

The yeas and nays are mandatory under the rule.

The clerk will call the roll.

The legislative clerk called the roll.

Mr. CORNYN. The following Senator is necessarily absent: the Senator from Kansas (Mr. MORAN).

The PRESIDING OFFICER. Are there any other Senators in the Chamber desiring to vote?

The yeas and nays resulted—yeas 65, nays 34, as follows:

[Rollcall Vote No. 90 Leg.]

YEAS—65

Ayotte	Harkin	Murray
Baldwin	Heinrich	Nelson
Begich	Heitkamp	Portman
Bennet	Heller	Pryor
Blumenthal	Hirono	Reed
Booker	Johnson (SD)	Reid
Boxer	Johnson (WI)	Rockefeller
Brown	Kaine	Sanders
Cantwell	King	Schatz
Cardin	Kirk	Schumer
Carper	Klobuchar	Shaheen
Casey	Landrieu	Stabenow
Coats	Leahy	Tester
Collins	Levin	Toomey
Coons	Manchin	Udall (CO)
Corker	Markey	Udall (NM)
Donnelly	McCaskill	Walsh
Durbin	Menendez	Warner
Feinstein	Merkley	Warren
Franken	Mikulski	Whitehouse
Gillibrand	Murkowski	Wyden
Hagan	Murphy	

NAYS—34

Alexander	Fischer	Paul
Barrasso	Flake	Risch
Blunt	Graham	Roberts
Boozman	Grassley	Rubio
Burr	Hatch	Scott
Chambliss	Hoeben	Sessions
Coburn	Inhofe	Shelby
Cochran	Isakson	Thune
Cornyn	Johanns	Vitter
Crapo	Lee	Wicker
Cruz	McCain	
Enzi	McConnell	

NOT VOTING—1

Moran

The PRESIDING OFFICER. On this vote the yeas are 65, the nays are 34.

Three-fifths of the Senators duly chosen and sworn having voted in the affirmative, the motion is agreed to.

EXECUTIVE SESSION

NOMINATION OF MATTHEW H. TUELLER, A CAREER MEMBER OF THE SENIOR FOREIGN SERVICE, TO BE AMBASSADOR EXTRAORDINARY AND PLENIPOTENTIARY OF THE UNITED STATES OF AMERICA TO THE REPUBLIC OF YEMEN

The PRESIDING OFFICER. Under the previous order, the Senate will proceed to executive session to consider the following nomination, which the clerk will report.

The legislative clerk read the nomination of Matthew H. Tueller, of Utah, a Career Member of the Senior Foreign Service, Class of Minister-Counselor, to be Ambassador Extraordinary and Plenipotentiary of the United States of America to the Republic of Yemen.

The PRESIDING OFFICER. Under the previous order, there will now be 2 minutes of debate equally divided.

Mr. REED. Madam President, I ask unanimous consent to yield back all time.

The PRESIDING OFFICER. Without objection, all time is yielded back.

If there is no further debate, the question is, Will the Senate advise and consent to the nomination of Matthew H. Tueller, of Utah, a Career Member of the Senior Foreign Service, Class of Minister-Counselor, to be Ambassador Extraordinary and Plenipotentiary of the United States of America to the Republic of Yemen?

The nomination was confirmed.

The PRESIDING OFFICER. Under the previous order, the motion to reconsider is considered made and laid upon the table.

The President will be immediately notified of the Senate's action.

LEGISLATIVE SESSION

The PRESIDING OFFICER. The Senate will resume legislative session.

PROTECTING VOLUNTEER FIRE-FIGHTERS AND EMERGENCY RESPONDERS ACT OF 2014—MOTION TO PROCEED—Continued

The PRESIDING OFFICER. The Senator from Rhode Island.

Mr. REED. Madam President, I wish to thank all of my colleagues for this very strong bipartisan vote to move a step closer to restoring unemployment insurance benefits for over 2 million Americans. I particularly wish to thank Senator HELLER, whose leadership from the beginning has been instrumental, as well as Senator COLLINS, whose leadership, wise counsel, and thoughtful proposals have been one of the really strong forces sustaining our efforts throughout. I also thank Senator PORTMAN, who has consistently thought about progressive changes for our training programs so that people are better prepared for jobs, as well as Senator MURKOWSKI for her support, and Senator KIRK, both of them valuable contributors. I thank all of my colleagues today who came forward.

This is not the end of the story, but it is an important step forward for over 2 million Americans who are looking desperately for work, who need the benefits, and who will contribute to our economy.

With that, I yield the floor, and I note the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Ms. MURKOWSKI. Madam President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER (Ms. WARREN). Without objection, it is so ordered.

RECOGNIZING THE 50TH ANNIVERSARY OF THE GREAT ALASKA EARTHQUAKE

Ms. MURKOWSKI. I ask unanimous consent the Senate proceed to the consideration of S. Res. 400, submitted earlier today.

The PRESIDING OFFICER. The clerk will report the resolution by title.

The assistant legislative clerk read as follows:

A resolution (S. Res. 400) recognizing the 50th anniversary of the Great Alaska Earthquake, which struck the State of Alaska at 5:36 p.m. on Good Friday, March 27, 1964, honoring those who lost their lives in the Great Alaska Earthquake and associated tsunamis, and expressing continued support for research on earthquake and tsunami prediction and mitigation strategies.

There being no objection, the Senate proceeded to consider the resolution.

Ms. MURKOWSKI. Madam President, over the past several days we have all watched the news of the massive landslide in Washington State. We have watched that with sadness, with shock—truly an awful, awful episode. Our hearts, our prayers are certainly with all of those who have been affected by this terrible tragedy. We continue to hope for the best as rescue and recovery efforts continue.

Today I have come to the floor to speak about a different natural disaster. This is a natural disaster that affected Alaska on Good Friday exactly 50 years ago today, in 1964. This is the Great Alaska Earthquake, the Good Friday Earthquake, the epic earthquake of 1964.

At the time that Alaska was struck by this massive earthquake, I was a young child. I was living in the southeastern community of Wrangell, AK. I have a map here, a map of the State of Alaska. The epicenter of the earthquake is here in the south central area. About a year prior to the quake, my family and I moved down to the small southeastern community of Wrangell, tucked safely in the inland passage waterways here.

We were all looking forward to Easter. When the earthquake hit, I certainly did not know that we had been struck by a massive, massive 9.2 earthquake of the magnitude on the Richter scale that decimated southcentral Alaska. The earthquake struck at 5:36 in the evening. I did not know that what had just occurred was the largest earthquake to strike the United States in recorded history. It is the second largest earthquake ever recorded on modern instrumentation.

Those of us who lived in Alaska at the time have memories of what happened on Good Friday 50 years ago. We have stories that will live with us for generations and passed down from generation to generation. You can talk to Alaskans about it: Where were you in the quake of 1964?

We had just moved, as I said, from Anchorage to Wrangell, AK. We did not feel the shake in Wrangell. We waited

for the big waves to come. We waited for the tsunami. We sat listening to the radio. But our home was situated directly on the beach. Everyone was told to move up to higher ground. So we moved everybody in the family, five kids at the time, up the hill. We went to my first grade teacher's house, which was really quite exciting for me.

We were allowed to stay up late into the evening. As a small child, there was a buzz. It was kind of exciting but kind of scary because we did not know what was happening in other parts of the State. My mom had basically packed some diapers for the smallest of the children in the family. She tells me that she brought along her silver tea set. That is the only thing that she brought from the house, along with the five kids.

We also tell the story of the home that we lived in just before we had moved to Wrangell. It was situated in a residential area called Turnagain. Turnagain was the area that was immediately and massively hit.

This is the Turnagain neighborhood. Our home that we lived in prior to moving to Wrangell was situated about two blocks back from the bluff. After the earthquake, the bluff slid down taking tens and tens of houses with it. The home that we were in then became bluff property. It was condemned never to be lived in again.

We all have stories of the earthquake. We saw the news accounts as they came slowly to us. We saw the photographs of the collapsed buildings.

I am going to go back to the first picture here. This first one that was up initially is downtown Anchorage, AK, 1964. This is on Fourth Avenue. You can see from the picture the ground just sunk, dropped—the crumpled buildings, the cars cattywampus.

The destruction and the devastation in the downtown area literally took your breath away. One very photographed picture was the J.C. Penney building which had just recently been constructed. The whole front facade of the J.C. Penney building just crashed down onto the streets and onto the cars below.

This is a picture here of Government Hill Elementary School. I showed you the previous picture where my family and I had lived in the neighborhood at Turnagain when I was a child. When my husband and I bought our home, where our sons were raised, it was directly across the street from this property where Government Hill Elementary literally slid down the hill.

As you can see from the picture there, the devastation to the school was extraordinary. Fortunately, it was 5:36 in the evening on Good Friday, and there were no children at the school. But the devastation, the visual impact that still remains as we look back 50 years now at what happened—the stories of loss of property, of damage to property, the stories of loss of life and truly miraculous survival—slowly started to reveal the extent of the de-

struction from an earthquake that Federal scientists would tell us years later was roughly equivalent to 100 million tons of TNT exploding—massive.

The Good Friday Earthquake reshaped the Alaska landscape. Land was lifted 33 feet in some places, and then in other places it sank in the ground—sank as much as 6 feet in places. Cliffs and buildings crumbled, forests and towns were flooded. Huge waves approximately 200 feet high were measured near the community of Valdez. A 200-foot wall of water was coming into the community of Valdez. Communities were literally washed off the map in Anchorage.

This is a picture here of Seward, which again is in Resurrection Bay along the coast, but the waves literally came in and swept everything out with it. But it was not just one wave. It was a series of waves. Anchorage, which is our State's most populous city and really the center of infrastructure in the State, was just 74 miles from the epicenter of the quake.

That is where we see so many pictures of the tremendous damage there. There has been a series of articles in our local newspaper, the Anchorage Daily News, leading up to this historic 50th anniversary. It is a series written by Mike Dunham. I ask unanimous consent that a portion of these series be printed in the RECORD.

But in the series discussing the tsunamis that hit Alaska, I would like to share with my colleagues some of the information that Mike outlined. He said NOAA's National Geophysical Data Center puts the total number of deaths resulting from the Great Alaska Earthquake of 1964 at 139. Fifteen of those deaths are attributed to falling buildings or crumbling ground during the quake itself. The rest were killed by the water. Thirty-two people died when a wave 30-feet high built up in Valdez. Similar-sized waves took 12 lives in Seward, and 15 in Kodiak and its surrounding villages. Another dozen perished when a wall of water 40-feet high smashed into Whittier in the Prince William Sound village of Chenega. One-third of the population, 23 people, were swept away by a 90-foot wave.

One thing that I found very fascinating in understanding some of the attributes of this earthquake and the tsunamis that came is that in many places the ground was still shaking when the water hit. Keep in mind, this earthquake lasted 4½ minutes—4½ minutes where the earth is lurching and shuddering and shaking. That is a horribly long time.

The first tsunami that hit Valdez, I am told, hit just 2 minutes after the quake had begun. So imagine the terror. You have got the ground moving all around you, up and down, lurching back and forth, and 2 minutes into it, you have a tsunami at your doorstep.

The loss of life from the tsunamis did not stop at the Alaska border, though.

Four children died in Beverly Beach State Park in Oregon; 12 people died in California, mostly in the waves that destroyed Crescent City's harbor.

But we know that it could have been much worse. The death toll was low for an earthquake of this magnitude. As I mentioned, it was after work. It was on a holiday.

It occurred in an area with a small population that constructed buildings from wood, not bricks or other heavier materials. But the Good Friday Earthquake and the subsequent tsunamis that followed caused some \$3.75 billion in damage and that is in today's dollars. This is 50 years ago, so \$3.75 billion is amazing.

Also, consider this was largely done to a State that was barely 5 years old, but the impacts reached far beyond Alaska. Tsunamis also caused damage to many of our Pacific neighbors, including Canada, Washington, Oregon, California, Washington, and Hawaii.

Those tsunamis destroyed everything in their path. They destroyed houses, cars, boats, and fishing gear all along the Pacific coast. In Ocean City, WA, a bridge over the Copalis River collapsed. In Crescent City, CA, a dockside tavern was destroyed. In Hilo, HI, 12.5 foot waves overran the waterfront. Seiches, which are seismically induced water waves in rivers, lakes, bayous, and harbors, caused minor damage. It wasn't extensive damage, but it caused damage along the gulf coasts of Louisiana and Texas. Think about how this massive earthquake reverberated around the world.

If we look again to the map that has the epicenter, we would think the extent would only be where the epicenter lines, the fault limits go, but in fact when we account for the tsunami effect, it truly was an amazing instance where Mother Nature came together in a massive and a violent way.

As we think about the devastation, the loss of life, the lost property, we have to ask the question whether anything good can come from a tragedy such as the Good Friday Earthquake, but I think the answer is ultimately yes. We came together, Alaskans came together in the aftermath of the quake and the tsunamis to help rebuild the worst hit communities. We rebuilt them to withstand earthquakes and in locations that are hopefully protected from the ravages of future tsunamis. We set aside parks to remember the historic earthquake and to prevent future building on landslide-prone cliffs. Out of the devastation we did gain a better understanding of what is happening below the surface in Alaska and other earthquake-prone areas.

In the 1960s we had very little information about what caused the massive shifts in the Good Friday Earthquake. There was very little understanding of the giant tectonic plates that make up the surface of the Earth and how their movement causes earthquakes. The 1964 earthquake resulted in greater seismic monitoring across the country

and has led scientists to have a far better understanding of how earthquakes occur and where they occur. We can now better protect our citizens by implementing better building codes and preparing for earthquake disaster response in earthquake-prone regions, thereby reducing the chance that another earthquake would result in so many deaths.

The tsunamis that were spawned by the Good Friday Earthquake provided scientists with a unique and important set of tsunami arrival times and heights that have been used to validate new models of tsunami propagation. These models have allowed our scientists and emergency authorities to warn coastal populations of potential tsunamis, protecting life and property.

We see these exercises and drills conducted certainly in my State, I know in Hawaii, and in our coastal communities.

The science has come a long way in the past 50 years and Alaska has too. As we mark this historic anniversary, we remember those who perished in the Good Friday Earthquake.

We salute the men and women who help protect our safety by monitoring and researching earthquakes and tsunamis, both in our State and in others. We thank the first responders who helped Alaskans in 1964, just as we thank those who are helping with the recovery in Washington today. Let us also use this occasion to consider whether we ourselves are prepared for the worst should we ever face a similar day of reckoning in the future.

To recognize this historic event, I have submitted a Senate resolution that commemorates the Great Alaska Earthquake. My colleague from Alaska, Senator BEGICH, and my colleagues from Oregon, California, and Hawaii have joined me.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

[From Anchorage Daily News, Mar. 24, 2014]

TSUNAMIS: WARNING SYSTEMS IMPROVED SINCE GREAT ALASKA EARTHQUAKE BUT UNLIKELY TO HELP

(By Mike Dunham)

NOAA's National Geophysical Data Center puts the total number of deaths resulting from the Great Alaska Earthquake of 1964 at 139. Fifteen of those deaths are attributed to falling buildings or crumbling ground during the quake itself.

The rest were killed by water.

Thirty-two people died when a wave 30 feet high boiled up in Port Valdez. Similar sized waves took 12 lives in Seward and 15 in Kodiak and its surrounding villages. Another dozen perished when a wall of water 40 feet high smashed into Whittier. In the Prince William Sound village of Chenega, a third of the population—23 people—was swept away by a 90-foot wave.

Smaller numbers of casualties were reported in scattered settlements across the region, from Cape St. Elias to Port Nellie Juan. One death took place at Shoup Bay on Valdez Arm, where the wave may have splashed 220 feet up the Chugach mountains.

In many places, the ground was still shaking as the water hit.

"We have this picture in our heads that first an earthquake happens, then the tsunami comes," said Mike West, State Seismologist at the Alaska Earthquake Information Center at the University of Alaska Fairbanks. "But in Alaska's fiords, something else happens."

In the second biggest earthquake ever recorded, that "something else" was massive.

"The entire floor of Prince William Sound failed," said Cindi Preller, Tsunami Program Manager for NOAA Alaska Region. "It was chaos."

WAVE TRAINS

There are different kinds of tsunamis and the 1964 earthquake set off a variety of them.

One was a general global splashing generated by the magnitude of the quake. The 1964 event was so strong that it made the whole world "ring like a bell," reads a U.S. Geological Survey pamphlet. Vibrations shook the planet for weeks and caused measurable sloshing as far away as Florida. Shifts in water levels were recorded in 47 states, including land-locked ones. Even in South Africa—about as far from Alaska as one can get—fluctuations in well water were noted.

One type of tsunami produced by the earthquake, seiche waves, caused no casualties, but they were violent enough to sink boats in Louisiana. Seiche action refers to standing waves in enclosed or confined water. They can be caused in different ways. Those caused by seismic disruptions can occur in places with no direct connection to bodies of water near the source of an earthquake.

Tectonic tsunamis are created directly by the shock of a fracture. They tend to come in a series of waves rather than a single surge, like the ripples formed when you plunk a rock into a calm pool and the displaced water spreads out in rings.

In the case of an undersea fracture, the displacement of the water comes from below. University of Alaska Anchorage geology professor Kristine Crossen said the sudden upthrust at one spot of Prince William Sound was so large that it took two minutes for the water to run off it.

"When the ocean bottom is moved, it sets up a wave train," said Peter Haeussler, U.S. Geological Survey research geologist.

These trains can travel thousands of miles at speeds of 500 miles an hour. In the deep water of the open ocean they seem small. But as they enter shallow water near shore, they grow slower and taller.

Current thinking is that, in 1964, tectonic waves were generated from two areas in the massive rupture, said Preller. One was near the epicenter, where the quake began, in northern Prince William Sound. The other was near Kodiak, hundreds of miles away. These waves took lives and leveled buildings from Alaska to California, often in concert with the most lethal kind of wave to emanate from the 1964 quake, landslide tsunamis.

These happen when the earthquake causes an avalanche. That's what happened in Lituya Bay in Glacier Bay National Park on July 9, 1958. Tumbling rock and ice sent up a megatsunami 1,720 feet high, the largest wave recorded in modern times.

The steep, mile-high mountains we see above ground throughout the southern coast of Alaska are mirrored by a similar submarine geography, where slopes can be further encumbered by millions of years of volcanic residue, glacial silt and other muck. A strong shake can send incalculable tons of material tumbling underwater, unseen and undetected until the displaced ocean shoots into the air.

"Those are really devilish," West said. "And they're not currently predictable."

SUDDEN DEATH

Valdez was founded during the gold rush on glacial fill and alluvial deposits surrounded by precipitous mountains. The ground at the old townsite was flat and easy to build on and ran right to the edge of a deep water port.

When the earthquake began, the delta deposits liquified. A mile of waterfront slumped into the bottom of the harbor, pushing water toward the open sea.

A home movie taken from the deck of the freighter Chena, tied to the city dock at the time of the quake, shows the 400-foot ship sinking into a giant hole in the water, the bottom of the harbor exposed. Then, with ferocious frothing, the ocean crashes back.

Those on the dock—citizens, curious children and workers—were killed in the first seconds of the quake. Amazingly, the Chena rode out the surge that carried it into the town and left it high and dry—temporarily. New waves hit, some after midnight, and floated it out to sea again.

"We think Valdez had two landslipping events," said Preller—one in Valdez Arm, the other right under the dock.

Most Valdez businesses and half of the homes in town were destroyed. Fuel tanks split open and their contents caught fire, a catastrophe that would be repeated in the ports of Whittier, Seward and Crescent City.

The fiords and coves throughout Prince William Sound, the area nearest where the quake began, experienced similar underwater landslides causing waves estimated to have splashed as much as 220 feet above sea level. Most of these places had few if any residents.

But there were people in Whittier and Seward. In those towns, as in Valdez, the narrow harbors confined by steep slopes channelized the water into a bore, amplifying the wave action like a giant bathtub.

Arriving immediately after the quake, or even while it was still rumbling, they gave residents no warning and little chance to escape. "The first tsunamis hit two minutes after the earthquake started," said Preller. The quake lasted for 4½ minutes.

The island of Chenega, southwest of Valdez, is not a dead-end inlet, like Whittier. But it is surrounded by precipitous submarine channels. "Prince William Sound is an environment where the inlets are extremely deep," said Preller. The underwater valleys had much the same effect as the above-water fiords.

The first wave rose smoothly but with astonishing speed, catching people trying to outrun it, trapping others in their homes. A second wave struck more violently, smashing every structure in the village except for the school. A third scattered whatever was left.

Survivors huddled around a fire through the night with no way to get word of their plight to the outside world.

EVACUATION

Most people in Kodiak figured the big quake was shaking only their neighborhood. The first inkling that it might be more serious came when they noticed that long distance phone service was out.

In the village of Kaguyak on the south end of Kodiak island, however, residents observed the odd swell on the ocean. They began moving away from the shore and sent radio warnings to nearby communities. Warnings picked up elsewhere on the island, alerting the people of Kodiak city 20 minutes before the first wave arrived.

The city's fire trucks ran their sirens to warn the population. Police went door to door urging evacuation and a line of cars started driving up Pillar Mountain. The town's taxi fleet used their CB radios to establish an ad hoc communications network.

The first surge came into Kodiak harbor at low tide, about half an hour after the quake. It didn't reach much past the docks and is thought to have been a landslide tsunami. "It came much sooner than we would have expected from a tectonic tsunami," said Preller. Most of the affected towns experienced both types of wave, she said.

Thirty minutes later a second wave came into the city, pushing boats into the city streets, floating cars away, wrenching buildings from their foundations and causing walls to collapse. It was not the towering breaker that swept up the Chena in Valdez or wiped out a sawmill and its workers in Whittier, but more on the lines of a large swell.

"Survivors most often describe tsunamis as a rapidly rising tide," said Haeussler. "They're like a continuous rise of the ocean that never stops. Often you cannot outrun it. It just overwhelms everything in its path."

At least three more waves ripped through the town in the next few hours. It's presumed that the highest reached 26 feet above mean low tide level. But no one saw it. It came in pitch dark after midnight when most of the population had moved up the hill. Kodiak fatalities tended to come not from people on land, but from those who were in fishing boats caught in the surge.

LONG-DISTANCE KILLER

Kodiak was luckier than Crescent City, Calif. Residents there received a warning three hours after the Alaska quake began. Many evacuated before the tectonic wave came in, just before midnight. Half an hour later a second wave, lower than the first, rolled into the harbor.

"People thought that was it," said Lori Dengler, a professor of geology at Humboldt State University in Northern California. "They came back."

At 1:20 a.m., a wave swirled into the waterfront that broke the tide gauge. The fourth wave is estimated to have reached 22 feet, Dengler said. "It was terribly timed. It came just at the top of the tide."

More than 100 homes were destroyed. Eleven people died. Total damage was estimated at \$23 million.

Others died in the rising waters at Newport, Ore. and Klamath River, Calif. \$600,000 in damage was sustained by boats and harbor facilities in San Raphael, Calif.

In Hawaii, tsunamis from the Alaska earthquake caused about \$70,000 in damage. Waves in several places were as high as the one that devastated Crescent City.

But no lives were lost. When the tsunami warning sirens went off, the Hawaiians paid heed. They had learned their lesson from another Alaska earthquake 18 years before.

On April 1, 1946, an Aleutian quake with a magnitude perhaps as high as 8.1 set off a wave that wiped out the concrete, five-story high Scotch Cap Lighthouse on Unimak Island. Hours later, Hawaiians flocked to the shores to observe the peculiar super-low tide. Curious crowds gathered on the beach at Hilo. Children ran to explore the exposed sea bottom. By the time they saw the wave coming it was too late to get away; 165 people died, including six in Alaska.

As a result, a system of ocean-based alarms was established to detect tsunami activity in areas particularly prone to seismic shifts. A line of detectors follows the Alaska coast where earthquake activity is particularly high.

EARLY WARNING

The detectors do a good job of alerting populations far from where the earthquakes take place, Dengler said. She noted a tsunami that hit Crescent City following the 2011 Japan quake was within inches of what the data predicted.

"But near the source area, they're not helpful," she said.

That's because a landslide tsunami will get to shore before the warning does, if there's any warning at all.

"We cannot detect when a landslide has happened," said Preller. "If you're near the ocean when there's an earthquake, get to high ground and stay there. Don't wait for a warning. The earthquake is your warning."

Nonetheless, Dengler said, the progress in long-distance tsunami warning has come a long way since 1964. "Back then it took three hours after the quake for Crescent City to get the warning. Today it would be two or three minutes."

Preller called the Japanese tsunami warning system "the best on the planet." That country has made some intriguing progress in providing early warnings for earthquakes.

"From the moment an earthquake initiates, you usually have some period of time before the shaking reaches you," said West. "If you can nail down that earthquake immediately when it happens, there's the potential of providing several tens of seconds of warning. That's enough time to shut down transit systems or have a surgeon put down his scalpel."

West is impressed by Japan's combination of good instrumentation and a warning notification system. "It was quite successful in the 2011 earthquake," he said. He sent a link to a Youtube video that shows a computer screen just before the massive earthquake and tsunami of March 11 that year. An automated voice is counting down from 29 seconds. At the moment the countdown reaches zero, the rattling begins.

"California, Oregon and Washington are in the process of developing such systems," West said. "Gov. Jerry Brown has mandated that California will do this."

"There's a legitimate discussion to be held as to whether or not such an investment would be worth it here. But nothing like it is currently in development for Alaska."

Wednesday: Witness to destruction

Shortly after tsunamis destroyed much of Seward, school students recorded their experiences with pictures.

Tidal wave vs. tsunami

In 1964 the phrase "tidal wave" was universally used by both average Alaskans and experts quoted in the media to describe the giant waves that wrought so much death and damage. Today the preferred term for a wave generated by a solid physical force such as an earthquake, landslide or volcano is tsunami. Tidal waves refer to waves caused by extreme tidal action or wind, including tidal bores or storm surges.

Casualties

There are various numbers given for the number of deaths caused by the Great Alaska Earthquake. The most recent estimate is given by the National Geophysical Data Center as 139, 124 of which were due to tsunamis; however that database does not break down the fatalities by location. "The casualties are still under discussion," said Cindi Preller, Tsunami Program Manager, NOAA Alaska Region.

Is Anchorage in danger?

In theory, a tsunami is possible at any oceanside location. But it's considered improbable in upper Cook Inlet. "Generally speaking, tsunamis travel better through deep water," said Kristine Crossen, head of UAA's geology department. "Cook Inlet is fairly shallow. It creates a lot of friction on the base of the wave."

Ms. MURKOWSKI. I ask unanimous consent that the resolution be agreed to, the preamble be agreed to, and the motions to reconsider be laid upon the table with no intervening action or debate.

The PRESIDING OFFICER. Without objection, it is so ordered.

The resolution (S. Res. 400) was agreed to.

The preamble was agreed to.

(The resolution, with its preamble, is printed in today's RECORD under "Submitted Resolutions.")

Ms. MURKOWSKI. I thank you for the opportunity to speak again on this historic event to recognize those who lost lives, lost family, and those who helped to not only ensure that Alaska was able to regroup and regain but knowing we have used these lessons learned 50 years ago to help us going forward.

PROTECTING VOLUNTEER FIRE-FIGHTERS AND EMERGENCY RESPONDERS ACT OF 2014—MOTION TO PROCEED—Continued

The PRESIDING OFFICER. The Senator from Vermont.

ANTI-PERSONNEL LANDMINES

Mr. LEAHY. Over the past 20 years I have spoken many times about the toll inflicted on innocent civilians and U.S. soldiers from antipersonnel landmines. I have talked about it in the Senate, in Ottawa, and in most parts of the world.

The reason I have done so is that landmines, like booby traps, are inherently indiscriminate. They are triggered by whomever comes in contact with them, whether an unsuspecting child, a farmer, a refugee, or a soldier. They are the antithesis of a precision guided weapon.

One hundred sixty-one nations, including most of our allies and friends and every European member of NATO, have signed a treaty banning them. One hundred sixty-one nations had the courage to sign that treaty.

Unfortunately, the United States is conspicuously not among them.

In 1994, 20 years ago, in a speech to the U.N. General Assembly, President Bill Clinton called for the elimination of antipersonnel landmines.

Two years later, in 1996, President Clinton said: "Today I am launching an international effort to ban antipersonnel landmines."

President Clinton went on to announce a U.S. plan to develop alternatives to landmines, with the goal that the United States would end its use of antipersonnel landmines by 2006.

We had a meeting in Ottawa where nations came together and Canada's Foreign Minister, Lloyd Axworthy, called for an antipersonnel landmine treaty. But in 1997 the United States missed an opportunity to be a leader in the international effort to ban antipersonnel mines, when it failed to sign the Mine Ban Treaty.

The year 2006 came and went. President Clinton's administration ended and President George W. Bush served for 8 years. President Obama was then elected and then reelected. In the meantime, U.S. troops fought two long ground wars. They fought those wars without using antipersonnel landmines.