

Council updates position on dispersant use during an oil spill

Prevention and mechanical recovery should remain primary options

The Council's Board of Directors has updated the organization's position on the use of chemical dispersants in the event of an oil spill in Prince William Sound and the Exxon Valdez oil spill region. The updated position states that dispersants should not be used on Alaska North Slope crude oil spills in the waters of our region.

Chemical dispersants are substances applied to floating oil slicks. The dispersants are designed to break the oil into smaller droplets that disperse into the water column.

The Council has long endorsed mechanical recovery as the primary tool to clean up an oil spill. Unlike dispersant use, mechanical recovery with booms and skimmers removes oil from the water. Conditions in Prince William Sound often limit the feasibility of dispersant application and dispersants have not been demonstrated to be effective in marine environments with similar temperatures and salinity levels to those found in the Sound. Uncertainty exists over the toxicity

caused by adding chemical dispersants to an oil slick and the long-term effects of dispersants application are not well understood. The known harms and potential risks caused by dispersants, in addition to a lack of proven effectiveness and safety, preclude the Council from supporting dispersants.

Oil spill prevention remains the Council's top priority because once oil is spilled there will always be adverse impacts to human health and the environment. In the event of an oil spill in our region, mechanical recovery and containment of oil spilled at sea should remain the primary response method. The Council also recommends that oil spill response research and development should focus on enhancing and improving mechanical recovery technologies and methods.

Continued on page 10

IN THIS EDITION OF THE OBSERVER

Invasive green crab have arrived in Alaska, p. 2

Volunteer Spotlight: Bait the education hook early to reel in later learners, p. 3

Archibald and Schantz: Partnering to protect the places we live, work, play, p. 4

From Alyeska: Prince William Sound: a place of unrivaled beauty, p. 5

Cleaning up a big oil spill Where does the equipment come from? p. 6

Plankton change with the seasons in Prince William Sound, p. 7

Community Corner: A new look at old programs, p. 8



Invasive green crab have arrived in Alaska

In July, Metlakatla Indian Community found several invasive European green crab shells during regular monitoring at the Annette Islands Reserve. Hundreds of live crabs have been trapped since that time.

This species is of particular concern because the crabs negatively impact shellfish, important habitat for juvenile salmon and native crabs, and other marine resources. Invasive green crab have destroyed habitats and outcompeted local species in other locations.

Since 1996, the Council has studied marine invasive species, such as European green crab. Research on these crabs has shown:

- They can survive in conditions found in Prince William Sound. A warming climate makes an even more suitable habitat.
- Invasive crab larvae could survive in the ballast water of an oil tanker, bringing them to our region from infested waters.

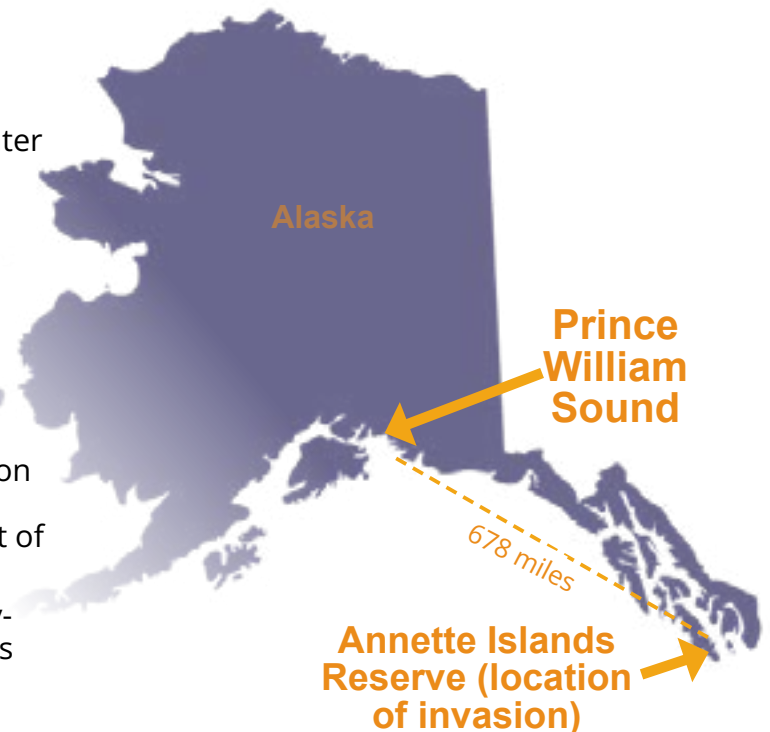
What can you do?

Support legislation: Contact your legislator to voice your support for a coordinated response to invasive species in Alaska. Find out more about the Council's work related to these invasive crabs on our website:

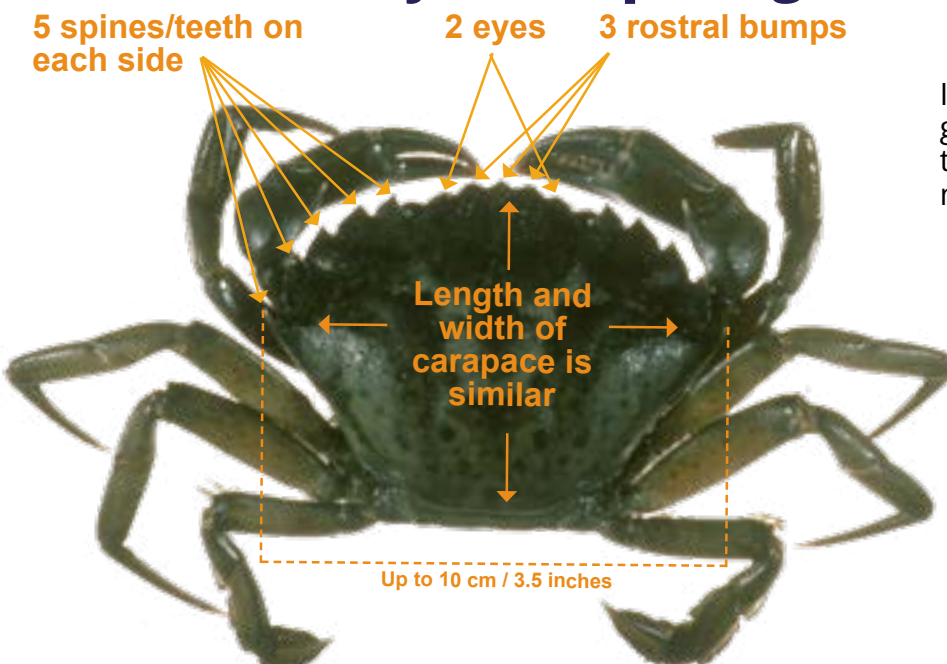
www.pwsrcac.org/greencrab

Search and report sightings: Look for invasive crabs on beaches, alive or dead. Do not collect the crabs. Take photos and report sightings to the Alaska Department of Fish and Game (ADF&G).

Set traps through ADF&G: Join the Alaska community-based Early Detection Monitoring Network to set traps in your community. Contact ADF&G to find out more: 1-877-INVASIV



How to identify a European green crab



European green crab, *Carcinus maenus*

Invasive green crab are not always green! They can be brown or green, and the bottom may be red or orange during molting.

What to do if you see a suspected invasive green crab

1. Take photos of the suspect crab
2. Report online: www.adfg.alaska.gov, under Invasive section
3. Call the ADF&G Invasive Species Hotline:

1-877-INVASIV

Volunteer Spotlight: Trent Dodson

Bait the education hook early to reel in later learners

In college, Trent Dodson was most fascinated in his biology classes. He tells a story of one of his professors, a parasitologist, who took the class out to a stream to look for snails. Dodson was hooked. He went on to take classes on insects and other critters, eventually settling on ichthyology, the study of fish.

After graduating, he taught school for a year. But it wasn't for him, and he decided to look for something different. That search brought him to Alaska in 2001.

"I came up to work a summer job for Cook Inlet Aquaculture Association," he says. In the fall, they asked him to stay on. Dodson has been an Alaskan ever since.

He mainly managed projects, but with his background in education, he ended up with some public outreach duties. He discovered that he liked teaching when it wasn't in a structured classroom.

Joining the citizen oversight club

While at the association, Dodson was elected to serve as the commercial fishing representative on the Cook Inlet Regional Citizens Advisory Council. He enjoyed this partnership so much that, later, when a position opened up in 2007, he applied to become their public outreach coordinator.

After a few years there, Dodson started to miss working directly with fish and in the outdoors. Then, on a trip to Kodiak, he fell in love with that community. Conveniently, the Kodiak Regional Aquaculture Association was hiring, so he got back to his aquaculture roots.

Dodson is currently the production and operations manager at Kodiak Regional Aquaculture Association.

The association enhances and rehabilitates salmon runs on and near Kodiak Island. Each year, they collect hundreds of millions of eggs from five salmon species and rainbow trout. The fry from these eggs are raised at their two hatcheries until they are older and able to better fend for themselves. The association also conducts research and monitoring of wild salmon habitats.

This work ensures that enough fish are available for commercial, sport, and subsistence fishing.

Dodson's job is to make sure they have all the right permits kept up to date and that their facilities are staying in compliance and meeting production goals.

"As you would imagine, you have to be highly regulated to release fish here and there, raise fish, and manage net pens in the ocean."

He says oil spills are a concern in that industry.

Continued on page 9

Information and Education member: Trent Dodson

Volunteers like Dodson dedicate their time and expertise on the Council's five standing committees who advise the Council's Board of Directors on technical issues related to the safe transportation of oil through Prince William Sound.

Dodson is a member of the Information and Education Committee. This group supports the Council's mission by fostering public awareness, responsibility, and participation through information and education.

One of Dodson's favorite pastimes is fly-fishing for trout. Photo courtesy of Trent Dodson.



From the president and executive director:

Partnering to protect the places we live, work, play

The Council views itself as a partner of and resource for industry and regulators. In our advisory role, we provide expertise and local knowledge with the goal of collectively protecting the place in which our communities and livelihoods depend. A true friend gives both support and pushback when needed in life. In the same way, the Council works hard to recognize the successes of industry and also provide constructive feedback to continuously improve prevention and response systems in our region.

We remain concerned with what the Council views as a steady deterioration of regulatory oversight due to federal and state budget and staff reductions at key agencies. We also see budgetary and other reductions within industry. Both are constantly pressured to do more with less. The Council believes that if these problems are allowed to persist, the people, environment, and economy of Alaska will be at higher risk of another major oil spill.

Over the past year, the Council has encouraged the Alaska Legislature to ensure sustainable funding for the Alaska Department of Environmental Conservation, Division of Spill Prevention and Response. Reduced revenues have resulted in a chronic shortfall. This directly threatens the department's ability to effectively oversee the oil industry in Prince William Sound.

The Council has also been closely monitoring damage to oil storage tanks that occurred at the terminal in early 2022, and the subsequent work by Alyeska and regulators to investigate, repair the damage, and prevent a recurrence. While no substantial injuries were associated with this event, hydrocarbons were released to the atmosphere and there were operational risks associated with oxygen ingress into the tank head space. The Council believes this event was a near miss that could have had devastating consequences.

Events such as this, especially while resources are being cut back, are of primary concern to the Council and its stakeholders. We raise these issues so that appropriate and effective actions can be taken.

The prevention and response system for Prince William Sound and its downstream communities



Robert Archibald
President
City of Homer

Donna Schantz
Executive
Director

was developed through partnerships, and extensive work from members of the oil industry, federal and state regulators, legislators, and citizen stakeholders: Alaskans working together with industry to ensure an oil spill like the 1989 Exxon Valdez never happens again.

There have been vast improvements to the safe transportation of oil in the decades since the Exxon Valdez oil spill. The Council must work harder than ever to make sure the safeguards put in place to prevent another disaster are not weakened and the lessons learned are not forgotten.

The oil spill that did not happen is hard to hold up as an accomplishment, and the importance and cost associated with prevention can often be dismissed. It takes a lot of work, and the cooperative effort of many every day, to protect the place we live, work, and play.

Tough conversations must happen as we strive to maintain and improve upon the safeguards in place. Our history of success means that citizens must stay active and maintain partnerships with industry and regulators to keep this system working.

From Alyeska:

Prince William Sound: a place of unrivaled beauty

Andrés Morales

Alyeska's Emergency Preparedness and Response Director

I first came to the Valdez Marine Terminal on a tanker in 1984 as I was just starting my chosen career in the maritime industry. It was winter. It was the most stunning place I have ever sailed to and remains vivid in my memory. The VMT appeared to be carved from a mountain in the raw wilderness. We loaded our cargo into tanks larger than cathedrals. It was a place out of time; I had never seen anything like it. Once full, we sailed out into Prince William Sound: a place of unrivaled beauty.

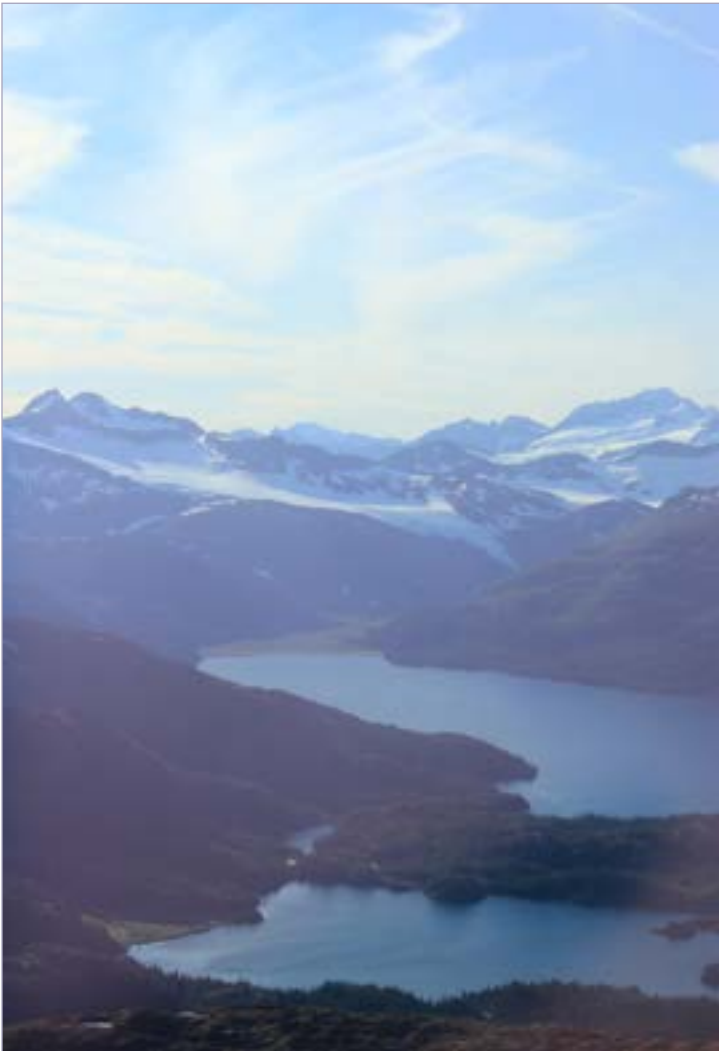
When I heard about the Exxon Valdez oil spill, I was sailing in the mid-Pacific. I had been at sea

continuously for more than a year. I remember the feelings of rage, sadness, and horror at the thought of a cargo of crude in those pristine waters. I returned home in April and shared a house with two other seamen; none of us could believe what had happened. It was unthinkable at the time. The images and stories from that time linger in my memory, and I know that many in our Alaska community feel the impacts still to this day.

From that catastrophe came global change. Tankers worldwide are now double-hulled and there are comprehensive training and verification standards for crews. Despite an increase in crude cargos, the rate and severity of tanker spills has dropped more than 10-fold. And 33 years later, at the epicenter of that terrible event, is one of the largest comprehensive prevention and response operations in the world, the Ship Escort Response Vessel System: SERVS.

The equipment and training here are purpose-built and world-class and our people are capable and passionate protectors of Prince William Sound. I am proud to lead a team with this mission and ownership. And that ownership fosters a culture of continuous improvement; we must work every day to be better and learn from where we have been. It's not enough to prepare for the incidents of the past; we must anticipate and prepare for new – unthinkable – risks.

And even as we march forward with progress, we must never forget the lessons and tragedies of 1989. Those images that still linger are a powerful motivation to do everything in our power to prevent oil spills, and be ready to respond aggressively if the unthinkable happens.



To commemorate its 45th Anniversary, Alyeska is featuring stories about the people, projects and history of TAPS on its website.

To read more, head to alyeska-pipe.com

Cleaning up a big oil spill

A large spill would require equipment brought in from other regions. The Council recently sponsored a study on the availability of equipment on short notice.

The oil industry in Prince William Sound has one of the best-equipped spill prevention and response systems in the world. However, if a big spill were to occur, more equipment would still be needed.

Required equipment

Alaska laws and regulations require Alyeska and the tanker companies to have enough equipment and trained personnel listed in their plans to contain, control, and clean up a spill of 12.6 million gallons of oil within three days. This equipment is staged in Valdez and other areas around the Sound.

But if a greater volume is spilled, industry is expected to recover this too. Alaska law requires industry to note in their oil spill contingency plans where that additional out-of-region equipment will come from.

Once all the equipment stored in Prince William Sound is assigned, there are several options:

Contracts: Alyeska and each tanker company hold contracts with various oil spill response organizations. These organizations maintain an inventory of equipment, vessels, and personnel, and are contracted to deliver these in a certain window of time.

Networks: Alyeska and many of the tanker companies are members of networks that share spill response equipment. Some of these are local to Alaska and some include other U.S. states and even a few foreign countries.

Ad-hoc: State and federal governments maintain stockpiles of equipment. In some cases, these may be released by local officials. Additional equipment from response organizations or other non-contracted sources may also be available. These ad-hoc resources are not guaranteed.

What's readily available?

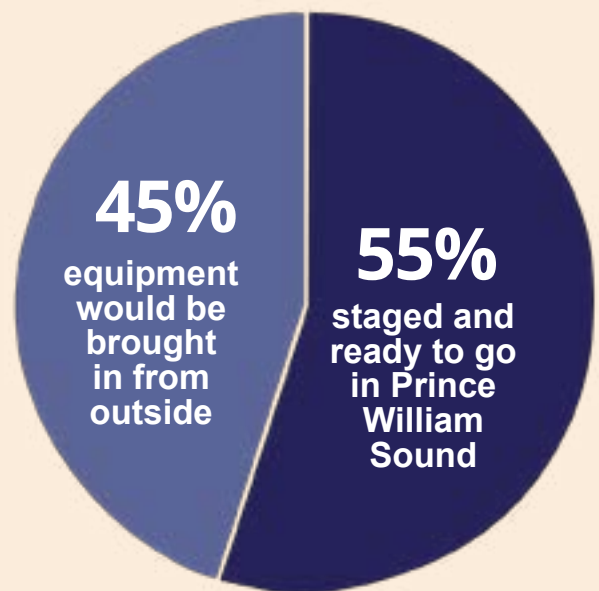
The Council worked with Nuka Research to examine how much equipment would need to be brought in, where this equipment would, or could, come from, and what sharing agreements are in

Continued on page 10

Equipment in Prince William Sound vs Out-Of-Region

The State of Alaska also requires Alyeska and the shipping companies to plan for a worst-case discharge, which means having access to enough equipment and trained personnel to clean up 22.9 million gallons of oil* in the shortest time possible.

Approximately 55% of that equipment must be stationed in Prince William Sound. The other 45% would come from other areas.



*The largest tankers in Prince William Sound can hold over 50 million gallons. Industry receives a "prevention credit" for certain spill prevention measures. These measures make a complete loss of total cargo less likely, allowing them to plan for fewer gallons spilled.

Plankton change with the seasons in Prince William Sound

A new Council study will help improve monitoring for invasive species, such as tunicates, that live on the sea floor or hard surfaces.

Researchers collected samples of plankton and used an identification technique called DNA metabarcoding. This technique allows researchers to identify multiple species from the same sample.

Identifying species while they are floating as larvae in the sea currents can be more efficient and costs less than monitoring the sea floor for adult specimens.

This study examined how and when Prince William Sound's populations of zooplankton change. Samples were collected from three locations in Port Valdez across different seasons, tidal stages, and time of day.

A high diversity of species was detected, with copepods the most dominant. None of the most common invasive species expected to be found in Prince William Sound were identified in the samples.

The study showed that location, time of day, and tide did not have a large influence on the samples. However, the season did have an effect, as a large shift was detected between spring and summer.

The project also added to existing knowledge of the genes of species already in Prince William Sound, which will help researchers better identify invasive species in the future.

Additional details are available in the full report:

www.tinyurl.com/PlanktonGenetics



Staff member Joe Lally holds a sample collected during the spring phytoplankton bloom.



Lally and fellow staffer Jeremy Robida collect samples. Photos by Nelli Vanderburg.

What are plankton?

Plankton, which are often tiny organisms, drift with the tide and currents, rather than swimming. These organisms can be plants (phytoplankton) or animals (zooplankton). This study analyzed populations of zooplankton, which can include larvae of crabs, sponges, sea stars, and fish, among others. Both phytoplankton and zooplankton are important parts of the food web.

Below are adults of some of the species identified in the genetic analysis. Images from Smithsonian Open Access Media.



**Flabellina
verrucosa**



**Janolus
fuscus**



**Dendronotus
albus**

A new look at old programs

Hello from the new voice here in the Community Corner! Since joining the staff in early August, I have enjoyed launching into and paddling around the vast and deep waters of the Council's work. I step into the outreach coordinator role with my background as a naturalist, science and

environmental educator, dancer, and outreach program manager.

I know the joy of facilitating young people learning about the nature that surrounds them. There is a specific excitement that comes when you help someone make a new connection about a science-based fact. I recognize the importance of clear information leading to an audience's

inspiration, which leads them to action.

As I explore and learn about the Council, I am sparked by the variety of community outreach accomplished and funded throughout the region. The Youth Involvement project stands out. As in years previous, the Council provided funding for educating the youth in our community on topics related to the Council's mission, such as citizens' oversight, environmental impacts of the operation of the Alyeska Pipeline Service Company oil terminal in Valdez and the oil tankers that call there, oil spill prevention, and response planning and operation. Eight programs were funded this year.

The Council sponsored a new youth track at the Prince William Sound Natural History Symposium this year, put on by the Prince William Sound Stewardship Foundation to encourage and engage

young people in the Prince William Sound region. These presentations and others from the symposium are available online at the foundation's website:

www.tinyurl.com/PWSnaturalhistory22

Oil spill prevention and response engineering was taught through the remotely operated vehicles, or ROV challenge at this year's Tsunami Bowl. This challenge was put on by the Prince William Sound Science Center. Youth Involvement also funded writing a ROV Kit Build-Guide for other educators to teach robotics and Exxon Valdez oil spill history and aftermath. It is available on their website here:

www.tinyurl.com/ROVguide

Among the rest are oil spill education for students via the Center for Alaskan Coastal Studies and the Copper River Watershed Project, and for teachers during Alaska Geographic's Kenai Fjords Floating Teacher Workshop and Prince William Sound College's Ecology for Teachers course.

The Youth Involvement projects are indicative of the many modes of community outreach that are important to share the Council's mission and the varied work of the staff and committees. Each connection the community of volunteers, staff, and partners make with the Council's audiences - be it the member communities and groups, the greater scientific community, oil industry and regulators, or the citizens of the region affected by the Exxon Valdez oil spill - is a paddle dipping into the water and pushing the Council's metaphorical kayak forward.

I look forward to continuing to tell the story of the spill, foster the network of organizations doing oil spill prevention and response education, and to inviting learners of all ages to understand their environment. As always, our goal remains to continue the Council's mission through engaging our community members in meaningful experiences and inspiring new and long-time environmental stewards.



**Maia
Draper-Reich**

**Outreach
Coordinator**

Volunteer Spotlight: Trent Dodson

Continued from page 3

“Aquaculture associations directly saw ramifications from the Exxon Valdez oil spill,” Dodson said. “If commercial fisherman can’t fish, that’s where we get our money to produce fish.”

Growing up in Indiana, volunteering wasn’t something he gave much thought to. But now, whether it’s his nephew’s fourth grade basketball team, the local chamber of commerce, or the Kodiak Maritime Museum, he’s always helping someone. He says his role on the IEC is a good fit for many of his interests. It scratches his itch for education that he doesn’t get elsewhere.

Upcoming Council meetings

The next meetings of the Council’s Board of Directors will be held:

- January 26-27, 2023 in Anchorage
- May 4-5, 2023 in Valdez
- September 21-22, 2023 in Homer

Board meetings are open to the public and an opportunity for public comments is provided at the beginning of each meeting.

Council meetings available online

In-person meetings of the Council’s Board of Directors are streamed online via Zoom.

Visit our website in early January for information on our in-person and online options: www.pwsrcac.org



IEC’s projects engage audiences of all ages, but his favorite involve kids. He loves helping with the Masters of Disaster program that brings the Council’s lesson plans to life in the communities.

“You’re teaching at a very small, focused level, but these are building blocks to more complicated lessons for older kids and teenagers and adults.”

He also says it’s important to spread awareness of the Council’s work and the concept of regional citizens advisory councils.

“With the IEC, we can go out and help educate those people that may not even be aware of what is happening.”

“This mechanism [regional citizens advisory councils] doesn’t really exist anywhere else. It allows us to help prevent a disaster like we saw before.”



Dodson helps a young Whittier student learn how responders clean oil from otters and birds during a Master of Disaster event. The event consists of 5-8 stations where students can learn about various aspects of oil spill prevention and response.

Your voice can help support the Council

Each year, the Council applies to the U.S. Coast Guard for recertification as the alternative voluntary advisory group for Prince William Sound, per Sec. 5002 (o) of the Oil Pollution Act of 1990.

Every third year, the Coast Guard asks the public for input on the Council's work via public comment period. The Council hopes our readers will submit letters of support. To receive notification when the public comment period begins, please contact Brooke.Taylor@pwsrcac.org to be added to our email list.

More details on our website: www.pwsrcac.org

Council updates position on dispersant use during an oil spill

Continued from page 1

The Council's previous position on dispersant use was adopted in 2006, after years of promoting research and testing to increase knowledge about dispersants and the environmental consequences of their use. In the intervening years, the Council has continued to track developments and analyze peer reviewed scientific literature from around the world regarding the use of dispersants. Discussion and work to develop this update have occurred over the past year, with the final approval taking place at the directors' meeting in Seward, Alaska, on September 23, 2022.

Further materials on the evidence and rationale supporting the position update are currently being finalized by the Council for publication in early 2023.

The full, detailed position is available on our website at: www.tinyurl.com/Dispersants2022

Cleaning up a big oil spill

Continued from page 6

place.

A different approach

The Council has done similar surveys, but not since 2007. The analysts at Nuka Research took a different approach from previous studies. They interviewed regulators and response organizations to determine the likely percentage of their equipment they would be able to release. Other regions must keep enough equipment on hand in case of a spill in their own area, so their capacity to share has limits. Sometimes regulatory approval is needed if sharing leaves their area dangerously under-prepared.

Based on these interviews, Nuka calculated how much equipment would be available if 50% and 25% of the inventory was available to send. They found that oil spill boom and skimmers are readily available, however storage equipment for recovered oil could be limited during a large spill.

The study did not cover whether there would be enough trained personnel to run the equipment, or whether the available boom, skimmers, and storage equipment would have components that are compatible with the existing system.

More details in the report:

www.tinyurl.com/OutOfRegion

THE OBSERVER

Subscribe by email:

www.tinyurl.com/TheObserverEmail

Send in your questions or comments:

newsletter@pwsrcac.org

Photo credits:

- Page 1: Photo from Whittier's Bioblitz in May 2022. Courtesy of U.S. Fish and Wildlife's Chugach National Forest.
- Page 2: European green crab courtesy CSIRO Marine Research.
- Unless noted otherwise, all other photos are from the Council's photo library.

PRINCE WILLIAM SOUND REGIONAL CITIZENS' ADVISORY COUNCIL



Citizens promoting environmentally safe operation of the Alyeska terminal and associated tankers

Who we are

The Council is an independent, nonprofit corporation formed after the 1989 Exxon Valdez oil spill to minimize the environmental impacts of the Trans Alaska Pipeline System's terminal and tanker fleet.

The Council is a voice for the people, communities, and interest groups in the region oiled by the Exxon Valdez spill.

Those with the most to lose from oil pollution must have a voice in the decisions that can put their livelihoods and communities at risk.

The Council's role

We combat the complacency that led to the 1989 spill by fostering partnerships among the oil industry, government, and local communities in addressing environmental concerns.

Board of Directors

The Council's 18 member entities are communities and interest groups affected by the Exxon Valdez oil spill:

- Alaska State Chamber of Commerce
- Community of Chenega
- Chugach Alaska Corporation • City of Cordova
- City of Homer • City of Kodiak • City of Seldovia
- City of Seward • City of Valdez • City of Whittier
- Cordova District Fishermen United
- Kenai Peninsula Borough • Kodiak Island Borough
- Kodiak Village Mayors Association
- Oil Spill Region Environmental Coalition
- Port Graham Corp.
- Prince William Sound Aquaculture Corp.
- Community of Tatitlek

Advisory Committees

Much of the Council's work is done through permanent volunteer committees made up of Board members, technical experts, and local citizens with an interest in making oil transportation safer in Alaska.

Our committees provide an avenue for public participation in the Council's work.

Terminal Operations and Environmental Monitoring (TOEM):

TOEM identifies actual and potential sources of episodic and chronic pollution at the Valdez Marine Terminal.

Port Operations and Vessel Traffic Systems (POVTS):

POVTS monitors port and tanker operations in Prince William Sound. The committee identifies and recommends improvements in the vessel traffic navigation systems and monitors the vessel escort system.

Scientific Advisory Committee (SAC):

SAC sponsors independent scientific research and provides scientific assistance and advice to the other council committees on technical reports, scientific methodology, data interpretation, and position papers.

Oil Spill Prevention and Response (OSPR):

OSPR works to minimize the risks and impacts associated with oil transportation by reviewing and recommending strong spill prevention and response measures, adequate contingency planning, and effective regulations.

Information and Education Committee (IEC):

IEC supports the Council's mission by fostering public awareness, responsibility, and participation in the Council's activities through information and education.

THE OBSERVER

3709 Spenard Road, Suite 100
Anchorage AK 99503
Phone: 907-277-7222
Toll-free: 800-478-7221

A publication of the Prince William Sound Regional Citizens' Advisory Council

Box 3089 / 130 S. Meals, Suite 202
Valdez AK 99686
Phone: 907-834-5000
Toll-free: 877-478-7221

NON PROFIT ORG.
U.S. POSTAGE PAID
ANCHORAGE, AK
PERMIT NO. 836



Email subscription available!
Subscribe by email: www.tinyurl.com/OBSERVERemail

To update your mailing address or change your subscription,
please email us at: newsletter@pwsrca.org



THE OBSERVER

Inside:

- Council updates position on dispersant use during an oil spill
- Invasive green crab found in Alaska
- And more...

Alaska State Chamber of Commerce - Chenega - Chugach Alaska Corp - Cordova
Cordova District Fishermen United - Homer - Kenai Peninsula Borough - Kodiak - Kodiak Island Borough
Kodiak Village Mayors Association - Oil Spill Region Environmental Coalition - Port Graham Corp
Prince William Sound Aquaculture Corp - Seldovia - Seward - Tatitlek - Valdez - Whittier