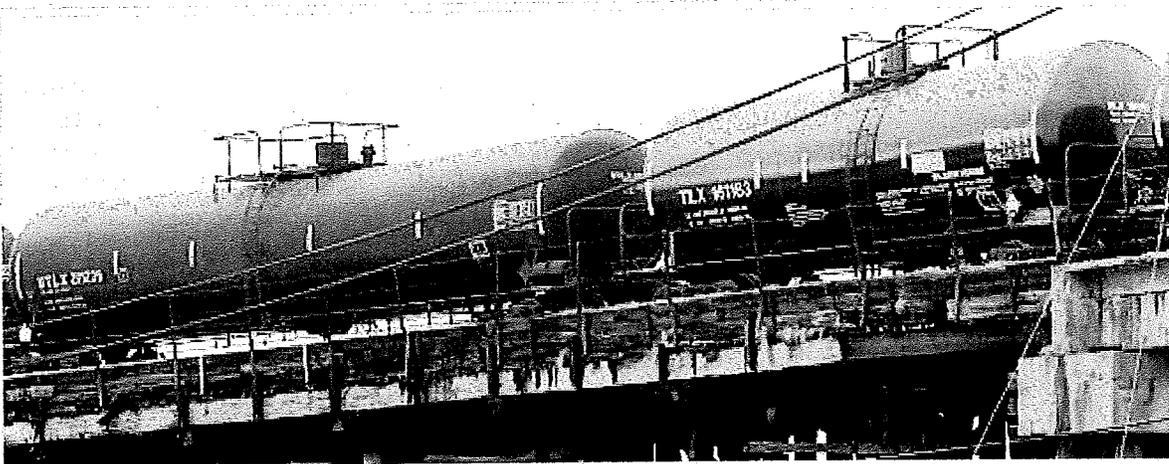
Hydraulic fracturing of new wells in the shale oil fields in the interior of North America has rapidly increased use of DOT-111 cars to transport crude oil to existing refineries along the coasts.^[7] The Montreal, Maine and Atlantic Railway runaway train in the Lac-Mégantic derailment of 2013 was made up of 72 of these cars,^{[8][9]} some of which ruptured, releasing explosively^[10] their cargo of Bakken formation light crude oil, resulting in a large fire and mass casualty event.



A DOT-111 tank car, specification 111A100W1, constructed by fusion welding carbon steel. This car has a capacity of 30,110 US gallons (113,979 L), a test pressure of 100 psi (690 kPa), a tare weight of 65,000 pounds (29,500 kg) and a load limit of 198,000 pounds (89,800 kg).



A damaged DOT-111A tank car. Note the AAR Type E double shelf coupler required for transporting dangerous goods.



Two different 111A100W1 specification tank cars, both with 263,000-pound (119,000 kg) gross rail load. On the left is a 27,399-US-gallon (103,716 L) capacity tanker with a load limit of 196,500 pounds (89,100 kg), making it suitable for low specific gravity liquids. On the right, a lighter, smaller 16,640-US-gallon (62,989 L) capacity tanker has a higher load limit of 204,300 pounds (92,700 kg). It is stenciled and placarded for 50% sodium hydroxide aqueous solution, which has a specific gravity of 1.5. This car is also equipped with an insulating jacket and external heating pipes to melt frozen contents if necessary.

Contents

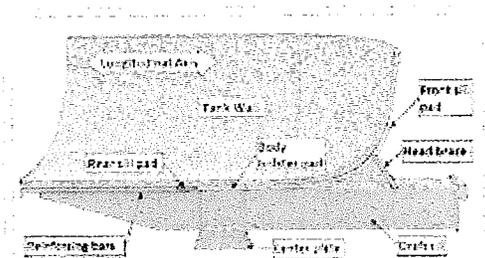
- 1 Construction
- 2 Regulations
- 3 Accident investigations
 - 3.1 Completed
 - 3.2 Ongoing
 - 3.2.1 Lac-Mégantic derailment
- 4 New construction standards
- 5 See also
- 6 References

Construction

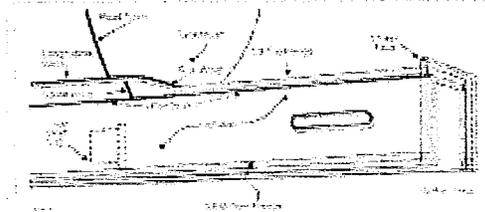
The DOT-111 tank cars are constructed with a draft sill design. Draft sills incorporate the draft gear behind each coupler that is designed to transfer longitudinal draft (tension) and buff (compression) forces throughout the length of a train. The draft sills are attached to steel pads that are attached to the tank. If the cars do not incorporate a continuous center sill extending the entire length of the car, the two draft sills at each end are referred to as stub sills, and the tank carries draft forces between couplers. In this case, reinforcing bars may be extended underneath the tank between the draft sills. Body bolsters and their associated body bolster pads centered above the railcar trucks support the tank and protect it against lateral forces. The draft sill center plate serves as the attachment point between the tank car body and the truck assembly. (See schematic cutaway at right.)^[11]

The body bolster pads and front sill pads are attached to the tank with fillet welds. At the rear edge of the front sill pad, a butt weld attaches the front sill pad to the body bolster pad and to the fillet weld attaching the body bolster pad to the tank shell. Fillet welds at the interior and exterior sides of the head brace attach the head brace to the front sill pad, and an exterior fillet weld attaches the head brace to the draft sill. To the rear of the head brace, the draft sill is welded to the front sill pad, body bolster pad, and reinforcing bars.^[11]

Because rail cars have no front or rear, for descriptive purposes, the ends of the cars are designated "A" and "B." The B end of the car is the end equipped with the wheel used to manually set the car's hand brakes. The end without the brake wheel is the A end. As trains are assembled, either end of a tank car may be placed in the front or rear position. The tank shells are constructed of several rings welded together, with six rings in a typical configuration. By convention, ring-1 is at the A end, and if there are six rings, ring-6 is at the B end.^[11] The tank rings can be welded in a "straight barrel" configuration, or with a "slope bottom" sloping down to a bottom outlet valve at the center of the tank.^[12]



Schematic cutaway view (not to scale) of end of tank car showing major components.



Draft sill structural and weld details

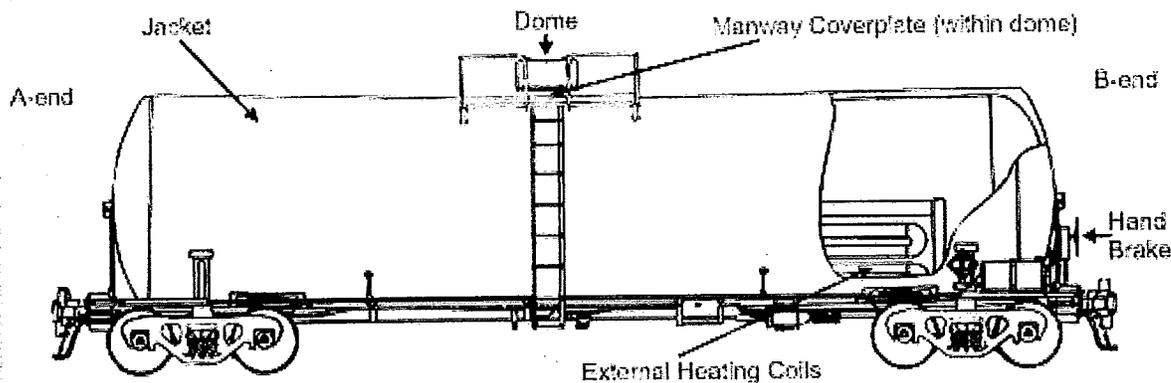


Diagram of a DOT-111J100W1 tank car with an insulating jacket and external heating coils. It has a capacity of 20,000 US gallons (76,000 L; 17,000 imp gal).

Regulations

The relevant US regulatory framework is found at 49 CFR Part 179. An overview of "49 CFR Part 179 - SPECIFICATIONS FOR TANK CARS" is available online.^[13] while the Means of Containment of the Transport of Dangerous Goods Regulations of Canada is found in Part 5.^[14] The US regulations call for the employment DOT-xxx containment standards, where 'x' substitutes to a numeral between 0 and 9, while the Canadian TDG Regulations have latterly a CSA/CGSB-xx.xxx container standard nomenclature, although as noted by Powers,^[1] the DOT-111 standard seems to apply in Canada.

A 2013 Senate of Canada committee report proposed mandatory minimum insurance for rail companies.^[15] Currently the railway industry lags the pipeline industry in value of mandatory insurance coverage, to a ratio of 1:40.^[15]

Railway operators are not required to inform Canadian municipalities about hazardous goods in transit.^[16] The 2013 Senate committee (see above) recommended the creation of an online database with information on spills and other incidents from rail cars.^[15]

DOT-112 tank cars and DOT-114 tank cars have been required since 1979 under Regulation SOR/79-101 of the Canada Transportation Act for the transportation of gases such as propane, butane, or vinyl chloride.^[17] Transportation Safety Board of Canada Railway Investigation Report R94T0029^[18] section 1.13.1 documents DOT-112 tank car and DOT-114 tank car standards: the DOT-111 tank "cars are not considered to provide the same degree of derailment protection against loss of product as the classification 112 and 114 cars, designed to carry flammable gases." DOT-111 tank cars may have been employed in trains such as those of the Lac-Mégantic derailment because crude oil is largely not a gaseous product at standard temperature and pressure.

Accident investigations

A report on "The State of Rail Safety in Canada" was commissioned by Transport Canada in 2007.^[19] The report contains a 10-year statistical examination of its subject. Section 6 is entitled "Accidents involving dangerous goods". A formal review of the Railway Safety Act was empanelled by the Minister in February 2007.^[20] The review, which was tabled in Parliament later that year, has a different take on the subject.

Completed

During a number of accident investigations over a period of years, the U.S. National Transportation Safety Board has noted that DOT-111 tank cars have a high incidence of tank failures during accidents.^[3] Previous NTSB investigations that identified the poor performance of DOT-111 tank cars in collisions include a May 1991 safety study as well as NTSB investigations of a June 30, 1992, derailment in Superior, Wisconsin;^[21] a February 9, 2003, derailment in Amara, Illinois;^[22] and an October 20, 2006, derailment of an ethanol unit train in New Brighton, Pennsylvania.^[23] In addition, on February 6, 2011, the Federal Railroad Administration (FRA) investigated the derailment of a unit train of DOT-111 tank cars loaded with ethanol in Arcadia, Ohio, which released about 786,000 US gallons (2,980,000 l; 654,000 imp gal) of product.^[24] The Transportation Safety Board of Canada also noted that this car's design was flawed

Market REPORT Details on Page C6	DOW 15,521.97 -36.86	NASDAQ 3,599.14 -14.03	S&P 500 1,685.33 -6.32
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BUSINESS

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Industries fight safety retrofit of rail cars

Oil firms, railroads cite technical challenges, costs

By MATTHEW DALY
Associated Press

WASHINGTON — The oil industry and U.S. railroads are resisting the Obama administration's attempt to boost safety standards for the type of rail car involved in a fiery, fatal explosion in Canada, citing costs and technical challenges.

Industry groups say it is impractical to retrofit tens of thousands of existing tank cars used to haul oil, even as they have adopted voluntary standards to ensure that cars ordered after October 2011 meet tough

requirements recommended by federal transportation experts following a deadly ethanol train derailment and explosion in Illinois two years earlier.

A proposed rule to beef up rail car safety was initially scheduled to be put in place last October, but it has been delayed until late September at the earliest. Officials blamed the delay on the time it has taken to seek and review petitions from industry groups and the public. A final rule isn't expected until next year.

The agency is considering a plan intended to fix a dangerous design flaw in a rail car commonly used to haul oil and other hazardous liquids from coast to coast. The soda-can shaped car, known as the DOT-111, has

come under scrutiny from safety experts because of its tendency to split open during derailments and other major accidents.

Defects in the car's structure were noted as far back as 1991. The rail industry estimates that retrofitting older cars would cost at least \$1 billion, not including lost-service time for cars removed from the fleet for repairs. "By comparison, derailment costs totaled approximately \$64 million over the past five years," the Association of American Railroads said in a 2011 petition to the federal government. Extra weight from retrofitting cars might even cause overloads, potentially

RAIL CARS, Page C7

Port releases Tesoro-Savage lease

It requires firms to have \$40 million in liability insurance

By AARON CORVIN
Columbian staff writer

The Port of Vancouver on Monday released a copy of the lease it approved for 42 acres last week with Tesoro Corp. and Savage Companies to build the largest oil-handling terminal in the Pacific Northwest.

The 429-page document shows the companies are required to maintain \$25 million in "pollution legal liability insurance," which would cover, among other

things, claims for "bodily injury, property damage (including third-party claims)" and "natural resources damages."

The pollution insurance would come on top of \$15 million in liability insurance, according to the lease. Citing the "deliberative process" exemption under state law, the port did not provide a copy of the draft lease before commissioners unanimously approved it on July 23. The port released the document after media,



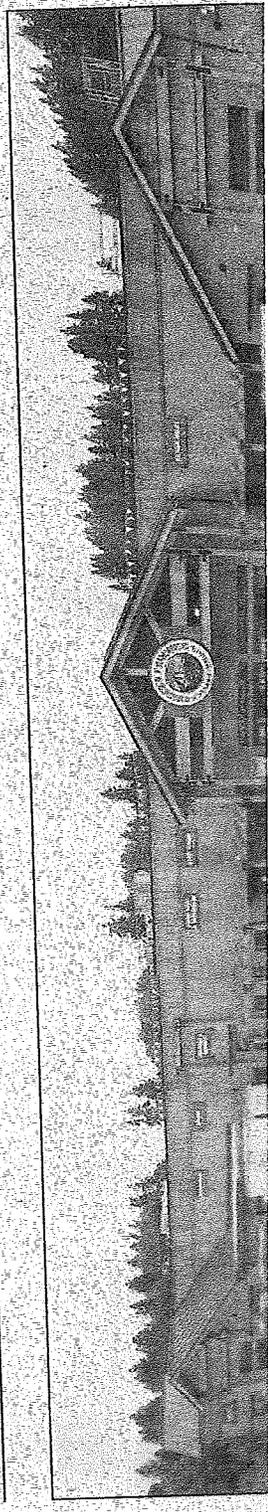
On the Web
Read the 429-page Tesoro-Savage lease.
columbian.com/documents

including The Columbian, made formal requests under state public records law. The port redacted parts of the lease agreement.

The oil terminal would handle up to 380,000 barrels of crude per day, hauled by train from North Dakota's Bakken site.

Commissioners approved the lease despite overwhelming public testimony against the oil terminal. But it was only a first step. That's because the Tesoro-Savage proposal must undergo an examination by the state Energy Facility Site Evaluation Council, which would make a recommendation to Gov. Jay Inslee, who has final say.

Amazon.com looks to fill 7,000 jobs



The car's underlying design makes it prone to damage and catastrophic loss of hazardous materials.

Two rules?

The pipeline safety agency said in a report this month that the delay was needed to allow "additional coordination" among officials and interested groups, including rail and oil industry representatives, who have lobbied against a rule change for existing cars.

Among the possibilities: splitting the proposed rule into one that addresses new tank cars and another that addresses possible retrofits.

In comments submitted to the pipeline safety agency, industry groups asked the Obama administration to focus its rule-making on cars built after October 2011.

Requiring retrofits "could increase compliance costs significantly," the American Petroleum Institute, the Renewable Fuels Association, the American Chemistry Council and other groups said.

An unattended Montreal, Maine & Atlantic Railway train came loose July 6 and derailed down a 7-mile incline before derailling and hitting in Lac-Mégantic, the explosion killed at least 47 people.

Seventy-two of the trains year, U.S. railroads moved 178,000 carloads of crude oil, and at least five exploded, setting off massive explosions that derailed the small lakeside town of 6,000 people. The DOT-111 cars were the DOT-111

estimates that as many as 140,000 carloads of crude oil will be shipped on Canadian's tracks this year, up from 500 carloads in 2009. Much of that increase is from oil produced in the Bakken oil patch in North

While freight rail should not be "demonized," increased traffic of rail cars carrying crude oil "war-rants increased safety measures, and that begins with putting the safest, most up-to-date tank cars on the tracks," Schumner said at a news conference last week in Albany, N.Y.

Sen. Charles Schumer, D-N.Y., is urging the Obama administration to phase out DOT-111 tank cars or require freight rail carriers to retrofit them to prevent potential explosions or spills.

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Dakota and surrounding areas. The train that crashed in Quebec was carrying oil from North Dakota to a refinery in New Brunswick, Canada.

The DOT-111 tank car represents more than two-thirds of the rail fleet carrying crude oil.

The Associated Press reported in September that the DOT-111 tank car has been allowed to haul hazardous liquids from coast to coast even though transportation officials were aware of the design flaw. The AP had reviewed 20 years of federal rail accident data involving DOT-111 cars used to haul ethanol and found that the cars had been breached in at least 40 serious accidents since 2000. In the previous decade, there were just two breaches.

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Solution: 13 letters

ORTHODONTISTS

spell the Wonderword

HOW TO PLAY: All the words listed below appear in the puzzle — horizontally, vertically, diagonally, even backward. Find them and CIRCLE THEIR LETTERS ONLY. DO NOT CIRCLE THE WORD. The leftover letters

WONDERWORD

By DAVID OUELLET

non devices" that would be bought in addition to PCs rather than replacements to traditional desktops and laptops are now saying the company's growth depends on low-power chips for portable devices. Global PC shipments fell 10.9 percent in the second quarter to 76 million, the fifth consecutive quarterly drop, market researcher Gartner Inc. said earlier this month. Sales slid from a year earlier in all regions, including a 1.4 percent drop in the U.S. Intel's PC-chip group, its largest division, had second-quarter sales of \$8.1 billion, down 7.5 percent from the same quarter a year earlier. The company was unable to compensate for that drop with an increase of less than 1 percent in server-chip sales, to \$2.74 billion. Intel's market share in smartphones is "close to zero today," and "you would measure our share in tablets as being some low number," Smith said. The company is aiming to change that by gearing its manufacturing more to producing chips that don't quickly drain batteries, he said. "We're targeting those designs and really focused on that with the full might of the company and the full power of our manufacturing engine. Intel doesn't enter into markets to have small amounts of share."



Politics

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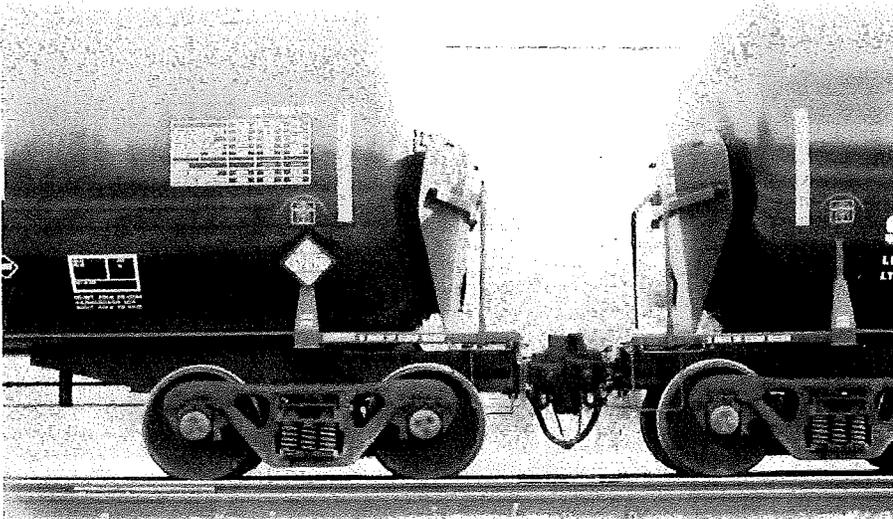
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Michaud, Pingree push for Lac-Megantic tanker redesign

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Brian Feulner | BDN

Tankers remain on a rail off Route 2 in Hermon on Friday. *Buy Photo*



Nick Sambides Jr. Follow on Twitter Find on Facebook Posted July 31, 2013, at 4:53 p.m.

The state's congressional leaders are pushing federal authorities to require rail shippers to correct design flaws in oil tankers that exploded in a Quebec town on July 6, killing 47 people, they said Wednesday.

U.S. Reps. Mike Michaud and Chellie Pingree encouraged Pipeline and Hazardous Materials Safety Administration chief Cynthia Quarterman during a meeting Wednesday to authorize improvements to the 40,000 flawed DOT-111 tanker cars in service now.

"It is still too early in the investigation to determine exactly how this tragedy could have been prevented, [but] the design flaws of DOT-111 tank cars are well documented," Michaud and Pingree said in a joint statement, calling the rulemaking process "frustratingly slow."

"We need to avoid any further delays, especially given the exponential growth of hazardous material shipments. Whether it's oil, ethanol, or some other hazardous material travelling on our nation's tracks, the American people deserve to know that these shipments are being carried in

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Whit Richardson

tanker cars that are designed to the highest safety standards," they said.

The safety administration announced Monday that it needs another year to apply recommendations from the National Transportation Safety Board that would fix flaws, first discovered in 1991, that cause the DOT-111 rail car to crack open during collisions and derailments.

The runaway Montreal, Maine and Atlantic Railway train that exploded in Lac-Megantic had 72 DOT-111 cars carrying light crude oil. Several cars cracked open and exploded when the train derailed.

The disaster has forced the closure of the track line, the layoff of at least 85 railway workers, and safety reviews in Canada and the U.S.



ional

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Thirteen of 19 tank cars carrying denatured fuel ethanol, a flammable liquid, caught fire, killing one nearby motorist, injuring seven others and doing \$7.9 million in damage, according to the National Transportation Safety Board report on the accident.

The report lists five accidents or studies involving the DOT-111 tank cars, which are unpressurized, dating to May 1991 in which investigators found tank head and shell breaches, damaged valves and fittings, or both.

"This represents an overall failure rate of 87 percent and illustrates the continued inability of DOT-111 tank cars to withstand the forces of accidents, even when the train is traveling at 36 mph, as was the case in this accident," the report on the 2009 incident states.

Quarterman had no public response to the meeting with Michaud and Pingree, but her agency and the Federal Rail Administration announced Tuesday that they will review

federal regulations regarding rail transport of hazardous materials Aug. 27-28 in Washington, D.C.

Similar articles:

7.12.2013 Quebec explosion prompts Michaud, Pingree to call for review of Maine's rail infrastructure	8.2.2013 Michaud, Pingree submit bill requiring 2-person crews on freight trains	7.29.2013 Report: Design flaws in rail tankers involved in Quebec disaster first discovered in 1991	7.24.2013 Michaud, Pingree meet with NTSB chairman, LePage to attend memorial for Lac-Megantic victims	7.18.2013 Feds promise more inspections of Maine railways after Quebec disaster
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by Taboola

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Rail safety advocate calls DOT-111 the 'Ford Pinto' of rail cars

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Mathieu Belanger | REUTERS

The remains of a burned train are seen in Lac-Megantic, Quebec in this July 8, 2013 file photo.

Posted Aug. 28, 2013, at 9:34 p.m.

WASHINGTON — The head of a rail safety group Wednesday compared a widely used train tank car to the recalled Ford Pinto in urging U.S. regulators to require upgrades that would prevent accidents like a Quebec derailment that killed 47 people.

Karen Darch, co-chairman of a coalition of communities around Chicago formed in response to a merger of railroads, said regulators dragged their feet in mandating safety improvements to the car, known as the DOT-111, amid evidence showing the tankers are more prone to rupture in a derailment than other types.

"Unfortunately, your combined track record has been less than stellar when it comes to improving the crash-worthiness of the DOT-111 tank car — the primary car used in the transport of dangerous hazmat like crude and ethanol in this country and in Canada," Darch, mayor of Barrington, Ill., told a panel of Federal Railroad Administration and Pipeline and Hazardous Materials Safety Administration officials.

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Regulators had known since 1991 that the rail car has "a high propensity to rupture in derailment scenarios," she said in comparing it to Ford's Pinto, which in the 1970s was recalled amid questions that a flawed fuel tank would catch fire in a rear-end collision.

In response to safety concerns, U.S. rail companies since 2011 have added safety features to new DOT-111s to reduce the risks of a spill or catastrophic accident. Regulators are reviewing whether more steps are needed.

Cheryl Burke, a rail safety executive for Dow Chemical Co. in Midland, Mich., said retrofitting all DOT-111s in use was "impractical if not impossible."

While she said Dow supports efforts to make rail transport safe, tank cars can't be expected to be "completely impervious to the substantial forces that occur in significant rail accidents, particularly high-speed derailments."

Regulators should do a risk analysis to determine whether particular rail fleets should be upgraded, Burke said.

Deborah Hersman, chairman of the National Transportation Safety Board, said in a 2012 letter to regulators that the DOT-111 had a "high incidence of tank failures during accidents."

According to the NTSB, about 69 percent of the U.S. rail tank car fleet are DOT-111s. A Canadian Senate committee said in a report this month the government should consider accelerating the phaseout of tank cars.

U.S. regulators are reviewing safety rules for transporting hazardous materials in response to the July 6 train derailment and explosion in Lac-Mégantic, Quebec. Some of the 72 cars, which were carrying crude from North Dakota's Bakken formation to a New Brunswick refinery, were DOT-111s.

U.S. and Canadian regulators this month imposed emergency rules designed to prevent trains that are parked and unattended from rolling free. The Federal Railroad Administration now prohibits operators from leaving trains hauling hazardous materials without an operator, unless receiving prior authorization, and requires employees to report to dispatchers the number of hand brakes used.

Canadian investigators have said that not enough force was applied to the hand brakes to the train in Quebec to keep it from moving.

The U.S. Railroad Safety Advisory Committee, which develops new safety standards and includes officials from the government, industry and labor unions, is also studying whether further actions are required. It is meeting Thursday to discuss the issue.

The panel convened Wednesday took public testimony about what changes regulators should make.

James Stem, national legislative director for Sheet Metal, Air, Rail and Transportation union, said railroads should be required to have more than one worker on a train.

The train in Quebec, which was operated by Montreal, Maine & Atlantic Railway Ltd., had a crew of one and was parked overnight when it broke free and rolled into the town, where it derailed and exploded.

The number of crude shipments by rail has increased by 443 percent since 2005. North Dakota accounts for much of the increase. About 75 percent of its oil heads to refineries by rail, with pipelines covering the remainder.

Robert Fronczak, assistant vice president for environmental and hazmat safety and operations at the Association of American Railroads, encouraged regulators to ensure shippers accurately describe the types of tank cars being used along with the cargo being carried.

Some rail operators may be using cars certified for the least hazardous loads to carry fuel that warrants a more robust rail car, he said. The government should provide some assurance that "the commodities being transported are being transported correctly and being declared correctly," Fronczak said.

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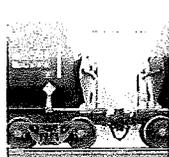


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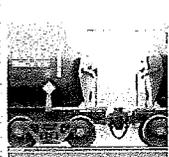
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Christinne Muschi | Reuters

A view of the devastation in the downtown core where burnt tankers sit in Lac Megantic, Quebec July 12, 2013.



Nick Sambides Jr.
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Posted July 29, 2013, at 4:35 p.m.
Last modified July 29, 2013, at 8:31 p.m.

A plan to correct design flaws in the tanker cars coupled to the explosive runaway train that destroyed the center of a Canadian town earlier this month won't be implemented for a year, officials said Monday.

As the head of the company involved in the disaster said the freight hauler is contemplating filing for bankruptcy protection and further layoffs, the Pipeline and Hazardous Materials Safety Administration announced it needs another year to apply recommendations from the National Transportation Safety Board that would fix flaws first discovered in 1991 that causes the DOT-

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"We are at the very beginning phase of addressing a change in the rules. It takes some time," Delcambre said Monday. "The thing is, because we change rules that affect the public and the regulated industry, we want to make sure we get enough feedback and information to do a cost savings analysis to see if it is actually cost-worthy to pass the rule.

"Sometimes what may be proposed could be excessively costly to industry. We have to weigh that aspect of rulemaking, [but] we haven't even got to the point yet of doing a cost analysis," he added.

The safety board's recommendation came not in response to the July 6 runaway freight train in Lac-Megantic, Quebec, which killed an estimated 50 people, but from a 2009 accident in which a Canadian National Railway Company freight train traveling 36 mph, derailed at a rail grade crossing in Cherry Valley, Ill., in June 2009.

Thirteen of 19 tank cars carrying denatured fuel ethanol, a flammable liquid, caught fire, killing one nearby motorist, injuring seven others and doing \$7.9 million in damage, according to the NTSB report on the accident.

The report lists five accidents or studies involving the DOT-111 tank cars, which are unpressurized, dating back to May 1991 in which investigators found tank head and shell breaches, damaged valves and fittings, or both.

"This represents an overall failure rate of 87 percent and illustrates the continued inability of DOT-111 tank cars to withstand the forces of accidents, even when the train is traveling at 36 mph, as was the case in this accident," the report on the 2009 incident states.

U.S. Reps. Mike Michaud and Chellie Pingree, both D-Maine, will be meeting with the Pipeline and Hazardous Materials Safety Administration on Wednesday. They are among several federal or state officials meeting with agencies handling rail safety or pressing for safety reviews.

The Maine Department of Transportation is reviewing state rail service per an executive order from Gov. Paul LePage. The Federal Rail Administration has been reviewing tracks at several points over the last week.

Rail industry officials also agreed to implement new safety standards for tank construction, Pingree said.

"The fact remains that there are about 40,000 tank cars out there that are already in service that don't meet those new standards. It's important to get those cars upgraded as soon as is practicably possible and it is an issue I expect will come up when we meet with the head of PHMSA this week," Pingree said in a statement on Monday.

"The federal rulemaking process is complex and can be frustrating, especially when considered in the wake of a tragedy like the one in Quebec," Michaud said in a statement, adding that he and Pingree were calling upon the administration to issue a new rule improving tanker design.

"The agency needs to get this right so that we can avoid future tragedies," Michaud said.

U.S. Sen. Angus King said he was disappointed in how long it is taking for the safety changes to be made.

"As PHMSA continues to study the proposed changes, it should also be pursuing other potential corrective safeguard measures that can be implemented immediately to protect against tragedies like the one witnessed at Lac-Megantic," King said in a statement.

The accident forced the Hermon-based railroad that owns the ill-fated train to lay off 79 of 179 workers as the Lac-Megantic tracks, key to its Maine-to-Montreal service, remain closed. The president of Montreal, Maine and Atlantic Railway parent company Rail World Inc., Ed Burkhardt, said Monday that Canadian investigators have given no timeline for the line's reopening.

The continued closure could force more layoffs or even, as some industry observers predict, the company's filing for bankruptcy. A check of the nationwide bankruptcy court database on Monday showed no filings.

Bankruptcy or more layoffs "obviously are possible and we are looking at our alternatives right now," Burkhardt said Monday. "We have several alternatives that we are studying.

"We are going to make some adjustments based on our current operation," he added in reference to layoffs. "There could be some minor adjustments."

MMA customers supply all rail cars used to haul their products, Burkhardt said.

The NTSB report cited poor performance of DOT-111 tank cars in a May 1991 safety study and investigations of a June 30, 1992, derailment in Superior, Wisc.; a Feb. 9, 2003 derailment in Tamaroa, Ill.; and an Oct. 20, 2006, derailment of an ethanol unit train in New Brighton, Pa., the report states.

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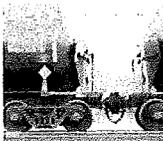
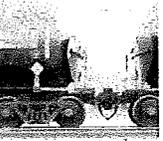
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FRA also investigated the derailment of a train of DOT-111 tank cars loaded with ethanol in Arcadia, Ohio, which released about 786,000 gallons of product on Feb. 6, 2011, the report states.

The incidents moved safety board officials to recommend that tank cars handling denatured fuel ethanol and crude oil have enhanced tank head and shell puncture resistance systems and top fittings protection that exceed the DOT-111 tank cars, the report states.

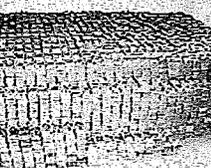
Costs for upgrading the tank cars were not provided.

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