

## Prince William Sound Regional Citizens' Advisory Council





Board of Directors Meeting January 23-24, 2025

Zoom link for meeting audio and presentations <https://pwsrcac.zoom.us/j/81907492214>

Or participate via teleconference: 1-888-788-0099 Meeting ID: 819 0749 2214


### Final Agenda


#### **Thursday, January 23, 2025**

- |       |   |   |
|-------|---|---|
| 8:30  | A   | Call to Order, Roll Call & Introduction   |
|       |   | <ul style="list-style-type: none"> <li>Welcome – President Robert Archibald</li> <li>Introductions/Director reports on activities since the last meeting</li> </ul>                                     |
| 8:45  | B   | 1-0 Approve Agenda  |
| 8:55  | C   | 1-1 Approve Minutes of September 19-20, 2024, Regular Board Meeting   |
|       |   | 1-2 Approve Minutes of November 26, 2024, Special Board Meeting   |
| 9:00  | D   | Public Comment Period, limit five minutes per person  |
| 9:15  | E   | <u>Internal Opening Comments</u> <i>(Please limit to general information not contained in Agenda)</i>   |
|       |   | <ul style="list-style-type: none"> <li>Technical Committee Updates (IEC, TOEM, OSPR, SAC, &amp; POVTS)</li> <li>PWSRCAC Board Sub Committee Updates (Governance, Legislative, &amp; Finance)</li> </ul> |
| 10:00 |    | BREAK   |
| 10:15 | F   | <u>External Opening Comments</u> <i>(Please limit to general information not contained in Agenda)</i>   |
|       |   | <ul style="list-style-type: none"> <li>PWSRCAC Ex Officio Members</li> <li>Trans Alaska Pipeline System Shippers, Owner Companies, and Pilots</li> </ul>  |
| 11:10 | G   | Alyeska / SERVS Activity Report   |
| 12:00 |    | LUNCH   |
| 1:00  | H   | Alyeska Presentation on Risk and Safety Culture Assessment Management Action Plan Closeout Report   |
| 1:40  | I   | 4-1 Update on Request for Informal Review on the VMT C-Plan – Linda Swiss   |
| 2:10  |  | BREAK   |
| 2:25  | J   | <u>Consent Agenda</u>   |
|       |   | 3-1 Delegation of Authority of Multifunctional Copier/Printer Lease Agreements<br>3-2 Approval of FY2025 Budget Modifications<br>3-3 Approval of Transcriptomics Research Contribution to the USGS      |
| 2:30  | K   | 4-5 Report Acceptance: 2024 Long-Term Environmental Monitoring – Dr. Danielle Verna with Dr. Morgan Bender of Fjord and Fish Sciences   |
| 3:10  | L   | 4-3 Report Acceptance: Assumptions & Calculations Used in Tank Vent Headspace Report – Sadie Blancaflor with Bill Mott of Taku Engineering  |
| 3:45  | M   | Executive Session to Discuss:   |
|       |   | <ul style="list-style-type: none"> <li>4-4 Approval of Anchorage Office Lease and Relocation</li> <li>Annual Review: Executive Director job description and performance goals</li> </ul>                |
| 4:45  |  | RECESS  |

Shaded Items Require Board Action

#### **Friday, January 24, 2025**

- |       |   |  |
|-------|---|--|
| 8:30  | A   | Call to Order & Roll Call  |
| 8:35  | B   | Report on Executive Session  |
|       |   | <ul style="list-style-type: none"> <li>4-4 Approval of Anchorage Office Lease and Relocation</li> <li>Annual Review: Executive Director job description and performance goals</li> </ul> |
| 8:50  | C   | Overview of Certificate of Inspection Requirements for Vessels of Opportunity – Joe Lally  |
| 9:30  | D   | 4-6 PWSRCAC Annual Long Range Plan and Report Acceptance – Hans Odegard  |
| 10:10 |  | BREAK <i>Continued on next page</i>  |

10:10		BREAK <i>Continued from previous page</i>
10:25	E	4-7 Approval of IRS Form 990 – Ashlee Hamilton
10:45	F	Director of Finance's Report to the Board
11:00	G	Executive Director's Report to the Board
11:20	H	President's Report to the Board
11:35	I	Consideration of Consent Agenda Items
11:40	J	Closing Comments
12:00	K	ADJOURN <i>lunch on your own</i>

Shaded Items Require Board Action

Additional items provided for information only:

- PWSRCAC Name Roster (*Board Members only*)
- PWSRCAC Expense Reimbursement Form
- 2-1 List of Commonly Used Acronyms
- 2-2 Budget Status Report
- 2-3 Director Attendance Record
- 2-4 Committee Member Attendance Record
- 2-5 List of Board Committee Members
- 2-6 PWSRCAC One-Page Strategic Plan
- 2-7 List of Board and Executive Committee Actions
- 2-8 PWSRCAC Organizational Chart
- 5-1 January 2025 Program/Project Status Report

**PRINCE WILLIAM SOUND  
REGIONAL CITIZENS' ADVISORY COUNCIL  
MINUTES  
REGULAR BOARD MEETING  
September 19 and 20, 2024  
Kodiak, Alaska**

**Members Present**

Robert Archibald	City of Homer
Amanda Bauer	City of Valdez
Robert Beedle	Cordova District Fishermen United
Mike Bender	City of Whittier
Mike Brittain	City of Seward
Nick Crump <i>(via videoconference)</i>	Prince William Sound Aquaculture Corporation
Ben Cutrell	Chugach Alaska Corporation
Wayne Donaldson	City of Kodiak
Mako Haggerty	Kenai Peninsula Borough
Luke Hasenbank	Alaska State Chamber of Commerce
Jim Herbert	Oil Spill Region Recreational Coalition
Elijah Jackson <i>(via videoconference)</i>	Kodiak Village Mayors Association
David Janka <i>(via videoconference)</i>	City of Cordova
Melvin Malchoff	Port Graham Corporation
Dorothy Moore	City of Valdez
Bob Shavelson	Oil Spill Region Environmental Coalition
Angela Totemoff <i>(via videoconference)</i>	Tatitlek Corporation & Tatitlek Village IRA Council
Michael Vigil	Chenega Corporation & Chenega IRA Council
Aimee Williams	Kodiak Island Borough
Kirk Zinck	City of Seldovia

**Members Absent**

(None.)

**Committee Members Present**

Steve Lewis <i>(via videoconference)</i>	POVTS Committee
Max Mitchell	POVTS Committee
Sarah Allan <i>(via videoconference)</i>	SA Committee
John Kennish <i>(via videoconference)</i>	SA Committee
Savannah Lewis <i>(via videoconference)</i>	IE Committee
Cathy Hart	IE Committee
Ruthie Knight <i>(via videoconference)</i>	IE Committee
Matt Melton <i>(via videoconference)</i>	OSPR Committee
Dave Goldstein <i>(via videoconference)</i>	OSPR Committee
Tom Kuckertz	TOEM Committee

**Staff Members Present**

Donna Schantz  
 Joe Lally  
 Brooke Taylor  
 Hans Odegard  
 Ashlee Hamilton  
 Jennifer Fleming  
 Danielle Verna  
 Roy Robertson  
 Linda Swiss  
 Jeremy Robida  
 John Guthrie  
 Amanda Johnson  
 Sadie Blancaflor  
 Maia Draper-Reich  
 Nelli Vanderburg  
 Jaina Willahan

Executive Director  
 Director of Programs  
 Director of Communications  
 Director of Administration  
 Director of Finance  
 Executive Assistant  
 Project Manager  
 Project Manager  
 Project Manager  
 Project Manager  
 Project Manager  
 Project Manager  
 Outreach Coordinator  
 Project Manager Assistant  
 Project Manager Assistant

**Ex Officio Members Present**

Ytamar Rodriguez  
 Lisa Fox *(via videoconference)*  
 CDR Sarah Rousseau  
 Torri Huelskoetter *(via videoconference)*  
 Reid Olson *(via videoconference)*  
 Anthony Strupulis *(via videoconference)*  
 Jonathan Kirsch *(via videoconference)*

Alaska Dept. of Environmental Conservation  
 U.S. Department of the Interior  
 USCG MSU Valdez  
 U.S. Environmental Protection Agency  
 Bureau of Land Management  
 Department of Natural Resources  
 Alaska Dept. Fish & Game

**Others Present**

Andres Morales  
 Alyssa Sweet  
 Mike Day *(via videoconference)*  
 Diana Bouchard *(via videoconference)*  
 Kate Dugan *(via videoconference)*  
 Klint VanWingerden *(via videoconference)*  
 Suzanne Cunningham *(via videoconference)*  
 Graham Wood  
 Kara Kusche *(via videoconference)*  
 Melissa Woodgate *(via videoconference)*  
 Sarah Moore *(via videoconference)*  
 Sonja Mishmash *(via videoconference)*  
 Kathy Shea *(via videoconference)*  
 Sam Saengsudham *(via videoconference)*

Alyeska Pipeline Service Company  
 Alyeska Pipeline Service Company  
 Alyeska Pipeline Service Company / SERVS  
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 Alaska Dept. of Environmental Conservation  
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 Alaska Dept. of Environmental Conservation

Mollie Dunkin <i>(via videoconference)</i>	Alaska Dept. of Environmental Conservation
MST2 Taylor Ward	USCG MSU Kodiak
MSTC Daniel Jarrett	USCG MSU Kodiak
Eileen Oliver <i>(via videoconference)</i>	Bureau of Land Management
Paul Degner <i>(via videoconference)</i>	Bureau of Land Management
Mark Curtis <i>(via videoconference)</i>	Crowley Alaska Tanker
Andrea West	Polar Tankers
Joe Scalia <i>(via videoconference)</i>	Colorado State University
Peter Laliberte	Santos
Tony Parkin	Santos
Walt Hufford	Repsol
Jim Wade	Repsol
Lydia Miner <i>(via videoconference)</i>	SLR
Bob Klieforth <i>(via videoconference)</i>	SLR
Natalie Kiley-Bergen <i>(via videoconference)</i>	Alaska Public Interest Research Group
Dr. Greg Ruiz <i>(via videoconference)</i>	Smithsonian Environmental Research Center
Dr. Nicole Ziegler <i>(via videoconference)</i>	University of Hawaii
Billie Garde <i>(via videoconference)</i>	Clifford & Garde, LLP
Dr. Mary Anne Bishop <i>(via videoconference)</i>	PWS Science Center
Janet Theis	Representative Louise Stutes Office
Celest Ossowski	Kodiak Area Native Association
Mary Lund	Citizen
Erik Munk	Citizen

## **Thursday, September 19, 2024**

### **CALL TO ORDER, WELCOME, AND INTRODUCTIONS**

A regular meeting of the Board of Directors of the Prince William Sound Regional Citizens' Advisory Council was held September 19 and 20, 2024, at the KANA Marketplace, Kodiak, Alaska. President Robert Archibald called the meeting to order at 8:30 a.m. on September 19, 2024, and welcomed everyone to the meeting.

A roll call was taken. The following 19 Directors were present at the time of the roll call, representing a quorum for the conduct of business: Archibald, Bauer, Beedle, Bender, Brittain, Crump *(via videoconference)*, Cutrell, Donaldson, Haggerty, Hasenbank, Herbert, Jackson *(via video conference)*, Janka *(via videoconference)*, Malchoff, Moore, Shavelson, Totemoff *(via teleconference)*, Vigil, and Williams. Kirk Zinck joined the meeting in person at approximately 9:00 a.m.

Ben Cutrell, Chugach Alaska Corporation's representative on the Council, welcomed everyone to Kodiak, with the following statement:

*Where we gather today is in the ancient homeland and traditional territory of the Alutiiq/Sugpiaq people. We recognize the complex history and rich culture of Alaska's Native communities, here and throughout our region, and ask you to join us in honoring the families and tribal members still connected to this land, as we conduct our business.*

Aimee Williams, the Kodiak Island Borough's Manager and the Borough's representative on the Council, also welcomed everyone to Kodiak and the meeting.

Robert Archibald led a moment of silence in memory of George Skladal, an original and longtime volunteer on the TOEM Committee for over 33 years, who passed away on June 25, 2024, at age 91.

Introductions and Directors' reports followed.

### **1-0 AGENDA**

President Archibald presented the agenda (green-colored sheet) for approval.

Jim Herbert moved to approve the agenda (green-colored sheet). Mako Haggerty seconded. The motion passed without objection and the agenda was approved as presented.

### **1-1 MINUTES**

Amanda Bauer moved to approve the minutes of the Annual Meeting of the Board of Directors May 2-3, 2024. Jim Herbert seconded, and the minutes were approved as presented.

### **PUBLIC COMMENTS**

(None at this time.)

### **INTERNAL OPENING COMMENTS – PWSRCAC TECHNICAL COMMITTEES**

#### **TERMINAL OPERATIONS & ENVIRONMENTAL MONITORING COMMITTEE (TOEM)**

Vice Chair Amanda Bauer reported on the activities of the TOEM Committee since the May Board meeting as follows:

- The committee received a presentation on current and upcoming Valdez Marine Terminal (VMT) maintenance projects from Mike Drew, VMT Maintenance Manager, South, on July 10, 2024. The committee thanked Alyeska for its efforts coordinating this presentation to align with the TOEM Committee's meeting date. The committee found this presentation to be thorough and engaging.
- The committee voted to bring a contractor to the VMT to observe the secondary containment liner pilot testing in the VMT West Tank Farm and calibration of the non-destructive testing method geoelectric leak location (GELL). This pilot test was

intended to evaluate the non-destructive testing methods that will be used to verify the integrity of the secondary containment liner at the VMT. Dr. Joe Scalia, a subcontractor for Dr. Craig Benson, subsequently traveled to Valdez to observe that testing, which occurred July 22 – 30, 2024, with Council staff Sadie Blancaflor, Joe Lally, and Jeremy Robida. Dr. Scalia will present an overview of the VMT West Tank Farm pilot study work later in the agenda.

- The committee held additional discussions with Taku Engineering, LLC, on the revision of the report titled “Review of the Ballast Water Tank 94 and Crude Storage Tank 7 Out-of-Service Inspection Reports.” These meetings addressed feedback and additional documentation provided by Alyeska that had not been included with the initial round of requested information related to this report. The report was then accepted as final by the TOEM Committee and approved by the Executive Committee on July 18, 2024.
- The committee also reviewed, revised, and accepted as final another Taku Engineering report (“Review of Crude Oil Storage Tank 2 Out-of-Service Inspection Report”), which was then approved by the Executive Committee on July 18, 2024.
- The committee reviewed documents from multiple Public Records Requests (submitted from October 2023 – May 2024) to the State Fire Marshal regarding the tank bottom processing fire that took place in the East Tank Farm on August 30, 2023. Additional documents, including the investigation report, were formally requested from Alyeska via a letter transmitted on February 29, 2024. VMT Operations Director Klint VanWingerden provided answers to several questions about the fire via email on June 10, 2024, but the requested documents from Alyeska are still outstanding. The TOEM Committee continues to have outstanding questions regarding the tank bottom processing fire that could be addressed through the receipt of the requested documentation from Alyeska.
- The committee expressed appreciation for Alyeska’s work to improve the response time to the committee’s requests for additional information in support of its projects and work. However, the committee continues to have outstanding requests for information from Alyeska needed for projects funded for FY2025. This includes information related, but not limited to, Storage Tank Maintenance Review of Tank 93, the Crude Oil Piping Maintenance Review, and Maintaining the Secondary Containment Liner.

### **OIL SPILL PREVENTION & RESPONSE COMMITTEE (OSPR)**

Chair Jim Herbert reported for the OSPR Committee on its activities since the May Board meeting, as follows:

- The committee was updated on area and regional planning efforts for the Alaska Regional Contingency Plan, and the Prince William Sound, Arctic and Western Alaska, and Inland Alaska c-plans and area committees.
- Prince William Sound Tanker C-Plan: The major amendment submitted in September 2023 was approved by ADEC in June 2024. This amendment aligns the plan with changes in c-plan regulations and covers replacement of the Mineral Creek response barge with the new OSRB-5.
- Valdez Marine Terminal C-Plan Renewal: ADEC has issued two rounds of Requests for Additional Information (RFAs). The second round was issued in July 2024 and responses were submitted in August. Once ADEC determines the plan is “complete,” there will be a final public comment period on both rounds of responses to the RFAs. The current c-plan is set to expire on November 7, 2024.
- The Regional Stakeholder Committee (RSC) Task Force completed their work on the job aids for members of the RSC and the RSC Liaison Officer. PWSRCAC/OSPR Committee has had significant input into creating and completing these job aids.
- The OSPR Committee’s virtual meeting with contracted response vessel representatives took place via Zoom on March 6, 2024. The committee accepted the draft report generated from that meeting as final and it was then accepted by the Executive Committee earlier this month, before being sent to SERV for their information.
- The committee reviewed and accepted various drill/exercise reports.
- OSPR has been kept up to date on various weather-related projects, including repair and maintenance on the Port Valdez weather buoys and the Council’s several Prince William Sound weather stations. Dr. Rob Campbell completed his analysis of the 2023 Port Valdez weather buoy data, and the Board will hear a presentation and be asked to act on this item later in this meeting.
- The committee was also updated on the Seal Rocks and Cape Cleare buoys in the Gulf of Alaska, both of which stopped working and then escaped their moorings late last year and early this year, respectively. The buoys were replaced by the National Data Buoy Center (NDBC) in April 2024; however, soon afterwards, the Seal Rocks buoy stopped reporting wave data again. PWSRCAC’s new Maritime Operations Project Manager and our legislative monitors in Washington, D.C., worked with NOAA and the NDBC to ensure the wave sensor would be repaired prior to the fall/winter season. The wave sensor was replaced in early September and both buoys are on-station and operable once more.
- As a representative of the OSPR Committee, Herbert participated in the interviews conducted by the Government Accountability Office (GAO) relating to the TAPS risk

and safety culture assessment report (Billie Garde report), and Max Mitchell and Herbert attended the landslide and submarine-generated tsunami workshop earlier in the season.

*(Kirk Zinck arrived at 9:00 a.m. – 20 Directors present.)*

### **PORT OPERATIONS & VESSEL TRAFFIC SYSTEMS COMMITTEE (POVTS)**

Chair Steve Lewis reported (via videoconference) on the efforts of the POVTS Committee since the May Board meeting.

He prefaced his report with an explanation of the committee's focus on the maritime operations and tankers that visit the VMT, and composition of maritime and offshore industry professionals. The committee's primary concern is that of safety. That includes the safety of the physical environment in the EVOS region, the safety of the creatures with whom it is shared, the safety of the people who live and work in Prince William Sound, and the safety of the physical infrastructure upon which the safe transportation of oil depends. He said the committee works to ensure this safety by following the operation of the TAPS tankers and the SERVS support fleet, and offering observations and recommendations for improvement. The committee monitors vessel design and construction, the daily operation of the fleet, the oversight of the fleet by the USCG and the ADEC, the compliance of operations with various other regulatory agencies, and the adoption of developing best available technology in marine transportation of oil. The committee believes that these efforts can have a positive effect in achieving the goal of operational safety of the TAPS system.

Lewis reported that PWSRCAC's new Maritime Operations Project Manager, John Guthrie, had joined the staff and started work with the committee. Lewis outlined Guthrie's qualifications and experience in maritime operations and welcomed him to the committee.

Lewis continued with a report of the committee's activities since the May Board meeting:

- The committee continues to stay informed about the weather-based projects led by the OSPR Committee and on matters pertaining to the Port Valdez weather buoys.
- The POVTS Committee collaborated with the Scientific Advisory Committee (SAC) on Council letters to NOAA and the Prince William Sound shippers regarding whale-vessel strike mitigation efforts, per the Board's direction at their May 2024 meeting. The letter to NOAA requested additional data review and outreach in order to assess and mitigate the risk of vessel-whale strikes in Prince William Sound, and the letter to the shippers requested they consider voluntary speed reductions for the same purpose, and also to reduce air emissions and underwater noise. The committee has discussed the responses PWSRCAC received to both letters, neither of which the committee found to be completely satisfactory, and the committee will be re-

examining possible courses of action on the matter of whale strike mitigation in their upcoming annual work plan.

- The committee recently received the Phase 2 report for the Maritime Miscommunication Project and will be reviewing it at their next regular meeting. The report will go to the Board or the Executive Committee for approval after POVTS takes action on the report. There will be a presentation on this project later in this Board meeting (currently scheduled for Friday morning). Beyond that, Lewis pointed out, there are social and interpersonal aspects of communication that are applicable to every conversation that we all have every day, and those lessons could be applied to benefit everyone. Lewis urged everyone to read the report and attend the presentation by Dr. Ziegler the following day. The committee will be considering the next steps of this project at its next meeting.
- This project has been completed. The Tsunami Hazards Guidance Workshop for Vessel Operators took place in early June and the committee recently accepted the final summary. This report will go to the Executive Committee or the Board for approval at a future meeting.

Mako Haggerty questioned whether the committee had accepted the response from NOAA on the whale-vessel strike issue or whether the committee had found it to be an unsatisfactory answer. Lewis responded that while it is not the committee's purview to accept or reject a response from the shippers or an agency to a letter from the Board, the committee did express and continues to sense that the response from NOAA was somewhat positive in that they have committed to pushing their information products a little more aggressively, but they did not commit to putting in any new effort with respect to researching the basic scientific questions of whale-vessel interaction in Prince William Sound. With respect to the shippers, the letter asked that they consider a voluntary speed reduction in the traffic lanes, and their response was basically to thank the Board for its suggestion but they are not going to do it. So, from the POVTS Committee's point of view, which has seen no operational reason for the shippers not to comply with a voluntary speed reduction in the tanker lanes, that was a disappointing but expected reply. Consequently, the committee will see what it can do at a project level, possibly in collaboration with SAC, to develop some of the basic science that people claim is lacking to justify such action.

### **INFORMATION AND EDUCATION COMMITTEE (IEC)**

Vice Chair Cathy Hart thanked staff and the committee members, and reported that IEC had two regular meetings and one project team meeting since the Board's May meeting, and the committee's activities were as follows:

- Plans are underway to host the annual Fishing Vessel tour on Monday, September 30, 2024, in Whittier. The Council has contracted with Stan Stephens Glacier & Wildlife Cruises to charter a vessel for the tour. IEC member and Whittier

Community School teacher Andrea Korbe is assisting to get middle and high school students out on the tour. Outreach Coordinator Maia Draper-Reich is the contact person for further information on this outreach event.

- The committee accepted four final reports from the following contractors as complete and meeting all deliverables for the Youth Involvement project: University of Alaska Anchorage-Prince William Sound College, Center for Alaskan Coastal Studies, and Fireweed Academy Charter School. Contracts are ongoing with Alaska Geographic, Copper River Watershed Project, Kenai Mountains - Turnagain Arm National Heritage Area, and Wrangell Institute for Science and Environment. These five contracts are on track to close at the end of September.

The most recent Youth Involvement RFP cycle received four project proposals. A project team met to review and evaluate the proposals. Based on the project team's recommendations, the committee voted to fund all four proposals at their requested amounts.

- In May, OSPR member Matt Melton, SAC members Davin Holen and Sarah Allan, and four Council staff members attended the International Oil Spill Conference in New Orleans. The Council co-hosted an exhibitor booth with Cook Inlet Regional Citizens Advisory Council at this event. Additionally, Davin Holen and PWSRCAC Project Manager Danielle Verna gave a presentation titled "Building Collaborative Social Science Research Models to Understand the Social, Cultural, and Economic Impacts of Spills."

Council staff have coordinated and participated in additional outreach events, and have presented to groups including regional teachers, college students, and local tour guides. These will all be detailed during the Community Outreach Annual Report at the May 2025 Board meeting.

- Author and illustrator Tom Crestodina provided a rough draft of the text, and progressed the storyboard and illustrations as far as he was able to before the fishing season started. Director of Communications Brooke Taylor distributed this information to the project team and industry contacts for initial review and input. She has compiled and provided all edits received to Crestodina for his review when he returns from fishing in late fall of this year.
- The committee voted to recommend the nomination of Amanda Glazier to the Information and Education Committee. This recommendation was approved by the Executive Committee at their September meeting. Glazier received her Ph.D. in Environmental Biology and is currently an Assistant Professor of Environmental Sciences at the Prince William Sound College in Valdez. The committee is excited to welcome her and her experience and expertise to the team.

### **SCIENTIFIC ADVISORY COMMITTEE (SAC)**

Chair Sarah Allan reported on the activities of the Scientific Advisory Committee since the May Board meeting as follows:

- The annual LTEMP sampling took place successfully over the summer. In May, passive sampling devices were deployed at three sites in Port Valdez. These samples were retrieved in June, along with sediment samples for hydrocarbon and metals analysis, and mussel samples for hydrocarbon analysis. Additional sampling was conducted in June via floatplane in Aialik Bay, Windy Bay, and Shuyak Harbor, which were sampling sites not reached during the quinquennial expanded LTEMP sampling that occurred in 2023. The committee anticipates receiving the draft report and results from this sampling at their next public meeting in early November.
- The committee received the final draft report from the Smithsonian Environmental Research Center on the results of their broad-scale invasive species survey in Prince William Sound, which included updated data and a full genetics analysis. The final report will be presented to the Board during this meeting (Item 4-5), and SAC recommends its acceptance.

Student interns have been monitoring monthly for invasive green crab in Valdez, Cordova, and Kodiak this summer. Green crab were first detected in Alaska in 2022, but no green crab have been found in our region to date.

- This year's Marine Bird Hot Spot Analysis report combined data from both Council-supported surveys and EVOS Trustee Council surveys throughout Prince William Sound to identify the highest use marine bird areas. The hotspot maps, data, and metadata have also been submitted to NOAA's Environmental Response Management Application database to make the information available to spill responders and planners. The committee has recommended the Board accept the completed report, which is scheduled to be presented at this Board meeting (Item 4-1).
- Following the action taken by the Board at the May meeting regarding the draft whale strike letters, the SA and POVTS Committees worked together to review and comment on draft letters to NOAA and TAPS shippers addressing concerns related to vessel-whale strikes in Prince William Sound. The letters were sent to NOAA and TAPS shippers, who responded on July 30 and August 21, respectively. The letters were acknowledged and briefly discussed at the recent September SAC meeting. No further action has been taken.
- A project team of staff, SAC, and IEC members is currently drafting a request for proposals to identify a contractor capable of assisting the Council with improving accessibility and distribution of the revised Peer Listener manual throughout our region.

- The purpose of the Social Science workshop is to gather community members from our region to identify science data needs and projects that fit within the PWSRCAC mission and could be supported by SAC. We are actively discussing options for holding the workshop in late winter 2025, in collaboration with the Chugach Regional Resources Commission and Alaska Sea Grant.
- Science Night is scheduled for December 5, 2024, at the Embassy Suites in Anchorage. The theme this year is, "Staying alert and proactive in the Exxon Valdez oil spill region." The committee encouraged everyone to attend this fun and informative event. An email invite and request for RSVP will be issued in advance.
- In mid-May, SAC member Roger Green attended the International Conference on Aquatic Invasive Species in Halifax, Nova Scotia. The conference covered a wide range of topics related to invasive species research, with a focus on both marine and freshwater ecosystems. Green's trip report was shared with SAC members and is available upon request.
- SAC continues to discuss the potential recruitment of a new member with expertise in oceanography. The committee has been evaluating potential candidates, but no recommendations have been made yet.

With regard to the committee's desire to engage with communities about science, Ben Cutrell commented that in January/February each year Chugach Alaska Corporation hosts its regional economic summit where all the communities get together and talk about pressing issues. This summit may offer an opportunity to get the word out to Alaska Native communities about SAC's search for more community-driven science needs on various issues.

Jim Herbert asked how fast and how far north the green crab are moving toward Prince William Sound. PWSRCAC's Danielle Verna reported that they have been found in Bostwick Inlet, near Ketchikan, so they are moving north, and Verna confirmed that from a study done approximately 15 years ago they can survive in Prince William Sound, Kachemak Bay, and the Kodiak region, and as far north as Valdez.

*(This concluded the Opening Comments of PWSRCAC's Technical Committees.)*

## **INTERNAL OPENING COMMENTS -- PWSRCAC BOARD SUBCOMMITTEES**

### **LEGISLATIVE AFFAIRS COMMITTEE (LAC)**

Dorothy Moore reported on the activities of the Legislative Affairs Committee (LAC) on federal and state issues of interest/concern to the Council since the last Board meeting.

- **Government Accountability Office Review.** During PWSRCAC's annual legislative visit to Washington, D.C., in May, Council staff and LAC members met with the Government Accountability Office (GAO) to discuss the process and scope of their review.

The GAO traveled to Alaska in August to conduct interviews with federal and state agencies with oversight responsibilities over the Valdez Marine Terminal (VMT).

During that visit the GAO interviewed PWSRCAC staff and volunteers regarding their review to determine the adequacy of federal and state regulatory oversight of the VMT.

The GAO plans to release their report on this matter in early 2025.

- **Seal Rocks Weather Buoy.** The Council's Legislative Monitors in Washington, D.C., conducted outreach with Alaska Delegation staff regarding the inoperable and off-station Seal Rocks and Cape Cleare weather buoys in the Gulf of Alaska, previously reported in the OSPR Committee report. The efforts of the Council's federal and state legislative monitors were instrumental in the replacement of those buoys, and the subsequent repairs.
- **Coast Guard's Application of Vessel Inspection Regulations to the SERVS Response Fleet.** The Council has been concerned with the potential serious impacts to the Alyeska/SERVS uninspected response vessel fleet since 2020, when the issue of the Coast Guard's application of Subchapter M towing vessel inspections first arose.

At that time, U.S. Coast Guard District 17 updated the PWSRCAC Board on a Marine Safety Information Bulletin that exempted the SERVS uninspected response vessels. However, in 2023, U.S. Coast Guard Headquarters implemented a Work Instruction that could potentially remove those exemptions and impact the SERVS fleet.

During the legislative visit to Washington, D.C., in May, PWSRCAC met with members of Coast Guard Headquarters where the regulatory issue that potentially impacts the SERVS uninspected response fleet was discussed.

The Council requested clarification from the Coast Guard regarding the applicability of Coast Guard regulations to the SERVS fleet as stated in their Work Instruction.

Due to confusion and clarity issues raised by PWSRCAC with the language in the Work Instruction, the Coast Guard requested the Council to send a letter requesting clarification to their Work Instruction.

The letter was sent in May and the Coast Guard acknowledged receipt and reported they were working on the issue.

In June, the Council was requested to provide input on draft legislative language developed by Sen. Dan Sullivan's staff and the Coast Guard to permanently resolve this regulatory issue. This language is still being refined by a workgroup comprised of members that could be potentially impacted by this issue.

- **State Legislative Issues.** During Alaska's legislative session, LAC was following the progress of several bills in the Alaska Legislature.
  - **PFAS.** This legislation, which requires the eventual disposal of all firefighting foam containing PFAS (the "forever chemical") in the state, was passed during the session.
  - **Refined Fuels Surcharge Increase.** This legislation lost momentum with legislators when the Alaska Department of Environmental Conservation's Spill Prevention and Response (SPAR) Director reported that their budget deficit concerns had been addressed by the continued infusion of State Undesignated General Funds (UGF) and changes in the agency's budgeting process that pushed the budget deficit out to FY2033. PWSRCAC and LAC continue to look for legislative fixes to this ongoing budgetary issue.
  - **ADEC/SPAR Budget:** The Governor signed the State operating budget in June and did not veto any of the SPAR funding.
  - **Alaska Invasive Species Council.** The Governor did not support the establishment of an Alaska Invasive Species Council during the session, which PWSRCAC was led to believe he was considering favorably.

Jim Herbert asked CDR Rousseau (USCG) if she had been asked for input into the applicability of the vessel inspection regulations under Subchapter M to the SERVS contracted fishing vessel response fleet. CDR Rousseau reported that she had met with Sen. Sullivan when he came up to Alaska in the summer and USCG (through CDR Rousseau) was able to advocate for the local area's "boots on the ground" perspective (i.e., if these regulations were to go into effect in Prince William Sound, this is how it would affect the Valdez Captain of the Port (COTP) zone and how it would decimate USCG's response capability in the COTP zone in Valdez). She pointed out that while the upper echelons of the USCG try to make good policies, they do not always know how that policy will affect certain areas. She added that the specific legislation came out of a "good" place but they were thinking of the Gulf of Mexico – and Prince William Sound is not the Gulf of Mexico. CDR Rousseau thanked the Valdez port partners who provided specifics on the numbers of fishing vessels that would be affected if the legislation went into effect in Valdez and that

information has been relayed to USCG Headquarters. CDR Rousseau also added she had met with Capt. Trey Wirth with the Office of Marine Environmental Response and with Capt. Mark Neeland with the Office of the Commercial Vessel Compliance at USCG Headquarters and they have been working in the previous two weeks with Sen. Sullivan on draft legislation. She emphasized that this work happens at Headquarters not at the local level. Headquarters reaches back for input and MSU Valdez then provides that input. MSU Valdez feeds the process but does not lead the process, and that is how it is supposed to work. She thanked everyone who had helped in the process.

Herbert added that what is not clear to him and of concern is the implementation of the process for as many as 350 fishing vessels of opportunity. He emphasized that the devil will be in the details of the implementation process. CDR Rousseau agreed but also emphasized that implementing a process is part of their job and they do similar things every day.

#### **BOARD GOVERNANCE COMMITTEE (BGC)**

Chair Luke Hasenbank reported on the Board Governance Committee (BGC) activities since the May Board meeting.

- The Board Governance Committee has not held a meeting since the last Board meeting in May.
- The Director of Finance and Director of Administration have been meeting to discuss potential policy updates they would like to present to the BGC at a meeting following this Board meeting.
- Some of the potential policy updates being discussed include:
  - Increasing the threshold for reimbursement without receipts currently set at \$25 and clarifying receipt requirements.
  - Implementing a new policy and/or modifying the existing policy that deals with check signers to address Automated Clearing House (ACH) payments or electronic payments. Staff will be recommending that Board authorization for electronic payments over \$15,000 be obtained via email, as Board members do not have access to the accounting system.

#### **FINANCE COMMITTEE (FC)**

Treasurer and Chair Mako Haggerty reported on the Finance Committee's activities since the May Board meeting.

- The committee has met once since the Board meeting in May.

- The committee received the March 31<sup>st</sup> financial statements in May via email for their review. Committee members had no additional questions or input upon receiving these statements.
- In August, the committee met in-person for the first time since the COVID-19 pandemic. During this meeting, the committee reviewed the June 30, 2024, financial statements. These statements are the last of FY2024. Based on these year-end financials, it appears that the Council will have approximately \$200,000-400,000 more in net assets than initially budgeted.
- The new auditors from Porter & Allison, Inc. joined the meeting in person to introduce themselves, state their scope and objectives, and answer any questions. The auditors also discussed their plans and timelines for the FY2024 audit. They anticipate the audit to take six weeks to complete.
- The committee reviewed and recommended the Board accept the proposed budget modifications for FY2025. These can be found in section 3-2 on the consent agenda in the Board meeting notebook.
- The committee talked about the possibility of putting some of the emergency fund in a certificate of deposit with hopes of earning more interest. They had some discussion with the auditors, and Director of Finance Ashlee Hamilton reached out to the Council's Treasury Management contact for additional guidance. The committee will continue to conduct further research on this topic before finalizing any recommendations.
- The committee also discussed the renewal of insurance policies, as well as the renewal of the copier lease for Anchorage and Valdez offices. With committee support, staff has decided to move forward with renewing the Konica Minolta copier lease.
- Director of Finance Ashlee Hamilton briefed the committee on Automated Clearing House (ACH) payments and procedures. The committee moved to implement ACH payments over the next few months for charges under \$15,000. This will simplify the check signing process and will make it possible for money to be directly deposited into bank accounts. An email requesting banking information will be forthcoming from staff for Board/committee members who want to opt-in to ACH direct deposits for travel claims.
- The committee received updates on the list of vendors staff is considering for budgeting solutions. No decisions have been made at this time.

*(This concluded the Opening Comments of PWSRCAC's Board Subcommittees.)*

*Break: 9:40 a.m. - 9:55 a.m.*

## **EXTERNAL OPENING COMMENTS - EX OFFICIOS**

### **ALASKA DEPT. OF ENVIRONMENTAL CONSERVATION (ADEC)**

Ytamar Rodriguez, the Interagency Coordination Manager for the Spill Prevention & Response (SPAR), Prevention, Preparedness & Response (PPR) Division of the Alaska Department of Environmental Conservation, reported on ADEC/SPAR activities since the May Board meeting.

- **Staffing.** The Central Region of the SPAR Division is now fully staffed with five of those staff members located in the Valdez office. The two previous vacant engineering positions in PPR are now fully staffed and personnel retention numbers have significantly improved. Calendar year to date, 92% of SPAR's 133 employees have been retained; and in the 2<sup>nd</sup> QTR 2024 the retention rate was 97%.
- **Spill responses.** There were no notable spill responses for the central region YTD 2024.
- **Prince William Sound Area Plan Updates.**
  - The process has been started to move the Prince William Sound Area Contingency Plan (ACP) into the new ACP architecture during a workshop conducted at USCG's Sector Anchorage during the first week of September. This was a collaborative effort among ADEC, USCG, and the EPA. The process was not completed at that time but it is hoped that it will be finished by the end of this year.
  - The next Prince William Sound Area Committee meeting will be held on October 8, in Cordova, both virtually and in person. Geographic Response Strategies (GRS) and the creation of a GRS Subcommittee is on the agenda for discussion at the October 8 meeting. ADEC appreciates the collaboration it is having with PWSRCAC staff, and notably with Jeremy Robida.
- **Prince William Sound Tanker and VMT oversight activities.**
  - Staff have continued to complete tank vessel inspections on tankers that call at the VMT.
  - Staff are involved in planning for the upcoming Marathon/Andeavor Prince William Sound shipper exercise in October 2024 and planning has also begun for the Polar Tankers' Prince William Sound shipper exercise that will occur in May 2025. Both exercises will involve field deployments with drone support.

- For the VMT C-Plan, staff observed the pilot study in the West Tank Farm for evaluating the testing methods used to test the integrity of the secondary containment liner in the East Tank Farm to ensure that it meets ADEC's requirements. This work was part of the process to meet ADEC's condition of approval from the 2019 VMT C-Plan approval to confirm the secondary containment system at the East Tank Farm meets the department's requirements. ADEC looks forward to receiving the report on this pilot study to better understand the technology's capabilities.
- The VMT C-Plan is still under review for the plan renewal process. There is no additional information to be shared at this time. The comment period for additional information will be determined soon and that will be a 20-day comment period.
- ADEC received the Council's comments and recommendations on Tanks 94 and Tank 7 and the associated American Petroleum Institute (API) standards and is working on a response.
- **Wildlife Stabilization Deployment.** Staff attended the wildlife stabilization unit deployment during the summer that showcased new equipment Alyeska/SERVS has developed to enhance the wildlife response capability.
- **Regulation Updates.** This past spring, PPR initiated two regulation projects: one to update technical standards adopted by reference for flowlines and facility oil piping at regulated facilities under 18 AAC 75, Art. 1, and one to update oil discharge prevention and contingency planning regulations under 18 AAC 75, Art. 4.
  - Article 1. The proposed update to technical standards adopted by reference for flow lines and facility oil piping has been submitted internally. Once the internal review is complete, the package will be submitted to the Regulations Attorney to conduct a preliminary review. Flow lines are located at production facilities, and facility oil piping is located at most facilities, including terminals, tank farms, production facilities, refineries, and any facility with regulated aboveground oil storage tanks. The proposed updates will ensure the most current technical standards are adopted by reference into ADEC's regulations and will also ensure that the current high level of prevention is maintained.
  - Article 4. As noted at the May meeting, the purpose of updating the oil discharge prevention and contingency plan regulations (Article 4) is to incorporate non-controversial, clarifying, and corrective revisions based on some of the out-of-scope public comments submitted for our previous 2023 update project, lessons learned from the implementation of those regulations, and input from staff, plan holders, and other stakeholders. At

this time, the package has been submitted to the Regulations Attorney to conduct a preliminary review. Once the preliminary review is complete, the next steps will be focused on moving to the public comment stage. It was anticipated both packages will be ready for public review and comment in 2024.

Following his formal report, Rodriguez answered questions from the Board.

Jim Herbert asked Rodriguez about the “permit shield” on Alyeska’s Title V air quality permit which was issued in 2012, and expired in 2017, but has not been reviewed/updated and continues to exist under the context of a “permit shield.” Herbert questioned whether ADEC has determined there were no changes that need to be scrutinized and therefore it could stay in place. Similarly, could a permit shield be applied to the water pollution and discharge elimination permit that is coming due at the end of November 2024. Rodriguez responded that he would need to get more information and that this was the first time he had heard the term “permit shield,” but as far as he was aware there was no change to Alyeska’s Title V air quality permit. The hold-up on the air quality permit was pending resolution of litigation between the EPA and Alyeska, and ADEC has to wait for the litigation to be resolved.

Bob Shavelson commented that when Congress passed the Clean Water Act and the Clean Air Act, the goal was to have five-year permit terms. When things drag out, the permittees are at an advantage because they do not have to upgrade technology to meet higher standards to reduce pollution, etc.

Shavelson went on to question ADEC’s rationale for giving an entity a credit (such as meeting the Response Planning Standard) for something that is already required by law. He said it just did not make sense. Shavelson asked Rodriguez to get an answer to the Board after the meeting if he was not prepared to answer the question at that time. Rodriguez stated he would get an answer and report back.

Amanda Bauer pointed out that those who live in Valdez were getting tired of the permit shield excuse, and perhaps it was time to push a little harder. The renewed permit was taking far too long for those who live in Valdez.

Executive Director Donna Schantz added that it was PWSRCAC’s understanding that ADEC does not have to wait for the resolution of litigation. Rather, it is a management decision on the part of ADEC to wait for a resolution of the litigation, and that could take years. She reported she had also heard that Alyeska may be getting ready to undertake some major changes/replacement to the incinerators and power vapor at the VMT and that would seem to require changes to the permit.

Robert Archibald commented that while the air quality over at the VMT appears to have improved from the early days of the VMT operation, the citizens of Valdez deserve better, and it is incumbent upon PWSRCAC as an organization and ADEC as the regulator to do what they can to move the issuance of an updated permit forward.

#### **UNITED STATES COAST GUARD (USCG)**

CDR Sarah Rousseau reported that MSU Valdez was coming to the end of its annual personnel rotation season. Incoming personnel included the Executive Officer for MSU Valdez, LCDR Kaaua. He is familiar with the region from his time as the Supervisor for the Marine Safety Detachment in Homer.

She thanked all the USCG port partners who assisted with notifications about an entangled whale in Prince William Sound during the summer. Several port partners were involved, including Stan Stephens Cruises, whose boats and personnel were standing a watch so that the whale was not harassed by other boats. NOAA was able to call in a whale expert from Juneau to disentangle the whale. There was excellent cooperation by all entities involved.

CDR Rousseau thanked Alyeska/SERVS for access to some of the remote sites as a primary escort by Tatitlek Federal Services for the USCG's Electronics Materials Officer (EMO) with the Vessel Traffic Service (VTS). Dennis Baron is a new hire into the previously unfilled EMO position in the VTS. Rousseau reported seeing many improvements already since Baron's hiring and allowing him access to some of the remote sites without the necessity of an Alyeska/SERVS escort has improved response times for addressing repairs and upgrades, etc.

CDR Rousseau spoke of the increased awareness of cyber security threats and the dangers they pose because it is not something physical, like a foreign aircraft in Alaska airspace, or a ship in Prince William Sound where one can see where the threat is coming from and deploy assets to negate the threat. A cyber security threat could be in a foreign country, and it is unseen and could lay in wait for months. She reported this is discussed often among the captains of the port and it is becoming more and more important because most people do not know the meaning of cyber security or what it is, and people are often talking in terms that people do not understand. She urged everyone as port partners and as advocates for the safety and security of Prince William Sound to take a harder look at cyber security in their operations and their response plans in Valdez.

Dave Janka questioned the dangers and cyber security risk of foreign flagged tankers coming into Port Valdez to load Alaska North Slope crude oil, who then deliver it to China, a non-allied country to the U.S. Rousseau said it is a difficult question to answer, as the U.S.'s political allies are different from its economic allies. She briefly explained the agreements and regulations of the International Maritime Organization that govern port visits of foreign flagged vessels known as the International Ship and Port Facility Security (ISPS) Code. She emphasized that the USCG does not allow a foreign vessel into a U.S. port if they are not in

compliance with U.S. regulations for entry to the U.S. or to where they are going. She said she does not have qualms with vessels coming in or going out to China, unless it is a vessel that is coming from a port that has not been found in compliance with ISPS security measures.

Steve Lewis reported that the POVTS Committee has looked at this and there is a question of what can realistically be shared. He invited CDR Rousseau to come to a POVTS meeting and provide a briefing on cyber security.

CDR Rousseau pointed out that even she, as the Captain of the Port, is not allowed to see the whole security plan for a vessel that comes into port because the information is protected. However, portions of a plan may be requested if there is a need to have that specific information without having to delve into classified information.

Mike Bender asked if there is a routine check of the buoys. CDR Rousseau explained that routine checks and maintenance of buoys is the responsibility of the organization that owns the buoy (e.g., USCG, NOAA.) The weather buoys belong to NOAA and the National Data Buoy Center (NDBC) has jurisdiction of those. USCG does have partnerships with the NDBC and conveys information all the time but does not maintain them at the field level. However, while not maintaining the weather buoys, MSU Valdez can act as a conduit to report a malfunctioning buoy to Juneau so they are aware.

Robert Beedle expressed concerns about the ongoing Rescue 21 communications problems in Prince William Sound. CDR Rousseau pointed out that Rescue 21 communications and deployment is not within the purview of the MSU Valdez COTP, but rather is run by Sector Anchorage and Western Alaska which is under Captain Culpepper.

Jim Herbert asked about conflicts with fishing vessels in the Valdez Narrows during the summer fishing season. CDR Rousseau reported it was a problem in 2023, when she first took over command. It was discussed internally and they explored various ways to fix the problem, including asking for additional USCG presence from units outside of MSU Valdez operational control, such as the U.S. Coast Guard Cutter LIBERTY, the Maritime Safety and Security Team (MSST), and the Small Boat Station. She reported it was not as much a problem during this 2024 summer season, and that an increased USCG presence on the water alone is sometimes an indicator of increased compliance by the fishing vessel fleet. She noticed an improvement in fishing crews manning their radios and other actions when USCG is out on the water. She also pointed out she does not control the deployment of the USCG cutter or the MSST assets. Sometimes she will get that additional assistance when she requests it and other times not.

Bob Shavelson commented on the unknown dangers and risks that artificial intelligence (AI) technology poses to the maritime industry and asked CDR Rousseau if there are any federal rules setting a minimum floor for cyber security protections in c-plans. CDR

Rousseau said she believes that USCG Headquarters is working on an official rulemaking but there is no specific regulation that she was aware of at the present time. There is a USCG cyber protection team already established that can be called in to specific instances of suspected cyber breaches, but currently, most cyber security protections put in place by industry are voluntary.

General discussion of cyber security issues followed.

Beedle said he would like to meet with CDR Rousseau to talk about solutions for better communications among all the users and port partners (fishermen, processors, fish managers, etc.) for non-enforcement issues because presently everyone is on a different radio channel. CDR Rousseau agreed and said, for example, she would like to see a greater presence from the fishermen on the Harbor Safety Committee and Area Committees and she looked forward to that discussion with Beedle.

#### **NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION (NOAA)**

(No report.)

#### **BUREAU OF LAND MANAGEMENT (BLM)**

Reid Olson reported that since the May meeting BLM personnel have attended the VMT Coordination & Exercise Planning Group meetings, the May 7 VEOC IMT training event, the May 8 VMT equipment deployment exercise, the secondary containment liner testing pilot study, and the July 31 VMT wildlife stabilization equipment exercise.

Herbert asked what information BLM representatives could impart to the Council at this time related to a newspaper article that ran during the summer about BLM being in conversations with Sen. Dan Sullivan's office that the permitting and property under the TAPS pipeline might be transferred to the State of Alaska. Herbert asked for a general overview of the viability of the proposal and if the conditions that were originally associated with the right-of-way (ROW) permit would be mandated to the State of Alaska or would the State have to come up with its own standards.

BLM's Paul Degner (via videoconference) responded that as part of the 1959 Statehood Act, the State of Alaska was entitled to approximately 105 million acres of federal lands in Alaska, much of which has already been transferred, except approximately five million acres of entitlement that is outstanding at this point in time. The State, in its selections of the additional five million acres, has included lands that are in the Dalton utility corridor which fall under PLO 5150, so those lands are currently withdrawn from the public domain. The selections the State made are called "top filed" and are not valid unless there is a decision made by the U.S. Secretary of the Interior to partially revoke PLO 5150. To date, no decision has been made on that.

Degner went on to explain, hypothetically, that if PLO 5150 were to be partially revoked, there would still be approximately 130 miles of federal lands that BLM administers south of the Yukon River, so in the event that that land transfer were to happen there would still be BLM involvement in TAPS at that point, including lands on the military reservations which are already withdrawn and remain under federal ownership. In terms of the State administering the ROW, that would probably continue in the way it is today, since there would still be federal lands in the ROW. This all being hypothetical.

Degner continued, in response to a follow-up question from Herbert as to whether the JPO would still have jurisdiction over the pipeline itself, even though it was running over State land, and said the current ROW has stipulations for oversight according to the stipulations within ROW grant, but BLM's statutory authority only applies to federal lands. The regulatory authority over state lands would be under State of Alaska ownership at that point. As long as the stipulations of the grant agreement remain in effect, that part would not change.

Amanda Bauer commented that when the LAC met with Sen. Sullivan he was upset there would be no more public process on this issue and into the decision. Degner stated that before any decision is made on PLO 5150, there would need to be additional National Environmental Policy Act (NEPA) analysis, but further than that he could not speculate. Reid Olson surmised that it would follow the normal process after the NEPA assessment (i.e., public notice and comment, environmental reviews, consultation, coordination, and then implementation).

#### **ALASKA DEPT. OF NATURAL RESOURCES (ADNR)**

State Pipeline Coordinator Tony Strupulis reported via videoconference that there had been some staff turnover in the office. The TAPS Lease Compliance position is now filled by Lexi Ehresmann who started two weeks prior to this meeting and has already been out in the field doing surveillance from Glennallen to Valdez and will be going back to do surveillance of the northern end of the pipeline corridor, weather permitting.

Addressing the previous questions about PLO 5150 land transfer, Strupulis stated it was his understanding that if the transfer did happen, the BLM land that is transferred would be amended under the State lease and those lands would be administered thenceforward by the State of Alaska.

#### **U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)**

Torri Huelskoetter reported briefly (via videoconference) on the sites the agency has been working on.

She announced that the office would be getting a third Federal On-Scene Coordinator (FOSC) in the next few months.

As to TAPS activities, EPA personnel were involved in the Yukon River exercise in August and would participate in the Tiekel River exercise in Glennallen on October 3. They met with the GAO when they came to Alaska in August for the JPO safety audit. She was also hosted by USCG on Subpart J issues.

There were no significant spills related to TAPS.

#### **U.S. DEPT. OF THE INTERIOR (DOI)**

Lisa Fox reported via videoconference that the Regional Response Team (RRT) met the previous week and the DOI continues to be involved in spill response. She thanked PWSRCAC staff members Linda Swiss and Jeremy Robida for volunteering their time on the RRT's Cultural Resources Committee. That committee is working to revise and improve the guidelines for spill responders to protect cultural resources. The expected delivery date for those revised guidelines is 2026.

Fox reported that DOI is also participating in the RRT's Tribal Task Force to revise the tribal consultation guidelines in the hope it is more helpful to FOSCs.

Fox reported that the wildlife protection agencies have met to work on the Wildlife Protection Guidelines. It was determined those guidelines are good as they stand and there will not be a revision in the short term. That committee will participate in the task force that will be addressing the sensitive areas compendium update.

Ben Cutrell asked if the committee engages with the Alaska Native Regional and Village corporations when updating these cultural resources. Fox reported that the committee will reach out to the Native groups when they have something of substance for the guidelines to share. Presently, there are several tribal representatives on the Cultural Resource Committee. There is also a Tribal Outreach Committee formed, of which she is a member. Once they have laid the groundwork, they will reach out to the Alaska Native groups.

#### **ALASKA DEPT. OF FISH AND GAME (ADF&G)**

(No report.)

#### **OIL SPILL RECOVERY INSTITUTE (OSRI)**

(No report.)

#### **ALASKA DEPT. OF HOMELAND SECURITY AND EMERGENCY MANAGEMENT (ADHSEM)**

(No report.)

#### **U.S. FOREST SERVICE (USFS)**

(No report.)

*(This concluded the External Opening Comments of PWSRCAC's Ex Officio Members)*

## **EXTERNAL COMMENTS – TAPS SHIPPERS, OWNER COMPANIES, AND PILOTS**

### **POLAR TANKERS**

Andrea West reported, as follows:

- YTD 2024, Polar Tankers successfully completed 74 loads and transported 55.4 million bbls. of TAPS crude without incident.
- Polar Tankers' bridge resource management course was in progress at that time in the San Jacinto Maritime Academy in Houston, TX. There are 15 mariners, one unlicensed and four Puget Sound pilots attending the trainings this year.
- Two ships went to Singapore for their regulatory required drydocks. The Polar Enterprise was returned to service on the West Coast on September 1, and the Polar Adventure left for Singapore on August 1 and is expected back in service in December.

David Janka thanked Polar Tankers for its letter on whale strikes and speed reductions, and asked whether Polar's tankers have infrared or low light technologies for whale detection. West reported that Polar Tankers relies on its lookouts and does not have infrared or other technology for whale detection, although sometimes whales can be picked up on radar, but that is not a reliable method. She added that tankers are required to have lookouts 24/7. There is one on the bow approaching the Narrows, and then at Hinchinbrook Entrance there is the master, the deck watch officer, and then the lookout up on the bridge. She pointed out that mariners going through the maritime academy learn about whales, how to identify them, and the 24-hour lookout requirements, and other best practices to detect and avoid whales. West explained in more detail the requirements of work/rest hours for a master to be on the bridge, etc. Herbert said it will be important for the Council to really look at what impacts reducing speeds in Prince William Sound could have on work/rest hours for watch standards in Prince William Sound.

### **CROWLEY ALASKA TANKERS**

Mark Curtis reported the following for Crowley Alaska Tankers (CAT):

- The Washington has returned from a successful shipyard period in Singapore. It was their second special survey and the ship has already called at the VMT. He reported zero injuries or incidents on board.
- The California is in the shipyard now in Singapore for its Critical Area Inspection Program (CAIP) inspection.
- The Oregon is in the Gulf of Mexico and is being transferred to Fairwater Tanker Management Company. Fairwater Tanker Management is part of the Fairwater

Holdings Company, LLC, which is a holding company for the joint venture between SEACOR and Crowley Alaska Tanker Company. More vessels will be added over the next few months to this new fleet. Operations will remain the same with the same crews and shoreside personnel, and they will remain CAT employees until the last month prior to the launch of the joint venture which will be known as Fairwater.

- Crowley Tanker Company was very busy in 2024, in that it took ownership of two new ships (an electric tug as well as an LNG bunker barge); two of Crowley's government service vessels were both in the Middle East and they were able to help with the humanitarian mission there as a result of the ongoing war and have now been welcomed back to the U.S. Crowley also broke ground in Massachusetts for the new offshore wind terminal.
- Curtis announced that this was his last meeting. Ingo Rose will replace Curtis for the ongoing CAT Anchorage operations. He is based in Anchorage.

Returning to the whale strike avoidance discussion, Amanda Bauer asked West/Polar Tankers and Curtis/CAT if a lookout is posted on the bow of their tankers when transiting the Valdez Narrows. West stated that Polar does it as a best practice. Curtis/CAT did not have that information and will follow up and report back. As a follow-up, Dave Janka said he would like to get information from CAT (after the meeting) as to whether they had the same whale protocols as Polar Tankers.

#### **HILCORP**

(No report.)

#### **ALASKA TANKER COMPANY (ATC)**

(No report.)

#### **MARATHON PETROLEUM**

(No report.)

#### **SOUTHWEST ALASKA PILOTS ASSOCIATION (SWAPA)**

(No report.)

*(This concluded the External Opening Comments of TAPS Shippers, Owner Companies, and Pilots.)*

*Break: 11:35 a.m. – 12:30 p.m.*

#### **ALYESKA/SERVS ACTIVITY REPORT**

Andres Morales, Alyeska's Emergency Preparedness and Response Director and Klint VanWingerden, Director of Operations for Alyeska, gave the Alyeska/SERVS' activity report

for 2024 YTD and an update on Alyeska's efforts to address concerns raised in the VMT Risks & Safety Culture report.

### **VMT Operations:**

- Operations:

	<u>2024 (as of 8/31/24)</u>
○ Tankers Loaded	143
○ Tankers Escorted	145
○ Barrels Loaded	106,058,326

	<u>Since start up (as of 8/31/24)</u>
○ Tankers Loaded	23,645
○ Tankers Escorted	14,975
○ Barrels Loaded	18,058,180,689

- Safety (TAPS): 2024 (2Q)

○ Days away from work cases	1
○ TAPS Combined Recordable Rate %	0.51

- Environment (Valdez): 2024 (2Q)

○ Spill Volume (Gallons)	2.036
○ Number of Spills	4

### **Fishing Vessel Availability by Port (2Q 2024):**

<u>Port</u>	<u>Tier 1</u>	<u>Tier 2</u>
Valdez	30	11
Cordova	26 (+8 Rapid Resp.)	124
Whittier	7	17
Seward	0	29
Homer	0	49
Kodiak	0	35
<b>Totals</b>	<b>63 +8RR</b>	<b>265</b>

### **2024 (1Q) Quarter Contingency Plan Activities:**

- Support PWS C-Plan Minor Amendment.
  - Allison Creek Changes.
- VMT C-Plan Renewal
  - Round 1: RFAs received from ADEC March 14, 2024.
  - Round 1: RFAI responses submitted to ADEC April 10, 2024.
  - Round 2: RFAs received from ADEC July 16, 2024.
  - Round 2: RFAI responses submitted to ADEC August 13, 2024.

**2024 (2Q) Training & Exercises**

- 4/2 – 4/24 F/V Training (Kodiak, Homer, Seward, Valdez).
- 4/22 & 4/24 Current Buster 8/Crucial Skimmer TF Training.
- 4/27 Operational Readiness Exercise – Valdez.
- 4/25 – 5/2 F/V Training (Cordova).
- 5/7 VMT Training Exercise.
- 5/8 VMT Exercise.
- 5/14 Allison Creek Demo Exercise – Open Water & Nearshore.
- 5/28 – 6/2 Remote Site Maintenance – Lake Bay/Main Bay.
- 6/11 – 6/12 Valdez Duck Flats Boom Deployment.
- 6/15 Valdez Star Open Water Training Exercise.
- 6/16 Solomon Gulch Hatchery Boom Deployment Exercise.
- 6/18 – 6/24 Remote Site Maintenance – Cannery Creek/Chenega.
- 6/19 Emergency Towing and Tether Exercise – Polar Endeavor.
- 6/23 Solomon Gulch Hatchery Boom Deployment Exercise.
- 6/26 – 6/27 Valdez Duck Flats Boom Deployment Exercise.
- 6/29 – 6/30 Nearshore Operational Readiness Exercise.

**2024 Valdez Major Maintenance:**

- BWT Triennial Inspection & Repair A Header & Berth 5.
- VMT Marine Structures Coating Repairs Berth 5.
- External Coating of Tank 54-TK-3 and 54-TK-4 (VMT-Crude).
- BWT DAF Cell 6 Inspection and Repair.
- 500-2 Refurbishment.

Morales noted that the safety statistics were not where Alyeska/SERVS would like them to be and, as a company, they are working to improve that. He pointed out that the spills and spill volume totals were small hydraulic leaks/spills (no ANS crude to water). The number of fishing vessels under contract in the Fishing Vessel Response Fleet has increased. Round 3 of RFAs on the Prince William Sound C-Plan were issued by ADEC and received by Alyeska the previous day and he hoped to turn those around and respond promptly. He also pointed out that 2024 was lining up to be a big year for completed trainings and exercises.

Alyeska's Director of Operations, Klint VanWingerden, via videoconference, gave an update of the maintenance activities at the VMT YTD and an update on the Management Action Plan for the VMT which came out of the VMT risks & safety culture issues report (Billie Garde Report). Executive Director Schantz had asked VanWingerden to speak to four topic areas of particular interest to PWSRCAC: an update on the Management Action Plan addressing the issues in the VMT risks & safety culture issues report (Billie Garde Report); the A&B Crude Header Inspection that was completed earlier this summer; the fire foam transition status; and the status of Alyeska's incinerator replacement project.

- Topic of Interest - VMT Risks & Safety Culture Issues Report:
  - Updated Management Action Plan (MAP):
    - Alyeska's Safety Management System.
      - Identification and implementation of opportunities for simplification and alignment with API 1173.
    - Process Safety Management (PSM).
      - Established audit identified need for adjustment of some PSM coverage areas. Developing a PSM compliance manual to centralize documentation in one location for clarity.
    - Maintenance Backlog and Engineering Query.
      - Reviewed and prioritized all of the maintenance and engineering backlog. There were no items deferred that would pose an imminent or serious incident at the VMT. Maintenance backlog targets were evaluated and established and are actively being worked at the present time.
    - Open Work Environment(OWE)/Employee Concerns Programs (ECP).
      - Reviewed both OWE and ECP and confirmed that Alyeska continues its commitments to Congress that align with the improvement plans that were previously established.
      - Actively addressing workforce morale and direction of the company, adding clarity around its mission, vision, and goals.
      - Addressing culture through leadership work sessions as well as open forum discussions with the workforce. A review of the open work environment shows a high compliance rate (99.9%) with the training requirement.
      - No issues were identified with the ECP program.
    - Audits.
      - Completed four audits that were incorporated into the actions in the MAP.
    - Training.
      - Current trainings have deficiencies that justified the pursuit of better solutions. A better platform has been identified and will be implemented next year.
    - Stakeholder Engagement.
      - Alyeska has committed to a "no surprises" approach to its stakeholders with both internal and external stakeholders.

VanWingerden added that while the details of the MAP have been addressed, opportunities for improvement will continue. He continued by addressing the other topics of interests:

- Topic of Interest – A&B Crude Header Inspections:
  - Inspections were conducted and coating repairs completed.
  - 12 individual pig runs were completed.
  - Tank 3 external coating completed.
- Topic of Interest – Fire Foam Transition Update:
  - Work in Progress:
    - VMT Berth 5 fire foam system being transitioned to Fluorine Free.
  - Future Efforts:
    - Long-range planning for remaining system on terminal, including Berth 4, Metering Facilities, mobile equipment, and escort fleet.
    - Continue evaluation of Fluorine Free products for use in existing tank farm subsurface application.
- Topic of Interest – VMT Vapor Management Strategy:
  - Boilers:
    - Increase maximum gas capacity.
    - No change to steam generating capacity.
    - Export excess power to CVEA grid.
  - Waste Gas Combustors:
    - Install two new 'right sized' units.
    - Transition from running two continuously to one only when needed.

Herbert pointed out the extensive and expensive work that is going into the 500-2 barge as evidence of its importance to the response effort.

Shavelson asked about the PHA audit and whether PWSRCAC could get a copy of the findings. Morales stated their internal audits are not normally shared and they are not shared with regulators, although Alyeska will sometimes share executive summaries. That is what they have done in the past, and if there is something in the summary that PWSRCAC has questions about, Alyeska would speak to those questions specifically.

Steve Lewis brought up the issue of new science research that is looking at the possible loss of cognitive ability in the workforce as a result of COVID-19 infections and whether Alyeska has recognized these issues and is looking into its safety procedures and/or employee training to compensate for this. Morales responded that he could not really answer that specifically, but the after-effects of COVID-19 infection on brain function is a concern.

A general discussion followed with the Board on topics covered during the presentation and particularly the new fire suppressant foam that Alyeska has selected as the

replacement for the existing suppressant chemicals containing PFAS and other forever chemicals. The changeover is to be phased in over a few years. Alyeska is working on a process for disposing of the PFAS fire suppressant foam when the new chemical is in place.

## **CONSENT AGENDA**

### **3-1, 3-2**

There were two items on the consent agenda (3-1, 3-2) with respective briefing sheets in the meeting notebook:

- **3-1 FY2025 LTEMP BUDGET MODIFICATION & CONTRACT CHANGE ORDER APPROVAL**  
Authorization of a budget modification in the amount of \$6,006 from the contingency fund to Project 9510 in the FY2025 budget and authorization for the Executive Director to carry out a corresponding change order to increase Contract 9510.25.06 with Fjord & Fish Sciences in an amount not to exceed \$61,731.
- **3-2 APPROVAL OF FY2025 BUDGET MODIFICATIONS**  
Approval of the FY2025 budget modifications as listed above, with a total revised contingency in the amount of \$36,147.50.

Mako Haggerty moved to approve the consent agenda as presented. Dave Janka seconded and the motion was approved without objection.

## **PRESENTATION BY REPSOL ON THE PIKKA PROJECT**

Walt Hufford and Jim Wade of Repsol presented an overview of Repsol and its partnership with Santos which is its operator on the Pikka Project in Alaska, and they outlined the expected timeline of ADEC's regulatory process for approval of the project.

Following the presentation, Hufford and Wade answered general questions from the Board on how and where Repsol/Santos will move the oil from Alaska, whether using spot charters or bringing in its own tankers, its plans to reduce pollution and greenhouse gas emissions, and the new technologies they will be using.

## **4-1 REPORT ACCEPTANCE: MARINE BIRD HOTSPOTS IN PRINCE WILLIAM SOUND**

The Board was asked to accept the report titled "Marine Bird Hotspots in Prince William Sound" dated July 2024, by Mary Anne Bishop, Ph.D., and Anne Schaefer of the Prince William Sound Science Center. The report describes a hotspot analysis performed with 14 years of at-sea marine bird survey data collected during March 2007-2014 and 2018-2023. Twelve marine bird species groups are identified within the analysis. The result is a series of maps that identify high-use areas in Prince William Sound during late winter, often observed in bays, passages, and semi-protected waters.

PWSRCAC Project Manager Danielle Verna introduced the report for acceptance and contractor Dr. Mary Anne Bishop shared a brief presentation summarizing the report's results and recommendations. Following the presentation, Dr. Bishop answered questions from the Board.

A briefing sheet and copy of the report were included in the meeting notebook as Item 4-1.

Amanda Bauer **moved to accept** the report "Marine Bird Hotspots in Prince William Sound" by Mary Anne Bishop, Ph.D., and Anne Schaefer of the Prince William Sound Science Center, dated July 2024, as meeting the terms and conditions of contract number 9110.24.01, and for distribution to the public. Dorothy Moore **seconded** and **the motion passed** without objection.

*Break: 2:40 p.m. - 2:50 p.m.*

#### **4-2 REPORT ACCEPTANCE: PORT VALDEZ WEATHER BUOY DATA ANALYSIS**

Project Manager Roy Robertson introduced Rob Campbell, Ph.D., with the Prince William Sound Science Center, who briefed the Board on his analysis and findings of weather buoy data in Port Valdez from 2019-2023.

As outlined by Robertson, PWSRCAC installed two weather buoys in Port Valdez in 2019, one in the vicinity of the Valdez Marine Terminal and the other near the Valdez Duck Flats. Dr. Campbell was contracted to analyze the data collected from the two weather buoys from 2019-2023 and provide a report of his findings. The report is the fourth in a series of projects that analyze the data collected to help determine weather trends throughout the year and seasonally at the location of the buoys. The analysis includes ocean current and wind direction and speed information, wave direction and heights, and other pertinent information that can be obtained from the weather data.

A briefing sheet and Dr. Campbell's report were included in Item 4-2 in the meeting notebook.

Dr. Campbell presented an overview of his findings and the Board was asked to accept the report as meeting the terms of the contract.

Jim Herbert **moved to accept** the report titled "Port Valdez Weather Buoy Data Analysis 2019-2023" by Robert W. Campbell, Ph.D., of the Prince William Sound Science Center as meeting the terms and conditions of Contract number 6536.24.01, and for distribution to the public. Mako Haggerty **seconded** and **the motion passed** without objection.

#### **4-3 UPDATE ON REVIEW OF SECONDARY CONTAINMENT LINER TESTING**

This agenda item was introduced by Project Manager Sadie Blancaflor who provided the Board with an update on the West Tank Farm secondary containment liner pilot test using

electrical leak location (ELL). Dr. Joe Scalia, Associate Professor of Civil and Environmental Engineering at Colorado State University who works with PWSRCAC's contractor Dr. Craig Benson, observed the pilot tests and provided the Board with an update on the ELL and Electrical Resistivity Tomography (ERT) pilot tests that Alyeska conducted in the decommissioned West Tank Farm on July 22-29, 2024.

A briefing sheet was included in the meeting notebook as Item 4-3. Following the presentation, Dr. Scalia answered questions from the Board. It was noted that neither the photos of the testing, nor the final report were available from Alyeska yet. Alyssa Sweet noted that the photos were approved and ready to transmit to PWSRCAC.

Jim Herbert asked whether there are any other tests that could be used if neither of these non-destructive testing methods work. Dr. Scalia stated that there really is not a better technology to do this type of non-destructive testing, and ELL is the industry standard.

Ytamar Rodriguez reported that ADEC's Valdez staff observed the testing; BLM personnel did also.

Sadie Blancaflor reminded the Board that Alyeska receives a 60% prevention credit on the basis that the liner is intact and meets the ADEC's "sufficiently impermeable" standard.

*(This was an information item. No action was requested of the Board.)*

#### **4-4 UPDATE ON TANKER C-PLAN 2023 AMENDMENT**

Project Manager Linda Swiss gave a brief review and update on a major amendment submitted in September 2023 to the Prince William Sound Tanker Oil Discharge Prevention and Contingency Plan (Tanker C-Plan) and associated vessel response plans for Alaska Tanker Company, Andeavor LLC, Crowley Alaska Tankers, Hilcorp North Slope, and Polar Tankers. The amendment was submitted on September 11, 2023, and approved on June 21, 2024, and addressed changes to 18 AAC 75, Art. 4, that became effective in February 2023.

Beedle expressed his frustration with having to search for amendment information online rather than being able to locate a hard copy easily, such as at a library, as was available in the past. Linda Swiss responded that c-plans in the state are available on ADEC's website. ADEC does not issue printed copies anymore. ADEC's Ytamar Rodriguez responded that ADEC personnel can assist the public with hard copies when requested, but Alaska's government offices and ADEC in particular are increasingly moving towards online methods for public information retrieval.

*(This was an information item. No action was requested of the Board.)*

**RECESS:** The meeting recessed at 4:45 p.m., to reconvene the following day.

**Friday, September 20, 2024.**

**CALL BACK TO ORDER**

President Archibald called the meeting back to order at 8:35 a.m. on September 20, 2024. A roll call was taken. There were 19 Directors present at the time of the call back to order: Archibald, Bauer, Beedle, Bender, Brittain, Crump (via Videoconference), Cutrell, Donaldson, Haggerty, Hasenbank, Herbert, Jackson (via videoconference), Janka (via videoconference), Malchoff, Moore, Shavelson, Vigil, Williams, and Zinck.

**4-5 REPORT ACCEPTANCE: NON-INDIGENOUS MARINE SPECIES IN PRINCE WILLIAM SOUND**

Project Manager Danielle Verna and PWSRCAC contractor Greg Ruiz, Ph.D., of the Smithsonian Environmental Research Center, presented a report for Board acceptance on non-indigenous species in Prince William Sound.

The report titled “Regional Evaluation of Non-Indigenous Marine Species in Prince William Sound” by the Smithsonian Environmental Research Center dated August 5, 2024, describes a broadscale survey for non-indigenous (NIS) marine species across Prince William Sound conducted in the summer of 2023 using polyvinyl chloride (PVC) settlement panels. The panels collected organisms throughout the summer season and were then analyzed with morphological and genetic methods to identify native and non-native species. Three NIS of benthic marine invertebrates were detected in this study, two of which appear to be new records in Prince William Sound, increasing the total number of documented NIS of benthic marine invertebrates in Prince William Sound to seven.

A briefing sheet and copy of the report were included in the meeting notebook as Item 4-5.

Dr. Ruiz presented a summary of the report’s results and recommendations and answered questions from the Board. He pointed out that the survey makes a good baseline for future studies.

The report recommends the following future studies:

- A decadal survey of Prince William Sound and Cook Inlet to evaluate:
  - Biosecurity management and policy
  - Long-term changes in the marine community
- An expanded PlateWatch Program:
  - Genetic detection
  - Training workshop and pilot test
- More frequent measures at transportation hubs:
  - Valdez Marine Terminal
  - Tatitlek Ferry Dock

Following the presentation Dr. Ruiz answered questions from the Board.

In response to a question from Jim Herbert as to why the high activity ports of Whittier and Valdez were not chosen for the project's methodology and decadal survey, and if he felt they were adequately covered by the PlateWatch program., Dr. Ruiz stated that all of the decadal surveys they have done focused on higher salinity waters because it is something that is comparable across the different bays and latitudes. Both Whittier and Valdez have a significant freshwater lens. But he recommended deploying the PlateWatch panels in deeper water to get below that freshwater lens and allow researchers to understand what non-native marine species are occurring in those areas. He felt the PlateWatch program could be effectively employed there.

Herbert asked if it was inevitable in 50-100 years non-native species will have marched northward, unchecked and unfettered, in spite of preventative measures such as ballast exchange and other techniques. Dr. Ruiz opined that most of the species that are established south of Alaska would not move across bays and estuaries without human assistance. One exception would be the European green crab which can disperse long distances because its larvae are long-lived and they can cross greater areas to move among bays, but most others could not.

Dr. Ruiz clarified that northward movement projections of NIS in the analysis are based on current climate data. The effect of climate change would likely increase the range of movement for those species, primarily because of warming. In response to a question from Steve Lewis about the effect on NIS of increased shipping into Arctic waters, such as around Prudhoe Bay and Utqiagvik, Dr. Ruiz commented that Canadian researchers are looking at NIS and shipping in the higher Arctic waters and also doing surveys there. He said he knew less about what is happening with NIS in Prudhoe Bay or Utqiagvik but he was interested in what may happen in Nome if that area is further developed and continues to warm.

Michael Vigil **moved to accept** the report titled, "Regional Evaluation of Non-Indigenous Marine Species in Prince William Sound" by Greg Ruiz, Ph.D. et al, of the Smithsonian Environmental Research Center, dated August 5, 2024, as meeting the terms and conditions of Contract number 9520.23.01, and for distribution to the public. Jim Herbert **seconded** and **the motion passed** without objection.

#### **4-6 MISCOMMUNICATION IN MARITIME CONTEXTS**

PWSRCAC's Project Manager John Guthrie and Nicole Ziegler, Ph.D., with Sky Island Language Learning Research, updated the Board on the first two phases of Project 8520 – Miscommunication in Maritime Contexts.

A better understanding of maritime English between ships' crews and native English speakers is an area of interest to the Council in terms of better addressing the human factors that contribute to accidents.

A briefing sheet that outlined the project's scope was provided under Item 4-6 in the meeting notebook. The final report for phase 2 will be brought to the Board when it is available at a later date after review by the POVTS Committee.

Lewis explained the timing of the release of phase 2 of the report and the possible need for some peer review before it is released. He hoped that at least a summary could be released by the POVTS Committee as soon as possible. He reported that he had read the report and was struck by the linguistic, pragmatic, and social causes of these miscommunications, and that one could take the problems caused by linguistic miscommunications out of the maritime context and apply them to every conversation one has with anyone every day. The speed of diction of some individuals, for example, as well as cultural diction, and miscommunication with those hard of hearing. Moving forward, POVTS will meet in a few weeks and will look at continuing with phase 3 of the project and he hoped it would be included in the upcoming budget cycle. He thanked everyone on the Board for recognizing the importance of the issue in maritime operations and for their support of this project.

*(This was an information item. No action was requested of the Board.)*

*Break: 10:00 a.m. - 10:15 a.m.*

#### **4-7 PWSRCAC LONG RANGE PLANNING**

Director of Administration Hans Odegard and Executive Director Donna Schantz presented a list of protected projects as part of the Council's Long Range Planning (LRP) process. The definition of a "protected project" was included in the briefing sheet 4-7 in the meeting notebook, and the list of the protected projects was included as Attachment A to the briefing sheet 4-7.

Odegard reviewed the list with the Board. In addition, Odegard also reviewed the deadlines for this year's LRP process, outlined on page 1 of the LRP Guidance Memo included in the Attachment to the briefing sheet. Odegard emphasized and encouraged each Board member to participate in the LRP process to help develop the FY2026-2030 work plan for adoption.

Odegard reported on PWSRCAC's recent LRP project with Professional Growth Systems (PGS) and what to expect in the coming months.

In July, PWSRCAC issued an RFP for a project to assess and improve PWSRCAC's five-year Long Range Planning and project development process. The LRP Committee reviewed a proposal from PGS, the contract was approved and is in process. The project involves reviewing best practices, reviewing background documentation, conducting surveys, and providing recommendations to enhance the planning, prioritization, and budgeting process. PGS will be sending out an online survey and everyone was encouraged to participate if they could. In addition, PGS will do follow-up telephone calls and interviews of

Board members and staff. In-person interviews will likely take place at the same time as the December workshop. Odegard encouraged as much Board member participation as possible. PGS will issue its findings and recommendations after the December workshop.

Executive Director Schantz pointed out that this LRP project was requested by the Board and therefore it was vitally important that staff and PGS get the Board's involvement and participation in the process. She pointed out that PGS was involved in assisting PWSRCAC with the development of the original LRP in 2001, and it is interesting to see them come back and assist to improve that process.

Amanda Bauer **moved to approve** the protected project list for the upcoming Long Range Planning process as presented in Attachment A to briefing sheet 4-7. Dave Janka **seconded** and **the motion passed** without objection.

### **DIRECTOR OF FINANCE'S REPORT TO THE BOARD**

Ashlee Hamilton reported on her activities as the Director of Finance since the May Board meeting, which included closing out FY2024 and preparing financials for the upcoming audit.

- **FY2024 Closeout & Audit.** A significant portion of her time was dedicated to preparing documents for the new auditors, Porter & Allison, who estimate the audit will take approximately six weeks. She emphasized the importance of receiving full cooperation from the previous auditors, BDO, in obtaining their work papers as this is the only potential bottleneck of the audit. She plans to schedule a special Board meeting upon completion because it appears PWSRCAC will have more net assets than originally budgeted.
- **New Budgeting Software.** After reviewing several different budgeting software programs, she finally made the decision with the Finance Committee's support to utilize Velixo, as the Council's new budgeting software. Velixo is priced at just under \$5,000 and offers a discount to nonprofit organizations. She plans to implement it the first week of November, allowing her time to familiarize herself with the software before the new budget cycle begins. Velixo's Excel-based format allows direct import into the Council's accounting software (Sage Intacct).
- **ACH Payments.** ACH Payment/deposits were successfully set up and this method will be used going forward for payments under \$15,000. This will be an opt-in method of paying Board and volunteer reimbursements. All payments over \$15,000 will continue to be processed by check.

### **EXECUTIVE DIRECTOR'S REPORT TO THE BOARD**

A detailed written report from the Executive Director was circulated earlier to the Board via email. Executive Director Schantz briefly updated that earlier report.

- **Assessment of Risks & Safety Culture at the VMT Report.** Schantz opined that this assessment and the resulting Garde report was one of the most important and complex efforts that she and the Council had been involved in since she had been with the Council. Most notable was the visit to Alaska by personnel from the Government Accountability Office (GAO) to interview some staff and volunteers of PWSRCAC and Alyeska/SERVS and tour the VMT. There had been a lot of work by staff to support the GAO requests to provide documentation to assist their assessment, and PWSRCAC's goal is to support the GAO in their review to highlight any federal and/or state deficiencies and gaps in regulatory oversight of the VMT, such that measures may be taken to address gaps that may exist. She emphasized PWSRCAC's view that there are gaps in meaningful oversight, which is one of the most powerful measures to prevent another oil spill or incident. Oversight is the critical role of regulators.

She outlined what she hoped PWSRCAC can convey to the GAO (i.e., that interest in regulatory oversight dropped off after the initial strong interest at the startup of TAPS in 1977). When EVOS happened in 1989, oversight ramped up again including the strengthening of the Joint Pipeline Office (JPO). In 2010, the JPO disbanded. Then, around 2015, PWSRCAC started to see regulatory oversight dropping away again, with ADEC experiencing significant budget cuts and reduced staffing. PWSRCAC will highlight to the GAO the negative effects of regulatory budget cuts and reduced staffing, the loss of institutional knowledge, the abandonment of the JPO, high attrition rates and difficulty filling positions, all of which has taken a toll on the effectiveness of regulatory oversight. There is no oversight of Alyeska's work through its Process Safety Management as those actions and reports are not even provided to the regulatory agencies. JPO/BLM used to review changes to the original design status of TAPS – but that is no longer happening as far as PWSRCAC can discern. The JPO's comprehensive monitoring program no longer exists.

- **Federal inspection requirements for Alyeska/SERVS Fishing Vessel (FV) Response fleet.** PWSRCAC is part of a working group striving to exempt the SERVS Fishing Vessel Fleet from those inspection requirements while participating in drills and exercises or an actual response. Sen. Dan Sullivan has been very supportive of exemption legislative language. The tragic consequence if these requirements carry forward would be the dismantling of the SERVS Fishing Vessel Response Fleet program.
- **Amicus curiae brief** to make Hilcorp's financial information public. This was approved by the Board in 2021, but it has not been filed as other pieces of the process that must take place before filing have been held up in the courts since that time. One of the lower court's orders as been remanded back to the Superior Court, so the opportunity is once again there for PWSRCAC to file its brief.

- **The National Academies of Science, Engineering, and Medicine** are presenting a three-part workshop, the first part of which will be on October 8 and 9, 2024. These workshops are designed to bring together representatives from Alaska who were impacted by EVOS and representatives from the Gulf of Mexico who were impacted by the Deepwater Horizon spill to share their experiences to help prepare and recover from future oil spills. Schantz has been asked to present opening remarks. She noted there was no money in PWSRCAC's budget for volunteers to travel, but any Board member who is interested should contact Danielle Verna. The link to more information was included in the previous week's weekly memo.
- Schantz thanked the Board and staff for their work and support.

### **PRESIDENT'S REPORT TO THE BOARD**

President Archibald led with a quote often attributed to Winston Churchill: *"I no longer believe what people say, I just watch what they do. Behavior never lies."*

He said he always listens and he watches, and this is also the role of PWSRCAC as an organization: it watches and listens, it advises, and it watches the behavior. He said he was recently reviewing the history and timeline of the how PWSRCAC came to be, from Rick Steiner's original concept of a regional citizens advisory committee in 1986, to the organization's initial contract with Alyeska on February 8, 1990, which guaranteed PWSRCAC's independence from industry, access to Alyeska facilities, and annual funding, to the passage of OPA 90 on August 18, 1990, which included language mandating both the Prince William Sound and Cook Inlet Regional Citizens Advisory Councils.

Archibald remarked on the big battles that the founding members of PWSRCAC fought in the early years and how much work they put in, but the Council's language and interactions with Alyeska is always professional, and the information and advice it provides to Alyeska is professional. PWSRCAC tries to get the best technical and scientific contractors available and it provides the results and advice to Alyeska in a very professional way and to the best of its ability. Sometimes the Council and Alyeska do not agree on an issue, but PWSRCAC's goal for its projects and advice is always the safe transportation of oil through Prince William Sound with no oil spilled to the water, and when that last drop of oil has gone through the line, PWSRCAC wants to see the DR&R (Dismantling, Removal & Restoration) of the pipeline accomplished in an environmentally responsible way.

### **CONSIDERATION OF CONSENT AGENDA ITEMS**

(None.)

### **CLOSING COMMENTS**

Directors were given the opportunity to make closing comments.

Bob Shavelson said he was disappointed that Hilcorp was not present during this meeting. He had just read that morning that Hilcorp had received its fifth fine of the year from the Alaska Oil & Gas Conservation Commission and Donna Schantz had noted Hilcorp's ongoing reluctance to share their financial information with Alaskans. He said if there is going to be a partnership where Alaska allows development of its public resources for private profit, those partners need to come to the table with transparency, trust, and openness. He wants to see Hilcorp more engaged with the Council.

Mako Haggerty emphasized the importance of the maritime miscommunications study. He was of the opinion that it may be one of the best studies the Council has commissioned in many years, and the Council should get credit for having commissioned and funded it.

### **ADJOURNMENT**

There being no further business to come before the Board and hearing no objections, the meeting was adjourned at approximately 11:25 a.m., on a **motion made** by Ben Cutrell and **passed** by general consent.

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Secretary

**Prince William Sound Regional Citizens' Advisory Council  
Special Board of Directors Meeting Minutes  
November 26, 2024**

**Members Present:** Robert Archibald, Amanda Bauer, Robert Beedle, Mike Bender, Ben Cutrell, Wayne Donaldson, Mako Haggerty, Jim Herbert, Dave Janka, Melvin Malchoff, Dorothy Moore, Bob Shavelson (1:36), Kirk Zinck

**Members Absent:** Mike Brittain, Nick Crump, Luke Hasenbank, Elijah Jackson, Angela Totemoff, Michael Vigil, Aimee Williams

**Staff Present:** Jennifer Fleming, John Guthrie, Ashlee Hamilton, Joe Lally, Hans Odegard, Jeremy Robida, Donna Schantz, Linda Swiss, Brooke Taylor, Nelli Vanderburg, Danielle Verna, Jaina Willahan

**Others Present:** Ytamar Rodriguez (ADEC), Ben Allison (Porter & Allison), Lisa Fox (DOI), Breck Tostevin (Nielsen Koch & Grannis PLLC)

**Call to Order**

President Archibald called the meeting to order at 1:31 p.m. A roll call was taken. The following 12 directors were present, representing a quorum for the conduct of business: Archibald, Bauer, Beedle, Bender, Cutrell, Donaldson, Haggerty, Herbert, Janka, Malchoff, Moore, and Zinck

**Approve Agenda**

Bauer added an agenda item to approve the Executive Director's annual holiday bonus that all other staff receive. This item was added after the Consent Agenda.

Janka moved to approve the agenda as amended. Herbert seconded. Archibald asked for objection; hearing none, the agenda was approved.

**Public & Opening Comments** (please limit as appropriate)

Archibald asked if there were any public or opening comments. There were none.

**Approval of FY2024 Audit**

Hamilton introduced Ben Allison, of Porter and Allison, the Council's new auditing firm. Allison explained that the Council's FY2024 financial audit was recently completed and provided a high level summary of the audit findings with the Board and welcomed questions during the presentation. Allison noted that there are required communications when issuing an audit report; communicating any issues they find with the audit to the governing body. Allison reported that there were no issues or findings, and the letter will state as much. Allison reviewed the year-end financial statements with the Board.

Herbert asked for the status of the IRS Form 990. Allison stated that draft 990 has been prepared by his firm and that a draft version is being reviewed by Porter & Allison management. Hamilton added that it is expected that the draft Form 990 will be presented to the Finance Committee at its next meeting, then brought to the Board in January for approval.

Herbert noted that the Finance Committee reviewed the draft audit at its most recent meeting in detail. The Finance Committee recommends approval.

Haggerty moved to accept the June 30, 2024 audited financial statements and audit report. Bauer seconded. Archibald asked for objection; hearing none, the action was approved.

Schantz recognized Hamilton for her work managing the financials and providing information for the audit, noting there were no audit findings or exceptions. Archibald, and other members of the Board, echoed sentiments of commendation to Hamilton.

### **Request for Informal Review on the VMT C-Plan**

Robida introduced this agenda item explaining that he has been supporting Linda Swiss in the management of this task. Robida explained that on November 6, 2024, the Alaska Department of Environmental Conservation (ADEC) approved the renewal of the Valdez Marine Terminal Oil Discharge Prevention and Contingency Plan (VMT C-Plan) and issued its Basis of Decision on the renewal. The 5-year renewal is effective as of November 6, 2024, and expires on November 5, 2029. Robida introduced contractor Breck Tostevin, who gave an overview of the informal review process.

Tostevin gave an overview of the history of the secondary containment liner explaining that the issue we are discussing today is a follow on from Condition of Approval (COA) #2 which required Alyeska to select a method for inspecting the secondary containment liner. Alyeska selected the electrical leak location method suggested by Council contractor Dr. Craig Benson, and conducted a pilot study in the West Tank Farm this past summer. Tostevin explained that in Alyeska's application for renewal, they do not outline what testing method they will ultimately use in the East Tank Farm to evaluate the integrity of the secondary containment liner. In ADEC's approval, COA #1 requires Alyeska to submit the final report of liner testing method by March 1, 2025, and to complete the liner testing in the East Tank Farm within this plan cycle, noting the plan renewal must be submitted in 2028.

With regards to requesting an informal review, Tostevin noted that doing so will afford the Council an opportunity to provide formal public comment on future decisions. Additionally, the Council is requesting a deadline on when the inspections would begin, as we are hopeful they would start in 2025. Tostevin added that Alyeska receives a 60% prevention credit for the liner containment system as a whole, which reduces the amount of response

equipment and personnel they are required to have listed in the plan for responding to a spill of the largest tank.

Beedle asked if ADEC was required to provide justification on how they came to their decision. Tostevin responded that ADEC outlined their reasoning for COA #1 in their findings document, specifically that the testing should go forward, but without specifying a timeline for completion.

Archibald thanked Tostevin for his work on this important issue.

Bauer moved to direct staff to request an informal review to ADEC pertaining to Condition of Approval #1 related inspection of the secondary containment liners as outlined in the recently approved Valdez Marine Terminal Oil Discharge Prevention and Contingency Plan. Janka seconded. Archibald asked for discussion/objection; hearing none, the action was approved.

### **Contract Approval: State Legislative Lobbyist**

Lally introduced this agenda item explaining that staff is seeking Board approval to transition current legislative monitor Gene Therriault from a legislative monitor to a registered lobbyist. Lally outlined the reasoning behind this transition, adding that it was discussed at length with the Council's Legislative Affairs Committee (LAC) at their most recent meeting. Therriault has represented the Council as a monitor since 2021, and has expressed interest in registering as a lobbyist which would allow him the flexibility to represent the Council more than he can as a monitor, among other advantages. Lally noted that the more obvious disadvantage to this change is that both Therriault and PWSRCAC would be required to file quarterly reports to the Alaska Public Office Commission (APOC) on his work as a lobbyist. Lally added that LAC is in support of this transition.

Bauer asked why the Council hired monitors historically, rather than lobbyists. Lally believes this was done due to Alyeska's taking issue to the Council having a lobbyist represent the Council; however, Joe Levesque has provided his legal opinion stating there is no reason why PWSRCAC cannot have a lobbyist, as long as we abide by the APOC requirements.

Beedle spoke in favor of this change, as a monitor, Therriault can only work 10 hours per month, which is challenging for PWSRCAC. Being a lobbyist will bring more value to the organization in the long run. Moore echoed Beedle's sentiments, adding that LAC has discussed this change for several years. She is in support of this request.

Haggerty moved to approve a sole source contract with Gene Therriault as the Council's State Legislative Lobbyist for FY2025 in an amount not to exceed \$31,700. Beedle seconded. Archibald asked for objection; hearing none, the action was approved.

## **Consent Agenda**

Herbert pulled item B from the consent agenda. Archibald pulled item A.

Beedle moved to approve the Board Policy Amendments on the consent agenda as presented. Bender seconded. Archibald asked for objection; hearing none, the consent agenda was approved as amended.

### **Tsunami Workshop Summary Report**

Accepted: Report titled "Tsunami Hazards Guidance for Vessel Operators Workshop Summary" by Nuka Research and Planning Group, LLC, dated August 2024, as meeting the terms and conditions of contract number 8025.24.01C0, and for distribution to the public.

### **Board Policy Amendments**

Approved: The set of proposed Board Policy Amendments (#s 304, 310, and 710.06) and the new policy (# 311) forwarded by the BGC.

## **Consideration of Consent Agenda Items**

### **FY2026 Funds and Contract for Copper River Delta and Flats GRS**

Herbert asked for a short explanation as to why this is being brought to the Board at this time. Robida explained that staff originally budgeted \$25,000 for this project. Upon further review, that amount was not sufficient to cover the costs, especially relating to travel and site visits. Additionally, it is anticipated that this project will be completed over two fiscal years (FY2025 and FY2026). Therefore, staff and the OSPR Committee request that the second phase of the project for FY2026 become protected to assure project completion. Herbert added that this was a high-ranking project for OSPR.

Schantz reiterated that if approved, this will authorize a two-year contract with Nuka Research and Planning Group, LLC and the project will be protected in the FY2026 Long Range Plan.

Bauer moved to approve the commitment of \$38,000 in the FY2026 budget for project 6540 Copper River Delta and Flats Geographic Response Strategies; and authorized the Executive Director to enter into a sole source contract with Nuka Research and Planning Group, LLC for project 6540 - Copper River Delta and Flats Geographic Response Strategies in an amount not to exceed \$45,000. Herbert seconded. Archibald asked for objection; hearing none, the action was approved.

### **Tsunami Workshop Summary Report**

Archibald disclosed one edit to the report, noting that Jim Herbert gave the opening welcome, not Archibald who was unable to attend. This edit was made to the workshop agenda that was included in the report.

Moore moved to accept the report titled "Tsunami Hazards Guidance for Vessel Operators Workshop Summary" by Nuka Research and Planning Group, LLC dated August 2024, as meeting the terms and conditions of contract number 8025.24.01C0, and for distribution to the public. Janka seconded. Archibald asked for objection; hearing none, the report was accepted.

### **Executive Director Holiday Bonus**

Bauer stated that the Executive Director has authority to issue a holiday bonus to all staff, with the exception of herself. Therefore, she is requesting approval to award a one-time holiday bonus in the amount of \$600.

Bauer moved to authorize a one-time 2024 holiday bonus for Executive Director Donna Schantz in the amount of \$600. Herbert seconded. Archibald asked for objections; hearing none, the action was approved.

### **Closing Comments**

Beedle expressed his appreciation to the Director of Finance, the Finance Committee, and support staff for a successful audit.

Members wished each other a happy holiday season.

### **Adjourn**

The meeting adjourned at 2:30 p.m.

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Secretary



**PWSRCAC**  
**Acronym List**  
**Updated December, 2023**

<b>AAC</b>	Alaska Administrative Code
<b>ABS</b>	American Bureau of Shipping
<b>ACMP</b>	Alaska Coastal Management Program
<b>ACS</b>	Alaska Clean Seas
<b>ADEC</b>	Alaska Department of Environmental Conservation
<b>ADF&amp;G</b>	Alaska Department of Fish and Game
<b>ADNR</b>	Alaska Department of Natural Resources
<b>AIMS</b>	Alaska Incident Management System
<b>AKOSH</b>	Alaska Occupational Safety and Health
<b>AMOP</b>	Arctic & Marine Oil Spill Program (Technical Seminar)
<b>ANS</b>	Alaska North Slope or Aquatic Nuisance Species
<b>ANSTF</b>	Aquatic Nuisance Species Task Force
<b>ANWR</b>	Arctic National Wildlife Reserve
<b>AOOS</b>	Alaska Ocean Observing System
<b>API</b>	American Petroleum Institute
<b>APSC</b>	Alyeska Pipeline Service Company
<b>ARRT</b>	Alaska Regional Response Team
<b>AS</b>	Alaska Statute
<b>ATC</b>	Alaska Tanker Company
<b>ATOM</b>	Alyeska Tactical Oil Spill Model
<b>AVTEC</b>	Alaska Institute of Technology (formerly Alaska Vocational Technical Center)
<b>BAT</b>	Best Available Technology
<b>BBL</b>	Barrel (42 Gallons = 1 bbl)
<b>BGC</b>	Board Governance Committee (PWSRCAC Committee)
<b>BTEX</b>	Benzene, Toluene, Ethylbenzene, Xylene
<b>BLM</b>	U.S. Bureau of Land Management
<b>BOO</b>	Barge of Opportunity
<b>BMPP</b>	Best Management Practices Plan
<b>BP</b>	British Petroleum or bollard pull
<b>BTT</b>	Biological Treatment Tanks
<b>BWT(F)</b>	Ballast Water Treatment (Facility), Alyeska
<b>C-Plan</b>	Contingency Plan

<b>CAA</b>	Clean Air Act
<b>CAOS</b>	Coastal Alaska Observing System
<b>CDFU</b>	Cordova District Fishermen United
<b>CERCLA</b>	Comprehensive Environmental Response, Compensation and Liability Act
<b>CFR</b>	Code of Federal Regulations
<b>CIP</b>	Community Impacts Planning
<b>CIRCAC</b>	Cook Inlet Regional Citizens Advisory Council
<b>CISPRI</b>	Cook Inlet Spill Prevention and Response, Incorporated
<b>CMT</b>	Crisis Management Team
<b>COA</b>	Condition of Approval
<b>COSRS</b>	Community Oil Spill Response System
<b>COTP</b>	Captain of the Port (USCG)
<b>CWA</b>	Clean Water Act
<b>DAF</b>	Dissolved Air Flotation
<b>DEIS</b>	Draft Environmental Impact Statement
<b>DES</b>	Division of Emergency Services
<b>DMR</b>	Discharge Monitoring Report
<b>DNV</b>	Det Norske Veritas – Norwegian Quality Assurance consultant
<b>DOI</b>	U.S. Department of the Interior
<b>DOT</b>	U.S. Department of Transportation
<b>DPS</b>	Dynamic Positioning System
<b>DR&amp;R</b>	Dismantling, Removal and Restoration
<b>DTTS</b>	Disabled Tanker Towing Study
<b>DWT</b>	Deadweight ton
<b>ECO</b>	Edison Chouest Offshore
<b>ECP</b>	Employee Concern Program
<b>EIA</b>	Environment Impact Assessment
<b>EIS</b>	Environmental Impact Statement
<b>EOC</b>	Emergency Operations Center
<b>EPA</b>	U.S. Environmental Protection Agency
<b>EPPR</b>	Emergency Prevention Preparedness and Response
<b>ERB</b>	Emergency Response Building
<b>ERP</b>	Emergency Response Plan
<b>ERV</b>	Emergency Response Vessel
<b>ETA Tool</b>	Ecological Tradeoff Assessment Tool

<b>ETT</b>	Enhanced Tractor Tug
<b>EVOS</b>	Exxon Valdez Oil Spill
<b>EVOSTC</b>	Exxon Valdez Oil Spill Trustees Council
<b>FBU</b>	Fairbanks Business Unit, Alyeska
<b>FLIR</b>	Forward-looking infrared
<b>FOIA</b>	Freedom of Information Act
<b>FOSC</b>	Federal On-Scene Coordinator
<b>FV</b>	Fishing Vessel
<b>FWPca</b>	Federal Water Pollution Prevention and Control Act
<b>GAO</b>	U.S. Government Accountability Office aka General Accounting Office
<b>GIS</b>	Geographic Information System
<b>GOA</b>	Gulf of Alaska
<b>GPS</b>	Global Positioning System
<b>GRS</b>	Geographical Response Strategies
<b>HAPs</b>	Hazardous Air Pollutants
<b>HAZWOPER</b>	Hazardous Waste Operation and Emergency Response
<b>HERO</b>	Hinchinbrook Entrance Response Options
<b>HIRD</b>	Harassment, Intimidation, Retaliation, Discrimination
<b>HOPs</b>	Hydrocarbon Oxidation Products
<b>IAP</b>	Incident Action Plan
<b>IAP2</b>	International Association of Public Participation
<b>ICCOPR</b>	Interagency Coordinating Committee on Oil Pollution Research
<b>IC</b>	Incident Command
<b>ICS</b>	Incident Command System
<b>IEC</b>	Information & Education Committee (PWSRCAC Committee)
<b>IMO</b>	International Maritime Organization
<b>IMT</b>	Incident Management Team
<b>IOSC</b>	International Oil Spill Conference
<b>IPL</b>	Independent Protection Layers
<b>IRIC</b>	Initial Response Incident Commander
<b>ISAC</b>	Invasive Species Advisory Committee
<b>IWWS</b>	Industrial Waste Water System
<b>JIC</b>	Joint Information Center
<b>JPO</b>	Joint Pipeline Office
<b>KPIs</b>	Key Performance Indicators

<b>KYP</b>	Keeping you Posted (Alyeska Internal Communication)
<b>LEPC</b>	Local Emergency Planning Committee
<b>LAC</b>	Legislative Affairs Committee (PWSRCAC Committee)
<b>LDAR</b>	Leak Detection and Repair
<b>LIO</b>	Legislative Information Office
<b>LOSC</b>	Local On-Scene Coordinator
<b>LRP</b>	Long Range Plan
<b>LTEMP</b>	Long Term Environmental Monitoring Project
<b>MAC</b>	Multi-stakeholder Agency Committee
<b>MEPC</b>	Marine Environmental Protection Committee (IMO)
<b>MIS</b>	Marine Invasive Species
<b>MMS</b>	U.S. Minerals Management Service
<b>MOA</b>	Memorandum of Agreement
<b>MOU</b>	Memorandum of Understanding
<b>MSO</b>	Marine Safety Office
<b>MSDS</b>	Material Safety Data Sheets
<b>MSU</b>	Marine Safety Unit
<b>NDBC</b>	National Data Buoy Center
<b>NEPA</b>	National Environmental Policy Act
<b>NESHAP-OLD</b>	National Emission Standard for Hazardous Air Pollutants – Organic Liquid Distribution
<b>NIIMS</b>	National Interagency Incident Management System
<b>NIS</b>	Non-Indigenous Species
<b>NISA</b>	National Invasive Species Act
<b>NOAA</b>	National Oceanographic & Atmospheric Administration
<b>NOBOB</b>	No Ballast on Board
<b>NPDES</b>	National Pollutant Discharge Elimination System
<b>NPREP</b>	National Preparedness & Response Exercise Program
<b>NRDA</b>	Natural Resource Damage Assessment
<b>NSF</b>	National Science Foundation
<b>NTSB</b>	U.S. National Transportation Safety Board
<b>NWS</b>	National Weather Service
<b>OCC</b>	Operations Control Center
<b>OHMSETT</b>	Oil and Hazardous Materials Simulate Environmental Test Tank
<b>OMS</b>	Oil Movements and Storage
<b>OPA 90</b>	Oil Pollution Act of 1990

<b>OSC</b>	On-Scene Coordinator
<b>OSHA</b>	U.S. Occupational Safety and Health Administration
<b>OSLTF</b>	Oil Spill Liability Trust Fund
<b>OSRB</b>	Oil Spill Response Barge
<b>OSPR</b>	Oil Spill Prevention and Response Committee (PWSRCAC Committee)
<b>OSREC</b>	Oil Spill Region Environmental Coalition
<b>OSRI</b>	Oil Spill Recovery Institute
<b>OSRL</b>	Oil Spill Response Limited
<b>OSRO</b>	Oil Spill Response Organization(s)
<b>OSRV</b>	Oil Spill Response Vessel
<b>OWE</b>	Open Work Environment
<b>PAH</b>	Polycyclic Aromatic Hydrocarbon
<b>PHA</b>	Process Hazard Analyses
<b>PHMSA</b>	U.S. Pipeline and Hazardous Materials Safety Administration
<b>PM</b>	Preventative Maintenance
<b>PMCR</b>	Preventative Maintenance Change Request
<b>POD</b>	Physical Oceanography Data
<b>POVTS</b>	Port Operations and Vessel Traffic System (PWSRCAC Committee)
<b>PPE</b>	Personal Protective Equipment
<b>PRAC</b>	Primary Response Action Contractor
<b>PRT</b>	Prevention and Response Tug
<b>PS</b>	Pump Station
<b>PSM</b>	Process Safety Management
<b>PV</b>	Power Vapor
<b>PWS</b>	Prince William Sound
<b>PWSAC</b>	Prince William Sound Aquaculture Corporation
<b>PWSC</b>	Prince William Sound College
<b>PWSEDD</b>	Prince William Sound Economic Development District
<b>PWSRAS</b>	Prince William Sound Risk Assessment Study
<b>PWSRCAC</b>	Prince William Sound Regional Citizens' Advisory Council
<b>PWSSC</b>	Prince William Sound Science Center
<b>PWSTA</b>	Prince William Sound Tanker Association
<b>RC</b>	Response Center or Response Coordinator (SERVS)
<b>RCAC</b>	Regional Citizens' Advisory Council
<b>RCM</b>	Reliability Centered Maintenance

<b>RFAI</b>	Request for Additional Information
<b>RFI</b>	Request for Information
<b>RFP</b>	Request for Proposal
<b>RFQ</b>	Request for Qualifications
<b>RMROL</b>	Realistic Maximum Response Operating Limitations
<b>RPG</b>	Response Planning Group
<b>RP</b>	Responsible Party
<b>RPOSC</b>	Responsible Party's On-Scene Coordinator
<b>RPS</b>	Response Planning Standard
<b>RRT</b>	Regional Response Team
<b>RSC</b>	Regional Stakeholders Committee
<b>SAC</b>	Scientific Advisory Committee (PWSRCAC Committee)
<b>SCAT</b>	Shoreline Cleanup Assessment Team
<b>SERC</b>	State Emergency Response Commission (or) Smithsonian Environmental Research Center
<b>SERVS</b>	Ship Escort Response Vessel System
<b>SETAC</b>	Society of Environmental Toxicology and Chemistry
<b>SMS</b>	Safety Management Systems
<b>SOS</b>	Seldovia Oil Spill Response
<b>SOSC</b>	State On-Scene Coordinator
<b>SPAR</b>	Spill Prevention and Response (A division within ADEC)
<b>SPO</b>	State Pipeline Coordinator's Office
<b>SRP</b>	Scientific Response Plan
<b>SWAPA</b>	Southwest Alaska Pilots Association
<b>TAG</b>	Technical Advisory Group
<b>TAPS</b>	Trans Alaska Pipeline System
<b>TF</b>	Task Force
<b>TOEM</b>	Terminal Operations & Environmental Monitoring (PWSRCAC Committee)
<b>TOO</b>	Tanker of Opportunity
<b>TROG</b>	Total Recoverable Oil and Grease
<b>TVCS</b>	Tanker Vapor Control System
<b>UC</b>	Unified Command
<b>UP</b>	Unified Plan
<b>USCG</b>	United States Coast Guard
<b>USF&amp;WS</b>	United States Fish & Wildlife Service
<b>VBU</b>	Valdez Business Unit, Alyeska

<b>VERP</b>	Prince William Sound Vessel Escort & Response Plan
<b>VEOC</b>	Valdez Emergency Operations Center
<b>VIDA</b>	Vessel Incidental Discharge Act
<b>VMT</b>	Valdez Marine Terminal
<b>VOCs</b>	Volatile Organic Compounds
<b>VOO</b>	Vessel of Opportunity
<b>VTC</b>	Vessel Traffic Center
<b>VTs</b>	Vessel Traffic System
<b>XCOM</b>	PWSRCAC Executive Committee

Prince William Sound Regional Citizens' Advisory Council  
Budget Status Report  
As of December 24, 2024

	Original Budget	Budget Modifications	Summary	Actual	Commitments	Total	Remaining Amount	Percentage Remaining
Revenue								
Alyeska Pipeline Service Co Contract	4,277,712.00	-	4,277,712.00	2,138,856.17	-	2,138,856.17	2,138,855.83	50.00 %
Funds								
Interest Income	55,000.00	-	55,000.00	38,941.82	-	38,941.82	16,058.18	29.20 %
In Kind Contributions	25,500.00	-	25,500.00	6,549.84	-	6,549.84	18,950.16	74.31 %
Miscellaneous Income	-	-	-	368.68	-	368.68	(368.68)	-
Book Royalties and Sales	-	-	-	10.59	-	10.59	(10.59)	-
Total Revenue	4,358,212.00	-	4,358,212.00	2,184,727.10	-	2,184,727.10	2,173,484.90	49.87 %
Functional Area								
Programs & Projects								
3100 - Public Information Program	7,897.00	-	7,897.00	-	-	-	7,897.00	100.00 %
3200 - Observer Newsletter	7,500.00	-	7,500.00	2,138.65	-	2,138.65	5,361.35	71.48 %
3300 - Annual Report	8,000.00	-	8,000.00	4,763.34	-	4,763.34	3,236.66	40.46 %
3410 - Fishing Vessel Program Comm	19,000.00	-	19,000.00	16,174.35	-	16,174.35	2,825.65	14.87 %
Outreach								
3500 - Community Outreach	60,060.00	-	60,060.00	24,365.93	(90.00)	24,275.93	35,784.07	59.58 %
3530 - Youth Involvement	73,243.00	-	73,243.00	22,493.00	-	22,493.00	50,750.00	69.29 %
3600 - Public Communications Program	4,599.00	-	4,599.00	-	-	-	4,599.00	100.00 %
3610 - Web Presence Best Available	7,140.00	-	7,140.00	360.00	-	360.00	6,780.00	94.96 %
Technology								
3810 - Illustrated Prevention & Re-	35,720.00	-	35,720.00	-	-	-	35,720.00	100.00 %
sponse System								
3903 - Internship	-	4,000.00	4,000.00	-	-	-	4,000.00	100.00 %
4000 - Program & Project Support	1,868,210.00	-	1,868,210.00	820,894.57	-	820,894.57	1,047,315.43	56.06 %
4010 - Digital Collections Program	2,500.00	-	2,500.00	150.00	-	150.00	2,350.00	94.00 %
4400 - Federal Government Affairs	109,100.00	-	109,100.00	22,932.67	-	22,932.67	86,167.33	78.98 %
4410 - State Government Affairs	41,800.00	-	41,800.00	-	-	-	41,800.00	100.00 %
5000 - Terminal Operations Program	29,000.00	-	29,000.00	4,351.00	-	4,351.00	24,649.00	85.00 %
5051 - Water Quality Permit Review	23,800.00	-	23,800.00	-	-	-	23,800.00	100.00 %
5053 - VMT System Integrity and Safety	25,000.00	3,840.00	28,840.00	3,130.25	-	3,130.25	25,709.75	89.15 %
Culture								
5057 - Air Quality Review	37,437.50	5,012.50	42,450.00	7,700.00	-	7,700.00	34,750.00	81.86 %
5081 - Storage Tank Maintenance Re-	38,000.00	-	38,000.00	4,358.00	-	4,358.00	33,642.00	88.53 %
view								
5591 - Crude Oil Piping Maintenance	51,744.00	-	51,744.00	-	-	-	51,744.00	100.00 %
Review								
5595 - Review of VMT Cathodic Protec-	34,000.00	-	34,000.00	-	-	-	34,000.00	100.00 %
tion System								
5640 - Alaska North Slope Crude Oil	5,000.00	-	5,000.00	-	-	-	5,000.00	100.00 %
Properties								
6000 - Spill Response Program	4,000.00	5,000.00	9,000.00	276.50	-	276.50	8,723.50	96.93 %
6510 - State Contingency Plan Reviews	80,000.00	-	80,000.00	19,498.25	-	19,498.25	60,501.75	75.63 %
6512 - Secondary Containment	38,000.00	-	38,000.00	35,953.14	-	35,953.14	2,046.86	5.39 %
6530 - Weather/Sea Currents	18,500.00	-	18,500.00	8,379.54	-	8,379.54	10,120.46	54.71 %
6531 - Port Valdez Weather Buoys	63,200.00	-	63,200.00	16,889.38	-	16,889.38	46,310.62	73.28 %
6536 - Analysis of Port Valdez Weather	22,806.00	-	22,806.00	5,806.00	-	5,806.00	17,000.00	74.54 %
Buoys								
6540 - Copper River Delta/Flats GRS	25,000.00	-	25,000.00	-	-	-	25,000.00	100.00 %
6560 - Peer Listener Training	35,000.00	-	35,000.00	-	-	-	35,000.00	100.00 %
6575 - Comparison of Windy Application	35,000.00	-	35,000.00	-	-	-	35,000.00	100.00 %
and Seal								
7000 - Spill Response Operations Pro-	4,250.00	-	4,250.00	-	-	-	4,250.00	100.00 %
gram								

Prince William Sound Regional Citizens' Advisory Council  
Budget Status Report  
As of December 24, 2024

	Original Budget	Budget Modifications	Summary	Actual	Commitments	Total	Remaining Amount	Percentage Remaining
7520 - Preparedness Monitoring	42,300.00	-	42,300.00	10,137.72	-	10,137.72	32,162.28	76.03 %
8000 - Maritime Operations Program	17,000.00	-	17,000.00	4,646.65	-	4,646.65	12,353.35	72.67 %
8250 - Assessing Non-Indigenous Species Biofoul	5,750.00	-	5,750.00	-	-	-	5,750.00	100.00 %
8520 - Miscommunication in Maritime Contexts	60,000.00	25,000.00	85,000.00	30,000.00	-	30,000.00	55,000.00	64.71 %
9000 - Environmental Monitoring Pro- gram	18,700.00	-	18,700.00	15,703.42	-	15,703.42	2,996.58	16.02 %
9110 - PWS Marine Bird Winter Survey	95,598.00	-	95,598.00	36,670.00	-	36,670.00	58,928.00	61.64 %
9510 - Long-Term Environmental Moni- toring	118,157.32	6,006.00	124,163.32	94,545.07	-	94,545.07	29,618.25	23.85 %
9520 - Marine Invasive Species	55,000.00	-	55,000.00	40,000.00	-	40,000.00	15,000.00	27.27 %
9521 - Marine Invasive Species Intern- ship	6,500.00	-	6,500.00	1,800.00	-	1,800.00	4,700.00	72.31 %
9700 - Social Science Workshop	30,000.00	-	30,000.00	-	-	-	30,000.00	100.00 %
Total Programs & Projects	<u>3,263,511.82</u>	<u>48,858.50</u>	<u>3,312,370.32</u>	<u>1,254,117.43</u>	<u>(90.00)</u>	<u>1,254,027.43</u>	<u>2,058,342.89</u>	<u>62.14 %</u>
Board of Directors								
1350 - Information Technology - Volun- teers	500.00	-	500.00	-	-	-	500.00	100.00 %
2100 - Board Administration	139,653.00	-	139,653.00	59,203.75	-	59,203.75	80,449.25	57.61 %
2150 - Board of Director Meetings	180,600.00	-	180,600.00	75,317.10	-	75,317.10	105,282.90	58.30 %
2200 - Executive Committee	3,000.00	-	3,000.00	-	-	-	3,000.00	100.00 %
2222 - Finance Committee	3,500.00	-	3,500.00	1,694.65	-	1,694.65	1,805.35	51.58 %
2700 - Legislative Affairs Committee (LAC)	18,675.00	-	18,675.00	-	-	-	18,675.00	100.00 %
Total Board of Directors	<u>345,928.00</u>	<u>-</u>	<u>345,928.00</u>	<u>136,215.50</u>	<u>-</u>	<u>136,215.50</u>	<u>209,712.50</u>	<u>60.62 %</u>
Committees & Committee Support								
2250 - Committee Support	214,867.00	-	214,867.00	96,528.71	-	96,528.71	118,338.29	55.08 %
2300 - Oil Spill Prevention & Response (OSPR)	15,000.00	-	15,000.00	7,033.80	-	7,033.80	7,966.20	53.11 %
2400 - Port Ops & Vessel Traffic Sys- tem (POVTS)	8,000.00	-	8,000.00	-	-	-	8,000.00	100.00 %
2500 - Scientific Advisory Committee (SAC)	15,000.00	-	15,000.00	1,808.38	-	1,808.38	13,191.62	87.94 %
2600 - Terminal Ops & Envrn Monitoring (TOEM)	11,500.00	-	11,500.00	696.50	-	696.50	10,803.50	93.94 %
2800 - Information & Education Commit- tee (IEC)	11,000.00	-	11,000.00	-	-	-	11,000.00	100.00 %
Total Committees & Committee Support	<u>275,367.00</u>	<u>-</u>	<u>275,367.00</u>	<u>106,067.39</u>	<u>-</u>	<u>106,067.39</u>	<u>169,299.61</u>	<u>61.48 %</u>
General & Administrative								
1000 - General & Administrative	494,003.00	-	494,003.00	184,087.05	12.96	184,100.01	309,902.99	62.73 %
1050 - General & Administrative - An- chorage	219,806.00	-	219,806.00	60,701.96	-	60,701.96	159,104.04	72.38 %
1100 - General & Administrative - Valdez	182,768.00	-	182,768.00	78,302.01	-	78,302.01	104,465.99	57.16 %
1300 - Information Technology	118,538.00	-	118,538.00	32,166.74	-	32,166.74	86,371.26	72.86 %
Total General & Administrative	<u>1,015,115.00</u>	<u>-</u>	<u>1,015,115.00</u>	<u>355,257.76</u>	<u>12.96</u>	<u>355,270.72</u>	<u>659,844.28</u>	<u>65.00 %</u>
Total Expenses	<u>4,899,921.82</u>	<u>48,858.50</u>	<u>4,948,780.32</u>	<u>1,851,658.08</u>	<u>(77.04)</u>	<u>1,851,581.04</u>	<u>3,097,199.28</u>	<u>62.59 %</u>

## PWSRCAC Director Attendance Record

January 2025

(Attendance recorded through November 26, 2024 Special Board Meeting)

<b>Board Member</b> <i>(date appointed)</i>	<b>Overall Attendance</b> <i># attended / # missed</i>	<b>Last 3 Mtgs.*</b> <i># attended / # missed</i>	<b>Term Expires</b>
Archibald, Robert <i>(May 2015)</i>	54/1	3/0	5/25
Bauer, Amanda <i>(May 2012)</i>	69/1	3/0	5/25
Beedle, Robert <i>(May 2013)</i>	62/4	3/0	5/26
Bender, Mike <i>(Sept. 2015)</i>	45/9	2/1	5/26
Brittain, Mike <i>(May. 2023)</i>	6/3	2/1	5/25
Crump, Nick <i>(May. 2021)</i>	16/7	2/1	5/25
Cutrell, Ben <i>(Jan. 2020)</i>	29/1	3/0	5/26
Donaldson, Wayne <i>(Jan. 2015)</i>	54/2	3/0	5/25
Haggarty, Mako <i>(May 2015)</i>	44/9	3/0	5/25
Hasenbank, Luke <i>(May 2016)</i>	38/13	2/1	5/26
Herbert, Jim <i>(January 2023)</i>	12/0	3/0	5/25
Jackson, Elijah <i>(May 2021)</i>	11/11	1/2	5/25
Janka, David <i>(January 2023)</i>	12/0	3/0	5/26
Malchoff, Melvin <i>(Sept. 2016)</i>	33/15	3/0	5/26
Moore, Dorothy <i>(Jan. 2007)</i>	94/2	3/0	5/26
Shavelson, Bob <i>(Sept. 2014)</i>	59/9	3/0	5/26
Totemoff, Angela <i>(May 2021)</i>	18/5	2/1	5/25
Vigil, Michael <i>(Sept. 2015)</i>	43/10	2/1	5/26
Williams, Aimee <i>(May 2022)</i>	15/4	2/1	5/26
Kirk Zinck <i>(May 2019)</i>	32/3	3/0	5/25

\* PWSRCAC policy states that member groups will be notified in writing if their appointed Board member misses three consecutive Board meetings.

Note: Overall attendance includes all voting meetings (regular and special Board meetings), but does not include non-voting meetings (e.g. LRP, budget workshops or Board retreats).



# PRINCE WILLIAM SOUND

## REGIONAL CITIZENS' ADVISORY COUNCIL

### PWSRCAC Committee Member Attendance Record

Port Operations and Vessel Traffic Systems (POVTS)			
Committee Member	Overall	Last 3 mtgs	Term Expires
Robert Archibald (Director)	27/0	3/0	5/26
Amanda Bauer (Director) (Vice Chair)	39/6	3/0	5/26
Steve Lewis (Chair)	23/0	3/0	5/25
Max Mitchell	7/0	3/0	5/25
Gordon Terpening	17/1	3/0	5/25

Oil Spill Prevention and Response (OSPR)			
Committee Member	Overall	Last 3 mtgs	Term Expires
Robert Beedle (Director)	43/16	3/0	5/25
Mike Bender (Director)	32/16	2/1	5/26
Dave Goldstein	82/22	2/1	5/26
Jim Herbert (Chair) (Director)	61/0	3/0	5/25
Matt Melton	7/1	3/0	5/25
Tim Robertson	4/1	2/1	5/26
Gordon Scott	71/80	1/2	5/25

Terminal Operations & Environmental Monitoring (TOEM)			
Committee Member	Overall	Last 3 mtgs	Term Expires
Amanda Bauer (Director) (Vice Chair)	62/10	3/0	5/26
Harold Blehm	56/13	2/1	5/25
Matt Cullin	22/13	1/2	5/26
Mikkel Foltmar (Chair)	40/14	3/0	5/25
Steve Goudreau	37/16	3/0	5/25
Tom Kuckertz	44/10	3/0	5/25

**Ratios are # meetings present/ # of absences**

Scientific Advisory Committee (SAC)			
Committee Member	Overall	Last 3 mtgs	Term Expires
Sarah Allan (Chair)	97/10	3/0	5/26
Wei Cheng (Vice Chair)	68/6	3/0	5/25
Wayne Donaldson (Director)	83/9	3/0	5/25
Roger Green	160/25	1/2	5/25
Davin Holen	74/9	3/0	5/26
John Kennish	156/14	3/0	5/25
Dorothy Moore (Director)	139/15	2/1	5/25

Information & Education Committee (IEC)			
Committee Member	Overall	Last 3 mtgs	Term Expires
Trent Dodson (Chair)	40/30	1/2	5/25
Jane Eisemann	89/16	1/2	5/25
Cathy Hart (Vice Chair)	84/23	3/0	5/25
Andrea Korbe	37/31	1/2	5/25
Ruth E. Knight	88/10	3/0	5/26
Savannah Lewis <i>*since recommital date</i>	57/0*	3/0	5/25
Kate Morse	64/33	2/1	5/26
Aimee Williams	14/7	3/0	5/26
Amanda Glazier	3/0	3/0	5/25

**Ratios are # meetings present/ # of absences**

## **Current List of Board Committee Members**

As of May 2024

### **Executive Committee**

- Robert Archibald, President
- Amanda Bauer, Vice President
- Mako Haggerty, Treasurer
- Bob Shavelson, Secretary
- Ben Cutrell, Member-at-Large
- Dave Janka, Member-at-Large
- Angela Totemoff, Member-at-Large

### **Long Range Planning Committee**

- Aimee Williams
- Robert Archibald
- Sarah Allan (SAC Chair)
- Mikkel Foltmar (TOEM Chair)
- Jim Herbert (OSPR Chair)
- Steve Lewis (POVTS Chair)
- Trent Dodson(IEC Chair)
- Cathy Hart

### **Board Governance Committee**

- Robert Beedle
- Dorothy Moore
- Luke Hasenbank
- Mike Bender

### **Legislative Affairs Committee**

- Robert Archibald
- Dorothy Moore
- Robert Beedle
- Mako Haggerty
- Kirk Zinck

### **Finance Committee**

- Mako Haggerty (Treasurer)
- Jim Herbert
- Wayne Donaldson
- Robert Archibald

# PWSRCAC BOARD AND EXECUTIVE COMMITTEE ACTIONS

Meeting Date      Action Item



**PRINCE WILLIAM SOUND**  
REGIONAL CITIZENS' ADVISORY COUNCIL

Board	11/26/2024	<b>Approval of FY2024 Audit:</b> The Board accepted the June 30, 2024 audited financial statements and audit report. Is this report in place?	<b>File Code</b> (if any)	<b>Responsible</b> Hamilton	<b>Disposition</b> Done
Board	11/26/2024	<b>Request for informal Review on the VMT C-Plan:</b> The Board directed staff to request an informal review to ADEC pertaining to Condition of Approval #1 related inspection of the secondary containment liners as outlined in the recently approved Valdez Marine Terminal Oil Discharge Prevention and Contingency Plan. Has this action taken place?	<b>File Code</b> (if any) 651.105.241126.ADECInformRvw	<b>Responsible</b> Swiss/Robida	<b>Disposition</b> Done
Board	11/26/2024	<b>Contract Approval:</b> State Legislative Lobbyist: The Board approved a sole source contract with Gene Therriault as the Council's State Legislative Lobbyist for FY2025 in an amount not to exceed \$31,700. Is this contract in place?	<b>File Code</b> (if any)	<b>Responsible</b> Lally	<b>Disposition</b> Pending
Board	11/26/2024	<b>Tsunami Workshop Summary Report:</b> The Board accepted the report titled "Tsunami Hazards Guidance for Vessel Operators Workshop Summary" by Nuka Research and Planning Group, LLC dated August 2024, as meeting the terms and conditions of contract number 8025.24.01C0 and for distribution to the public. Is this report in place?	<b>File Code</b> (if any) 802.104.241126.TsuWkshopRpt	<b>Responsible</b> Guthrie	<b>Disposition</b> Done
Board	11/26/2024	<b>Board Policy Amendments:</b> The Board approved the set of proposed Board Policy Amendments (#s 304, 310, and 710.06) and the new policy (# 311) forwarded by the Board Governance Committee (BGC). Are these policies in place?	<b>File Code</b> (if any)	<b>Responsible</b> Odegard	<b>Disposition</b> Done
Board	11/26/2024	<b>FY2026 Funds and Contract for Copper River Delta and Flats GRS:</b> The Board approved the commitment of \$38,000 in the FY2026 budget for project 6540 Copper River Delta and Flats Geographic Response Strategies; and authorized the Executive Director to enter into a sole source contract with Nuka Research and Planning Group, LLC for project 6540 - Copper River Delta and Flats Geographic Response Strategies in an amount not to exceed \$45,000. Are theses steps in place?	<b>File Code</b> (if any)	<b>Responsible</b> Robida	<b>Disposition</b> Done
Board	11/26/2024	<b>Executive Director Holiday Bonus:</b> The Board authorized a one-time 2024 holiday bonus for Executive Director Donna Schantz in the amount of \$600. Has the bonus been delivered?	<b>File Code</b> (if any)	<b>Responsible</b> Hamilton	<b>Disposition</b> Done

# PWSRCAC BOARD AND EXECUTIVE COMMITTEE ACTIONS

Meeting Date Action Item



**PRINCE WILLIAM SOUND**  
REGIONAL CITIZENS' ADVISORY COUNCIL

Board	9/19/2024	<b>FY2025 LTEMP BUDGET MODIFICATION &amp; CONTRACT CHANGE ORDER APPROVAL:</b> The Board authorized a budget modification in the amount of \$6,006 from the contingency fund to Project 9510 in the FY2025 budget and authorization for the Executive Director to carry out a corresponding change order to increase Contract 9510.25.06 with Fjord & Fish Sciences in an amount not to exceed \$61,731. Is this modification in place?	<b>File Code</b> (if any)	<b>Responsible</b> Verna	<b>Disposition</b> Done
Board	9/19/2024	<b>APPROVAL OF FY2025 BUDGET MODIFICATIONS:</b> The Board approved the proposed FY2025 budget modifications as listed above, with a total revised contingency in the amount of \$36,147.50. Are these modifications in place?	<b>File Code</b> (if any)	<b>Responsible</b> Hamilton	<b>Disposition</b> Done
Board	9/19/2024	<b>REPORT ACCEPTANCE: MARINE BIRD HOTSPOTS IN PRINCE WILLIAM SOUND:</b> The Board accepted the report "Marine Bird Hotspots in Prince William Sound" by Mary Anne Bishop, Ph.D. and Anne Schaefer of the Prince William Sound Science Center, dated July 2024, as meeting the terms and conditions of contract number 9110.24.01, and for distribution to the public. Is this report in place?	<b>File Code</b> (if any) 900.431.240701.PWSSCBirdHotSpot	<b>Responsible</b> Verna	<b>Disposition</b> Done
Board	9/19/2024	<b>REPORT ACCEPTANCE: PORT VALDEZ WEATHER BUOY DATA ANALYSIS 2019-2023:</b> The Board accepted the report titled "Port Valdez Weather Buoy Data Analysis 2019-2023" by Robert W. Campbell, Ph.D., of the Prince William Sound Science Center as meeting the terms and conditions of Contract number 6536.24.01, and for distribution to the public. Is this report in place?	<b>File Code</b> (if any) 653.431.240901.PtVdzWxBuoyData	<b>Responsible</b> Robertson	<b>Disposition</b> Done
Board	9/19/2024	<b>REPORT ACCEPTANCE: NON-INDIGENOUS MARINE SPECIES IN PRINCE WILLIAM SOUND:</b> The Board accepted the report titled "Regional Evaluation of Non-indigenous Marine Species in Prince William Sound" by Greg Ruiz, Ph.D. et al. of the Smithsonian Environmental Research Center, dated August 5, 2024, as meeting the terms and conditions of contract number 9520.23.01, and for distribution to the public. Is this report in place?	<b>File Code</b> (if any) 952.104.240919.NISreport	<b>Responsible</b> Verna	<b>Disposition</b> Done
Board	9/19/2024	<b>PWSRCAC LONG RANGE PLANNING:</b> The Board approved the protected project list for the upcoming Long Range Planning process as presented in Attachment A to briefing sheet 4-7. Is this list in place?	<b>File Code</b> (if any)	<b>Responsible</b> Odegard	<b>Disposition</b> Done
XCOM	9/10/2024	<b>Information &amp; Education Committee Appointment:</b> The Executive Committee approved the appointment of Dr. Amanda Glazier to the Information & Education Committee with a term set to expire at the May 2025 annual Board meeting. Is this appointment in place?	<b>File Code</b> (if any)	<b>Responsible</b> Willahan	<b>Disposition</b> Done

# PWSRCAC BOARD AND EXECUTIVE COMMITTEE ACTIONS

Meeting Date Action Item



PRINCE WILLIAM SOUND  
REGIONAL CITIZENS' ADVISORY COUNCIL

XCOM	9/10/2024	<b>Alyeska/SERVS Contracted FV Fleet Representative Meeting Report:</b> The Executive Committee approved the Contracted Fishing Vessel Fleet Representative Meeting Notes (report) and suggest formal transmission to Alyeska/SERVS. Has the report been transmitted to Alyeska?	<b>File Code</b> (if any) 703.105.240913.FVRepMeeting	<b>Responsible</b> Robida	<b>Disposition</b> Done
XCOM	9/10/2024	<b>Out-of-State Travel to Pacific Marine Expo:</b> The Executive Committee approved out-of-state travel for Jim Herbert to attend the Pacific Marine Expo, November 20-22, 2024 in Seattle, Washington with total travel costs in an approximate amount of \$2,300. Has the travel taken place?	<b>File Code</b> (if any)	<b>Responsible</b> Willahan	<b>Disposition</b> Done
XCOM	9/10/2024	<b>Approval of International Travel to Attend PWSRCAC Volunteer Events:</b> The Executive Committee approved international travel for Dr. Roger Green to travel from Ontario, Canada to Alaska to attend PWSRCAC's Science Night, volunteer workshop, and annual holiday party, scheduled for December 5-6, 2024, in an approximate amount of \$2,727 (USD). Has the travel taken place?	<b>File Code</b> (if any)	<b>Responsible</b> Willahan	<b>Disposition</b> Done
XCOM	9/10/2024	Agenda for Upcoming PWSRCAC Board Meeting: The Executive Committee approved the agenda for the PWSRCAC Board meeting, September 19-20, 2024 in Kodiak. Has the agenda been distributed?	<b>File Code</b> (if any) 210.001.240919.SeptAgenda	<b>Responsible</b> Fleming	<b>Disposition</b> Done
XCOM	7/18/2024	<b>Approval of Professional Agreement for Legal Services:</b> The Executive Committee authorized the Executive Director to enter into a sole source professional services agreement with Landye Bennett Blumstein (LBB), LLP for legal services. Is this contract in place? (Levesque)	<b>File Code</b> (if any)	<b>Responsible</b> Odegard	<b>Disposition</b> Done
XCOM	7/18/2024	<b>Approval of Advisory Letters to the TAPS Shippers:</b> The Executive Committee directed staff to send the proposed advisory letter to the TAPS Shippers requesting consideration of voluntary vessel speed reductions as a prevention measure for potential vessel-whale strikes in Prince William Sound, when it is safe to do so, and requesting additional information about operational impacts of reduced speeds. Has this letter been sent?	<b>File Code</b> (if any) 900.105.240719.RPGwhalespeed	<b>Responsible</b> Verna	<b>Disposition</b> Done
XCOM	7/18/2024	<b>Approval of Advisory Letters to NOAA:</b> The Executive Committee directed staff to send the proposed advisory letter to NOAA – National Marine Fisheries Service requesting additional data review and outreach to assess and mitigate the risk of vessel-whale strikes in Prince William Sound. Has this letter been sent?	<b>File Code</b> (if any) 900.105.240718.NOAAwhalespeed	<b>Responsible</b> Verna	<b>Disposition</b> Done

# PWSRCAC BOARD AND EXECUTIVE COMMITTEE ACTIONS

Meeting Date Action Item



**PRINCE WILLIAM SOUND**  
REGIONAL CITIZENS' ADVISORY COUNCIL

XCOM	7/18/2024	<b>Approval of Contract Increase for Secondary Containment Liner Testing:</b> The Executive Committee authorized the Executive Director to increase the contract with Dr. Craig Benson for deliverables associated with project 6512 Maintaining the Secondary Containment Liner, in an amount not to exceed \$38,000. Is the contract increase in place?	<b>File Code</b> (if any)		<b>Responsible</b> Blancaflor	<b>Disposition</b> Done
XCOM	7/18/2024	<b>Approval of Storage Tank 7 &amp; 94 Maintenance Review Report:</b> The Executive Committee accepted the report titled "Review of Ballast Water Tank 94 and Crude Oil Storage Tank 7 Out-of-Service Inspection Reports" dated May 2024 as final and for public distribution. Has the report been distributed?	<b>File Code</b> (if any)	500.431.240501.TakuTanks7and94 and 500.105.240718. APSCTakuI94and7	<b>Responsible</b> Blancaflor	<b>Disposition</b> Done
XCOM	7/18/2024	<b>Approval of Storage Tank 2 Inspection Report:</b> The Executive Committee accepted the report titled "Review of Crude Oil Storage Tank 2 Out-of-Service Inspection Report" dated May 2024 as final and for public distribution. Is this report in place?	<b>File Code</b> (if any)	500.431.240501.TakuTank2OOS	<b>Responsible</b> Blancaflor	<b>Disposition</b> Done
XCOM	7/18/2024	<b>Amicus Curiae Brief Budget Increase:</b> The Executive Committee authorized a budget modification of \$5,000 from the contingency fund to project 6000 to finalize and submit the amicus curiae brief in support of the City of Valdez's appeal of the Regulatory Commission of Alaska's ruling relating to the disclosure of Hilcorp/Harvest Alaska's financial information.	<b>File Code</b> (if any)		<b>Responsible</b> Schantz	<b>Disposition</b> Pending
XCOM	7/18/2024	<b>Approval of In-State Travel:</b> The Executive Committee authorized in-state travel for Directors Jim Herbert and OSPR Committee member Tim Robertson to travel to Valdez to be interviewed by members of the Government Accountability Office on August 6, 2024, in an approximate amount of \$1,720 and \$2,120 per traveler, respectively. Has the travel taken place?	<b>File Code</b> (if any)		<b>Responsible</b> Fleming	<b>Disposition</b> Done
Board	5/2/2024	<b>PWSRCAC DIRECTOR APPOINTMENTS:</b> The Board confirmed the two-year terms of the selected representatives for each of the following: L. Hasenbank (Ak State Chamber of Commerce), M. Vigil (Chenega), B. Cutrell (Chugagh Alaska Corporation), D. Janka (Cordova), D. Moore (Valdez), M. Bender (Whittier), R. Beedle (CDFU), A. Williams (Kodiak Island Borough), B. Shavelson (OSREC), and M. Malchoff (Port Graham). Are these appointments in place?	<b>File Code</b> (if any)		<b>Responsible</b> Fleming	<b>Disposition</b> Done
Board	5/2/2024	<b>APPROVAL OF FY2025 BUDGET:</b> The Board adopted the FY2025 budget as presented during the Budget Workshop on April 25, 2024. Total expenses of \$4,976,676, and the contingency is \$75,000. Is the approved budget in place?	<b>File Code</b> (if any)		<b>Responsible</b> Hamilton	<b>Disposition</b> Done

# PWSRCAC BOARD AND EXECUTIVE COMMITTEE ACTIONS

Meeting Date Action Item



**PRINCE WILLIAM SOUND**  
REGIONAL CITIZENS' ADVISORY COUNCIL

Board	5/2/2024	<b>APPROVAL OF RESOLUTION DESIGNATING PWSRCAC CHECK SIGNERS:</b> The Board adopted the resolutions provided by First National Bank Alaska to update the list of authorized individuals to sign checks and conduct financial transactions on PWSRCAC's account. Are these resolutions in place?	File Code (if any)	Responsible Hamilton	Disposition Done
Board	5/2/2024	<b>APPROVAL OF FY2025 CONTINGENCY PLAN CONTRACTOR POOL:</b> The Board authorized individual contracts with Nuka Research and Planning Group, LLC. and Attorney Breck Tostevin for professional services in FY2025 with the aggregate total not to exceed \$80,000. Are these contracts in place?	File Code (if any)	Responsible Swiss	Disposition Done
Board	5/2/2024	<b>MARINE BIRD FALL AND EARLY WINTER SURVEYS CONTRACT AUTHORIZATION:</b> The Board authorized the Executive Director to enter into a sole source contract with the Prince William Sound Science Center to conduct project 9110 – PWS Marine Bird and Mammal Winter Surveys in 2024 in an amount not to exceed \$78,928. Is this contract in place?	File Code (if any)	Responsible Verna	Disposition Done
Board	5/2/2024	<b>APPROVAL OF PWSRCAC/ALYESKA CONTRACT COMPLIANCE VERIFICATION REPORT:</b> The Board accepted the PWSRCAC/Alyeska Annual Contract Compliance Verification Report. Is this report in place?	File Code (if any)	Responsible Hamilton	Disposition Done
Board	5/2/2024	<b>APPROVAL FOR ANCHORAGE OFFICE LEASE EXTENSION:</b> The Board authorized the Executive Director to sign a one-year lease extension for the Anchorage office located at 3709 Spenard Road. The monthly rent is \$5,950.95, totaling \$71,411.40 over the one-year term. Is this extension in place?	File Code (if any)	Responsible Odegard	Disposition Done
Board	5/2/2024	<b>APPROVAL OF FY2024 BUDGET MODIFICATIONS:</b> The Board approved the FY2024 budget modifications as listed on the provided sheet, with a total revised contingency in the amount of \$204,629. Are these modifications in place?	File Code (if any)	Responsible Hamilton	Disposition Done
Board	5/2/2024	<b>ELECTION OF OFFICERS AND MEMBERS-AT-LARGE:</b> The Board elected the following: President - Robert Archibald; Vice President - Amanda Bauer; Treasurer - Mako Haggerty; Secretary - Bob Shavelson; Members-at-Large - Ben Cutrell, Angela Totemoff, Dave Janka. Are these confirmations in place?	File Code (if any)	Responsible Fleming	Disposition Done

# PWSRCAC BOARD AND EXECUTIVE COMMITTEE ACTIONS

Meeting Date Action Item



**PRINCE WILLIAM SOUND**  
REGIONAL CITIZENS' ADVISORY COUNCIL

Board	5/2/2024	<b>REPORT ACCEPTANCE: 2023 DRILL MONITORING ANNUAL REPORT:</b> The Board accepted the 2023 Annual Drill Monitoring Report for distribution to the public. Is this report in place?	<b>File Code</b> (if any)	752.431.240101.DrillMon2023	<b>Responsible</b> Robertson	<b>Disposition</b> Done
Board	5/2/2024	<b>APPROVAL OF COUNCIL'S ONE-PAGE STRATEGIC PLAN:</b> The Board adopted and approved the one-page strategic plan as developed by the Strategic Planning Committee. Is this plan in place?	<b>File Code</b> (if any)		<b>Responsible</b> Lally	<b>Disposition</b> Done
Board	5/2/2024	<b>TECHNICAL COMMITTEE MEMBER APPOINTMENTS:</b> The Board approved the following technical committee members to two-year terms on their respective committees: Scientific Advisory Committee (SAC) - S. Allan, and D. Holen; Terminal Operations and Environmental Monitoring Committee (TOEM) - A. Bauer, M. Cullin, and G. Skladal; Oil Spill Prevention and Response Committee (OSPR) - M. Bender, D. Goldstein, and T. Robertson; Port Operations and Vessel Traffic Systems (POVTS) - A. Bauer and R. Archibald; and, Information and Education Committee (IEC) - R. Knight, K. Morse and A. Williams. Are these confirmations in place?	<b>File Code</b> (if any)		<b>Responsible</b> Vanderburg/	<b>Disposition</b> Done
Board	5/2/2024	<b>RESOLUTION REQUESTING A VOLUNTARY VESSEL SPEED REDUCTION BY TAPS TANKERS:</b> The Board directed staff to work with the appropriate technical committees to draft an advisory letter to NOAA – National Marine Fisheries Service, any other relevant regulatory agencies identified, and the TAPS shippers conveying the Council's concerns relating to vessel-whale strikes within the Council's region and acknowledging the effectiveness of a vessel speed reduction. Have these letters been sent?	<b>File Code</b> (if any)	See 4/23/24 XCOM action.	<b>Responsible</b> Verna	<b>Disposition</b> Done
Board	5/2/2024	<b>ANNUAL BOARD SUBCOMMITTEE APPOINTMENTS:</b> The Board approved the appointments to the following Board subcommittees: <u>Finance</u> - Mako Haggerty (Treasurer), Jim Herbert, Wayne Donaldson, Robert Archibald; <u>Long Range Planning (LRP)</u> - Aimee Williams, Robert Archibald, the five technical committee chairs, IEC member Cathy Hart; <u>Board Governance (BGC)</u> - Robert Beedle, Dorothy Moore, Luke Hasenbank, Mike Bender; and <u>Legislative Affairs (LAC)</u> - Robert Archibald, Dorothy Moore, Robert Beedle, Kirk Zinck, Mako Haggerty. Are these appointments in place?	<b>File Code</b> (if any)		<b>Responsible</b> Fleming	<b>Disposition</b> Done
Board	5/2/2024	<b>FY2025 LTEMP CONTRACT AUTHORIZATION:</b> The Board authorized individual contracts with Alpha Analytical and Fjord & Fish Sciences with the aggregate total not to exceed the amount approved in the final FY2025 LTEMP budget (Project 9510) for contract expenses, and delegation of authority to the Executive Director to enter into individual contracts with the aforementioned consultants; and authorized that the contract work commence prior to the start of FY2025, as approximately \$20,000 of these funds will need to be expended in May and June 2024. Are these steps in place?	<b>File Code</b> (if any)		<b>Responsible</b> Verna	<b>Disposition</b> Done

# PWSRCAC BOARD AND EXECUTIVE COMMITTEE ACTIONS

Meeting Date Action Item



PRINCE WILLIAM SOUND  
REGIONAL CITIZENS' ADVISORY COUNCIL

XCOM	4/23/2024	<b>Approval of Agenda for Upcoming Board Meeting:</b> The Executive Committee approved the agenda for the PWSRCAC Board meeting, May 2-3, 2024. Has the agenda been distributed?	File Code (if any)	Responsible Fleming	Disposition Done
Board	3/27/2024	<b>Approval of Out-of-State Travel to Washington, DC for Legislative Visits:</b> The Board approved out-of-state travel for Directors Dorothy Moore and Robert Beedle to conduct annual legislative outreach visits in Washington, DC, May 5-11, 2023 in the approximate amount of \$5,114, per traveler. Has the travel taken place?	File Code (if any)	Responsible Fleming	Disposition Done
Board	3/27/2024	<b>Approval of In-State Travel to Valdez for Tsunami Workshop:</b> The Board approved in-state travel for Robert Archibald, Jim Herbert, Dave Janka, and Max Mitchell to attend the Tsunami Workshop in Valdez, June 3-4, 2024 in an approximate amount of \$2,325 per traveler; and approve a budget modification adding \$9,300 to project 8025 from the contingency fund for this travel.	File Code (if any)	Responsible Fleming	Disposition Done
Board	3/27/2024	<b>White Paper Acceptance – Miscommunication in Maritime Contexts:</b> The Board accepted the white paper titled "Miscommunication in Maritime Contexts" by Dr. Nicole Ziegler as meeting phase one of contract 8520.23.01 and allow Dr. Ziegler to seek professional publication of the paper. Is this report in place?	File Code (if any)	Responsible Sorum/Lally	Disposition Done
Board	3/27/2024	<b>Approval of IRS Form 990:</b> The Board authorized the Executive Director to sign the Form 990 on behalf of PWSRCAC and submit it to the IRS on or before May 15, 2024. has the IRS Form 990 been transmitted to the IRS?	File Code (if any)	Responsible Hamilton	Disposition Done
Board	3/27/2024	<b>Annual Evaluation of the Executive Director:</b> The Board approved extending the Executive Director's contract for one year and authorized a one-time bonus of \$2,500. Have these actions taken place?	File Code (if any)	Responsible Hamilton	Disposition Done
Board	1/25/2024	<b>REPORT ACCEPTANCE: 2022-2023 LONG-TERM ENVIRONMENTAL MONITORING:</b> The Board accepted the reports titled "Long-Term Environmental Monitoring Program 2022–2023 Summary Report" and "Long-Term Environmental Monitoring Program 2022–2023 Technical Supplement" by Morgan Bender of Owl Ridge Natural Resource Consultants, Inc., both dated December 2023, as meeting the terms and conditions of contract number 951.24.04, and for distribution to the public. Is this report in place?	File Code (if any)	Responsible Verna	Disposition Done

# PWSRCAC BOARD AND EXECUTIVE COMMITTEE ACTIONS

Meeting Date Action Item



**PRINCE WILLIAM SOUND**  
REGIONAL CITIZENS' ADVISORY COUNCIL

Board	1/25/2024	<b>BUDGET MODIFICATIONS:</b> The Board approved the FY2024 budget modifications as listed on the provided sheet, with a total revised contingency in the amount of \$111,654. Are these modifications in place?	<b>File Code</b> (if any)	<b>Responsible</b> Hamilton	<b>Disposition</b> Done
Board	1/25/2024	<b>CONTRACT APPROVAL FOR AIR QUALITY MONITORING AT THE VMT:</b> The Board authorized a contract with Ron Sahu, PhD, in an amount not to exceed \$50,000 to conduct work related to VMT Title V air quality permit review and associated air quality issues under project 5570 - Valdez Air Quality. Is this contract in place?	<b>File Code</b> (if any)	<b>Responsible</b> Blancaflor	<b>Disposition</b> Done
Board	1/25/2024	<b>APPROVAL OF FY24 CONTRACT WITH TAKU ENGINEERING FOR ENGINEERING SUPPORT:</b> The Board authorized a contract increase with Taku Engineering in the amount of \$21,720, for a new not to exceed total of \$46,720, to provide engineering support related to Alyeska's request for information on the oxygen content of the head spaces of the VMT crude oil storage tanks. Is this contract in place?	<b>File Code</b> (if any)	<b>Responsible</b> Blancaflor	<b>Disposition</b> Done
Board	1/25/2024	<b>2023 VMT C-PLAN RENEWAL &amp; APPROVAL OF C-PLAN CONTRACT INCREASE:</b> The Board delegated authority to the Executive Director to negotiate contract increases with selected contingency plan review contractors at a cost not to exceed \$90,000 for project 6510: State Contingency Plan Reviews for FY2024. Is this contract in place?	<b>File Code</b> (if any)	<b>Responsible</b> Swiss	<b>Disposition</b> Done
Board	1/25/2024	<b>BYLAW AMENDMENT – SECTION 2.2.1 ADDING A RECREATION SEAT AS A CLASS I MEMBER:</b> The Board approved of the proposed amendment to section 2.2.1 of the PWSRCAC Bylaws to remove the Temporary Recreation Seat and add the Oil Spill Region Recreational Coalition to the list of Class I members; and, the proposed amendment to the Bylaws to include listing the definition of recreation as developed by BGC in the footnotes on page 2 of Attachment A. Are these amendments in place?	<b>File Code</b> (if any)	<b>Responsible</b> Fleming	<b>Disposition</b> Done
Board	1/25/2024	<b>DIRECTOR APPOINTMENT FOR OIL SPILL REGION RECREATIONAL COALITION:</b> The Board confirmed the appointment of Jim Herbert as representing the Oil Spill Region Recreational Coalition with a term set to expire at the May 2025 annual meeting. Is this appointment in place?	<b>File Code</b> (if any)	<b>Responsible</b> Fleming	<b>Disposition</b> Done
Board	1/25/2024	<b>CONTRACT APPROVAL - FEDERAL GOVERNMENT AFFAIRS MONITOR:</b> The Board approved a contract with Blank Rome to work with PWSRCAC's Federal Legislative Monitor Roy Jones, and the Legislative Affairs Committee, under project 4400 Federal Governmental Affairs in an amount not to exceed \$22,500 for Fiscal Year 2024. Is this contract in place?	<b>File Code</b> (if any)	<b>Responsible</b> Lally	<b>Disposition</b> Done

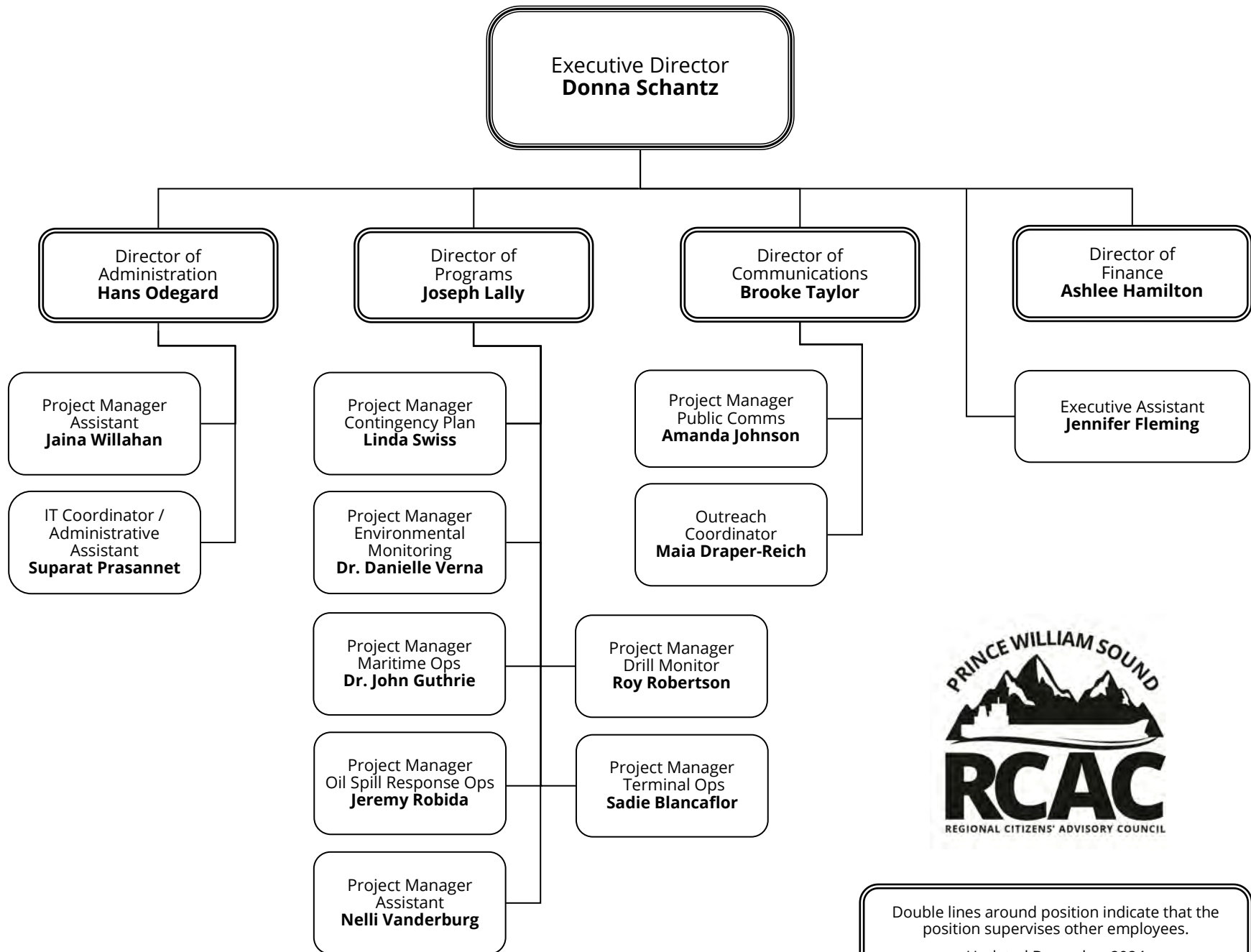
## PWSRCAC BOARD AND EXECUTIVE COMMITTEE ACTIONS

Meeting Date Action Item



PRINCE WILLIAM SOUND  
REGIONAL CITIZENS' ADVISORY COUNCIL

Board	1/25/2024	<b>PWSRCAC FY2025-FY2029 LONG RANGE PLAN APPROVAL:</b> The Board approved the Five-Year Long Range Plan for Fiscal Years 2025–2029, as developed and finalized for consideration by the Board at the January 24, 2024 Long Range Plan work session.	<b>File Code</b> (if any)	210.101.24012.FiveYearLRP
			<b>Responsible</b>	<b>Disposition</b>
			Vanderburg	Done
XCOM	1/18/2024	<b>Out-of-State Travel Request to International Oil Spill Conference:</b> The Executive Committee approved out-of-state travel for Director Kirk Zinck and OSPR Committee member Matt Melton to attend the International Oil Spill Conference May 13-16, 2024 in New Orleans, LA in the approximate amounts of \$4,779 and \$3,881, respectively. Has the travel taken place?	<b>File Code</b> (if any)	
			<b>Responsible</b>	<b>Disposition</b>
			Fleming	Done; Zink withdrew
XCOM	1/18/2024	<b>Agenda for Upcoming PWSRCAC Board Meeting:</b> The Executive Committee approved the agenda for the PWSRCAC Board meeting, January 25-26, 2024 as amended.	<b>File Code</b> (if any)	
			<b>Responsible</b>	<b>Disposition</b>
			Fleming	Done



Double lines around position indicate that the position supervises other employees.

Updated December 2024

**Consent Agenda Briefing for PWSRCAC Board of Directors – January 2025****ACTION ITEM**

**Sponsor:** Hans Odegard and Ashlee Hamilton

**Project number and name or topic:** Five-Year Lease Agreement for Multifunctional Copier/Printer

1. **Description of agenda item:** The Board of Directors is asked to approve a new five-year lease agreement with Konica Minolta for multifunctional copier/printers in the Anchorage and Valdez offices in an approximate amount of \$49,315.00. The current lease and maintenance agreement for these machines will end in early 2025. The duration of the new lease will be 60 months and include a provision for the Council to purchase the machines at the end of the lease term for \$1.

2. **Why is this item important to PWSRCAC:** The multifunctional copier/printer machines are the primary printers, scanners, and copiers in the Anchorage and Valdez offices and are used to assemble committee and Board materials on a regular basis.

3. **Previous actions taken by the Board on this item:**

<u>Meeting</u>	<u>Date</u>	<u>Action</u>
Board	1/21/2010	Authorized executive director to enter into lease agreements for two Konica Minolta copier/printers.
Board	1/22/2015	The Board authorized the Executive Director to enter into lease agreements and maintenance contracts for copier/printers to be located in the Anchorage and Valdez offices after evaluation of responses from the RFP and recommendations from the Finance Committee. The lease terms will not exceed five years and the total cost will not exceed \$100,000.
Board	1/23/2020	Delegation of Authority of New Office Machinery Lease: Authorization for the Executive Director to enter into a new five-year sole-source lease agreement and maintenance contract with Konica Minolta for copiers to be located in the Valdez and Anchorage offices, in an approximate amount of \$66,856.

4. **Summary of policy, issues, support, or opposition:** Konica Minolta has given the option to PWSRCAC to renew our five-year lease in February of 2025, when the current lease expires. This renewal will entail replacing the current machines with newer models. The basic lease payment is \$452/month plus an upgrade buyout of \$6,650 for an approximate total of \$33,770 or \$562.83/month over the five years. In addition, there is a charge for each print/copy made and is based on \$0.0459 each for color copies and \$0.0071 each for black and white copies. The current average quarterly (3 month) volume of the Anchorage machine is 6,000 black and white copies/prints and 5,000 color copies/prints. The current average quarterly volume of the Valdez machine is 6,500 black and white copies/prints and 10,000 color copies/prints. Based on these volumes, the additional cost for copies/prints over five years would be approximately \$15,545.00. The total estimated cost of the lease, including the base charge and the copy count charge, is

## Five-Year Lease Agreement for Multifunctional Copier/Printer 3-1

\$49,315.00. This is an average of \$9,863.00 per year. The lease agreement provides for onsite maintenance in Anchorage and Valdez as well as toner and other supplies, excluding paper.

In June of 2024, staff put this lease out to competitive bid. We received proposals from Arctic Office, Alaska Enterprise Solutions, and a written response from our Konica Minolta sales representative. Based on these responses, Konica Minolta has provided an attractive proposal. Konica Minolta has existing machines in Valdez with other customers (City of Valdez, Valdez School District, and Alyeska) and therefore regularly has a technician in Valdez. PWSRCAC has been very satisfied with the equipment and maintenance provided by Konica Minolta since 2010.

5. **Committee Recommendation:** At their in-person meeting in August, the Finance Committee reviewed our renewal options and favors renewing the lease with Konica.

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6. **Relationship to LRP and Budget:** Office machinery is in the approved FY2025 budget in the amount of \$11,760, for the two multifunctional copier/printers.

7. **Action Requested of the Board of Directors:** Authorize a new five-year sole-source lease agreement and maintenance contract with Konica Minolta for multifunctional copier/printers to be located in the Valdez and Anchorage offices, in an approximate amount of \$49,315.00.

8. **Alternatives:** We could have bought out of our lease with Konica Minolta, which would have been cost-prohibitive, and then switched vendors to one of the other proposers. However, the other proposers did not have competitive rates, neither monthly lease rates nor page rates.

9. **Attachments:** None.

Consent Agenda Briefing for PWSRCAC Board of Directors – January 2025
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**ACTION ITEM**

**Sponsor:** Ashlee Hamilton, Director of Finance

**Project number and name or topic:** FY2025 Budget Modifications

1. **Description of agenda item:** The Board is asked to approve modifications to the FY2025 budget as outlined on the attached list. These modifications were identified by staff at a December 3, 2024 budget review meeting. The Finance Committee will review all budget modifications at their meeting on January 14. If the changes proposed in this briefing sheet are approved, the FY2025 contingency will be \$464,771.

It is important to note there are two other agenda items on the January 2025 Board meeting consent agenda that, if approved, will further affect the FY2025 contingency. They are item 3-3 "Approval of Transcriptomics Research Contribution to the USGS" adding \$109,863 to contract expenses for a USGS research contribution, and item 4-4 "Approval of Anchorage Office Lease and Relocation" adding \$18,000 to expenses for the security deposit and first months rent of the new Anchorage office lease. If the budget modifications in item 3-3, 4-4 and 3-2 (this agenda item) are all approved, the updated FY2025 contingency amount will be \$336,908.

2. **Why is this item important to PWSRCAC:** PWSRCAC's annual budget provides the organization's spending plan and authorities. While some of the listed modifications are within the authorities of the Executive Director and the Executive Committee, others are not. The entire list is therefore presented to the Board to simplify the approval process.

3. **Previous actions taken by the Board on this item:**

<u>Meeting</u>	<u>Date</u>	<u>Action</u>
Board	5/2/2024	Approved the FY2025 budget.
Board	9/19/2024	Approved the FY2025 budget modifications as listed on the provided sheet, with a total revised contingency in the amount of \$36,147.50.

4. **Committee Recommendation:** The Finance Committee will review at their meeting on January 14, and give their recommendations at the Board meeting.

5. **Action Requested of the Board of Directors:** Approve the FY2025 budget modifications as listed on the provided sheet, with a total revised contingency in the amount of \$464,771.

6. **Alternatives:** None recommended.

7. **Attachments:** The list of proposed budget modifications.

List of Proposed FY2025 Budget Modifications  
January 2025 Board Meeting

Task	Name	Budget Modifications	From Contingency	To Contingency	Total Net Assets Not Budgeted	Notes
1000	Rev	New office chairs for staff in Anchorage and Valdez (6 x \$800.00)	(\$4,800.00)		\$ 370,550.27	Maia, Amanda, Jaina, Ashlee, Suparat & John
1300	Information Technology	Supplies not originally budgeted	(\$1,000.00)			
2222	Finance Committee	Travel and meeting expenses no longer needed for FY2025		\$1,805.35		
2300	OSPR	Travel and meeting expenses no longer needed for FY2025		\$1,317.95		
2400	POVTS	Travel and meeting expenses no longer needed for FY2025		\$3,500.00		
2500	SAC	Travel and meeting expenses no longer needed for FY2025		\$6,500.00		
2600	TOEM	Travel and meeting expenses no longer needed for FY2025		\$3,276.20		
2800	IEC	Travel and meeting expenses no longer needed for FY2025		\$4,500.00		
3300	Annual Report	Printing and reproduction less than original budget / contract expenses less than original budget		\$1,986.66		
4000	Program & Projects	Library and dues and subscriptions not originally budgeted	(\$2,250.00)			
5591	Crude Oil Piping Maintenance Review	Project deferred based on lack of information from Alyeska to move it forward		\$51,744.00		
6536	Analysis of Port Valdez Weather Buoys	Project deferred until next fiscal year due to VMT buoy being out of service for part of year		\$17,000.00		
9521	Marine Invasive Species Internship	Supplies no longer needed		\$500.00		
5082	Timeline of VMT Tank Repairs and Inspection Intervals	Deferred project repropose due to available net assets	(\$15,000.00)			
5640	Alaska North Slope Crude Oil Properties	Proposal came in higher than original budget	(\$1,000.00)			
9850	Transcriptomics	Deferred project repropose due to available net assets	(\$109,863.00)			This item will be on a separate agenda item / including it here for transparency
1050	General & Administrative - Anchorage	Security deposit and first month rent for new office location at 2525 Gambell Street.	(\$18,000.00)			This item will be on a separate agenda item / including it here for transparency
Total			(\$151,913.00)	\$92,130.16	(\$59,782.84)	

Current Contingency	\$ 396,691.80
Current Expenses not budgeted	(\$59,782.84)
New Contingency	\$336,908.96

3903	Internship	Deferred project repropose due to available net assets	(\$4,000.00)			Approved at XCOM on December 18th, 2024 / amount above reflects this budget mod
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**Consent Agenda Briefing for PWSRCAC Board of Directors – January 2025****ACTION ITEM**

**Sponsor:** Danielle Verna & the Scientific  
Advisory Committee

**Project number and name or topic:** 9850 – Transcriptomics

1. **Description of agenda item:** The Board is being asked to approve a research contribution to the United States Geological Survey (USGS) of \$109,703, to genetically analyze blue mussel samples obtained at 10 of the Council’s monitoring sites for its Long-Term Environmental Monitoring Program (LTEMP) in Port Valdez and Prince William Sound. These data will be used in conjunction with hydrocarbon monitoring of mussels at these sites to assess the long-term impacts of operation of the Valdez Marine Terminal and associated tankers. The samples have already been collected and are in storage at the contractor’s facility in California.

Project 9850 – Transcriptomics Monitoring was deferred based on Long Range Plan ranking and lack of available funds. With the FY2024 audit now complete, and the associated additional funds available in contingency, staff is proposing to implement this project for completion this fiscal year. Additionally, if approved, there will be overlap with the FY2025 and FY2026 transcriptomics work reducing the proposed FY2026 budget to an approximate amount of \$23,000.

2. **Why is this item important to PWSRCAC:** The Oil Pollution Act of 1990 instructs the PWSRCAC to “devise and manage a comprehensive program of monitoring the environmental impacts of the operations of terminal facilities and of crude oil tankers while operating in Prince William Sound.” The work done under the Council’s Long-Term Environmental Monitoring Program has been designed by the Scientific Advisory Committee to fulfill that responsibility. Transcriptomics is a complementary approach to hydrocarbon monitoring. Transcriptomics can be used to assess physiological changes in organisms when exposed to hydrocarbons, which is an important indicator of the impacts of that exposure over time.

3. **Previous actions taken by the Board on this item:**

<u>Meeting</u>	<u>Date</u>	<u>Action</u>
Board	1/23/2020	Accepted of the “Port Valdez Mussel Transcriptomics” report by Lizabeth Bowen of the U.S. Geological Survey, dated November 20, 2019, as meeting the terms and conditions of contract number 951.20.06, and for distribution to the public.
Board	5/21/2020	Approved the following: authorizing a contract negotiation with Payne Environmental Consultants Inc., for work to be performed under LTEMP, at an amount not to exceed \$115,064. Authorizing a contract negotiation with Newfields Environmental Forensics Practice, for work to be performed under LTEMP, at an amount not to exceed \$95,807. Authorizing a contract negotiation with the United States Geological Survey, for work to be performed under LTEMP, at an amount not to exceed \$65,371. Authorizing a contract negotiation with Oregon State University, for work to be performed under LTEMP, at an amount

## Approval of Transcriptomics Research Contribution to the USGS 3-3

		not to exceed \$22,030. Authorizing a contract work to commence prior to the start of FY2021, as approximately \$33,000 of these funds will need to be expended in May and June 2020.
Board	5/6/2021	Accepted the report titled "Long-Term Environmental Monitoring Program: 2020 Sampling Results and Interpretations," by Dr. James R. Payne and William B. Driskell, dated March 2021, as meeting the terms and conditions of contract number 951.21.04, and for distribution to the public. The Board accepted the report titled "Using Mussel Transcriptomics for Environmental Monitoring in Port Valdez, Alaska: 2019 and 2020 Pilot Study Results", dated February 17, 2021, as meeting the terms and conditions of contract number 951.21.06 and for distribution to the public.
Board	5/21/2021	Authorized individual contracts with Newfields Environmental Forensics Practice, Oregon State University, and the United States Geological Survey (USGS) with the aggregate total not to exceed the amount approved in the final FY2022 LTEMP budget (\$147,720) for contract expenses, and delegated authority to the Executive Director to enter into individual contracts with the aforementioned consultants; and authorized that the contract work commence prior to the start of FY2022 as approximately \$30,000 of these funds will need to be expended in May and June 2021.
Board	1/27/2022	Approved that PWSRCAC provide the United States Geological Survey with a research contribution of \$75,555 to genetically analyze blue mussel samples obtained to monitor the environmental impacts of the April 12, 2020 oil spill at the Valdez Marine Terminal.
Board	5/4/2023	Accepted the reports titled "Executive Summary: Transcriptomic responses to an Alaskan oil spill over time reveal a dynamic multisystem involvement in exposed mussels" and "Transcriptomic responses to an Alaskan oil spill over time reveal a dynamic multisystem involvement in exposed mussels (Mytilus trossulus)" by Lizabeth Bowen, William B. Driskell, Brenda Ballachey, James R. Payne, Shannon Waters, Eric Litman, and Austin Love as meeting the terms and conditions of research contribution number 951.22.07, and for distribution to the public.

4. **Summary of policy, issues, support, or opposition:** Since 2019, the Council has been working with Dr. Liz Bowen from the USGS on transcriptomics analysis of mussels, a new genetic testing method, as part of LTEMP. Transcriptomics is a promising new tool and in 2019, 2020, and 2021, the Scientific Advisory Committee advised that the Council conduct transcriptomics monitoring work to serve as a pilot study, the results of which would be used to determine if the Council should continue to use this technique in the long term. Originally, the pilot study was only planned for 2019 and 2020, but then the April 12, 2020 oil spill occurred, providing a unique opportunity to further test the utility of transcriptomics to monitor the environmental impacts of the Valdez Marine Terminal and tankers.

Initially, 14 genes were chosen to assess the mussels, then the scope was expanded to include all mussel genes. Genes that could potentially distinguish between ANS crude oil and harbor contaminants were identified. A recommendation of the expanded study that looked at all genes was to develop assays from a shorter list of genes of potential interest. In 2023, mussels were collected for transcriptomics analysis and were shipped to the contractor, but the samples were not analyzed due to a lack of funding.

This project would prioritize (1) developing assays for an expanded 24-gene panel and (2) analyzing mussel tissues collected at 10 LTEMP sites in Port Valdez and Prince William

## Approval of Transcriptomics Research Contribution to the USGS 3-3

Sound in 2023. This project was deferred during the FY2025 Long Range Planning process due to lack of funds.

Making a research contribution to the USGS for this work has significant financial benefit for the Council. By making a research contribution rather than entering into a contract, the Council will avoid paying overhead costs of 51.25%. Since 2019, the Council has made research contributions to the USGS to support related transcriptomics work and the results of all those contributions have been successful (i.e., the research and associated report was completed and delivered to the Council). The Finance Committee has provided [guidelines for providing research contributions](#) using PWSRCAC funds.

5. **Committee Recommendation:** The Scientific Advisory Committee has supported previous transcriptomics projects and supported this project during the FY2025 Long Range Planning process. SAC will be made aware of the requested action to add this project to the FY2025 budget at a meeting in January 2025, and their recommendation will be given at the Board meeting.

6. **Relationship to LRP and Budget:** Project 9850 was deferred for FY2025, noting it may be brought back mid-year if funding allows.

7. **Action Requested of the Board of Directors:** Transfer \$109,703 from contingency to project 9850 – Transcriptomic Monitoring and provide the United States Geological Survey a research contribution of \$109,703 to genetically analyze blue mussel samples already obtained to monitor the environmental impacts of the Valdez Marine Terminal.

8. **Alternatives:** None recommended.

9. **Attachments:** Budget estimate from Dr. Liz Bowen from the United States Geological Survey available upon [request](#).

**Briefing for PWSRCAC Board of Directors – January 2025**

**INFORMATION ITEM**

**Sponsor:** Linda Swiss and the OSPR Committee  
**Project number and name or topic:** 6510 - Valdez Marine Terminal  
Contingency Plan Renewal

1. **Description of agenda item:** On November 6, 2024, the Alaska Department of Environmental Conservation (ADEC) approved the renewal of the Valdez Marine Terminal Oil Discharge Prevention and Contingency Plan (VMT C-Plan) and issued its Basis of Decision on the renewal. The 5-year renewal is effective as of November 6, 2024, and expires on November 5, 2029. ADEC's approval letter and Basis of Decision document can be found <https://pwsrcac.net/committees/vmt-contingency-plan-2023-renewal/>.

Alyeska submitted the VMT C-Plan renewal to ADEC for a sufficiency review in October 2023, followed by two public reviews and three rounds of requests for additional information.

ADEC's recent approval includes **Condition of Approval (COA) #1 East Tank Farm Secondary Containment Area Required Evaluation**. As outlined in Issue #7 in the Basis of Decision document, section 2.1.7.1 of the plan, further analysis of the liners is required. This renewal requires Alyeska to complete the following:

- A. *Submit the final report of secondary containment liner testing method to be used to evaluate the condition of the East Tank Farm secondary containment area by March 1, 2025.*
- B. *Complete liner investigations of the East Tank Farm secondary containment area within the plan cycle (prior to plan submittal of the 2029 renewal).*

On November 26, 2024, the Board approved filing a Request for Informal Review on this COA to include the following:

1. The COA should specify that the submissions required of Alyeska by the COA, the schedules of inspections, and corrective actions because the liner inspections will be reviewed as major amendments to the Prevention Plan with formal public review as required by 18 AAC 75.415(a)(4)-(5).
2. The COA should establish a schedule for completing inspections of the liners by the end of 2025.
3. The COA should include requirements for corrective action if the liner inspections fail to demonstrate that the existing liner meets the "sufficiently impermeable" standard of 18 AAC 75.075.

## Update on Request for Informal Review on the VMT C-Plan 4-1

This informal review request was directed to ADEC's Spill Prevention and Response (SPAR) Director Teresa Melville for resolution. On December 3, 2024, PWSRCAC was notified by Director Melville that our request has merit under 18 AAC 15.185(b). A decision on the informal review is expected by February 24, 2025.

2. **Why is this item important to PWSRCAC:** The VMT C-Plan approval process includes important actions which could potentially impact every member organization of PWSRCAC. The VMT C-Plan establishes state and federal oil spill prevention and response requirements that Alyeska is required to comply with to prevent a spill from occurring, as well as requirements that Alyeska would be obligated to address should an oil spill occur. This plan is renewed every five years. Reviewing contingency plans is a major task for PWSRCAC, as outlined in both the PWSRCAC/Alyeska contract and OPA 90.

Additionally, this renewal and request for an informal review are important to PWSRCAC because the secondary containment liners in the East Tank Farm are there to prevent the contamination of ground and surface water in the event of an oil or other hazardous liquid spill. The issue with the secondary containment liner (also known as the "catalytically blown asphalt liner" or "CBA liner") is if the integrity of the liner is compromised, such as having through holes, cracks, and gaps, the risk of an oil spill causing environmental damage increases.

Furthermore, Alyeska receives a 60% prevention credit from the Response Planning Standard volume from a catastrophic spill for a "sufficiently impermeable secondary containment liner." PWSRCAC has been following this issue for more than 20 years and has questioned the reasonableness of this prevention credit when the integrity of the liners cannot be verified. This integrity issue was also the subject of a 2019 Request for Informal Review and a 2022 Request for Adjudicatory Hearing.

3. **Previous actions taken by the Board on this item:**

<u>Meeting</u>	<u>Date</u>	<u>Action</u>
XCOM	12/4/19	Authorized staff to submit requests for informal review on VMT C-Plan renewal
Board	1/27/22	Approval to authorize Executive Director to file request for adjudicatory hearing on the VMT C-Plan related to secondary containment liner.
XCOM	4/28/22	Approval of contract with Dr. Craig Benson for secondary containment liner work.
Board	1/26/23	Accepted report "Methodologies for Evaluating Defects in the Catalytically Blown Asphalt Liner in the Secondary Containment System at the Valdez Marine Terminal" by Dr. Craig Benson dated 11/29/22 as meeting the terms of contract 6512.22.02; direct staff to send report to Alyeska, state and federal regulators with cover letter.
Board	5/2/24	Authorized individual contracts with Nuka Research and Planning Group, LLC. and Attorney Breck Tostevin for professional services in FY2025 with the aggregate total not to exceed \$80,000.
Board	11/26/24	Authorized staff to request an informal review to ADEC pertaining to COA #1 related inspection of the secondary containment liners in the recently approved VMT C-Plan.

4. **Committee Recommendation:** Staff and members of the C-Plan Project Team from the OSPR and TOEM Committees have been briefed on the status of the VMT C-Plan renewal.

## Update on Request for Informal Review on the VMT C-Plan 4-1

5. **Relationship to LRP and Budget:** Work associated with this project was included in the FY2025 budget under project 6510, in an amount not to exceed \$80,000.
6. **Action Requested of the Board of Directors:** None, this item is for information only.
7. **Attachments:** None.

**Briefing for PWSRCAC Board of Directors – January 2025**

**ACTION ITEM**

**Sponsor:** Sadie Blancaflor and the TOEM Committee

**Project number and name or topic:** 5000 - TOEM Program

1. **Description of agenda item:** The Board is being asked to accept the report titled “2022 Tank Pressure/Vacuum Pallet Damage: Crude Oil Storage Tank Headspace Gas Assessment,” by Taku Engineering, LLC dated December 2024. Bill Mott of Taku Engineering, the report’s author, will provide a briefing to the Board at the meeting.

2. **Why is this item important to PWSRCAC:** This report was drafted in response to Alyeska’s October 2023 request for additional information related to Taku Engineering’s calculations in the June 2023 “Crude Oil Storage Tank Vent Damage” report. The 2023 report outlines concerns related to worker safety in the aftermath of the 2022 tank vent damage incident, due to oxygen levels in the Valdez Marine Terminal East Tank Farm crude oil storage tank headspaces calculated to be above the lower explosive limit.

3. **Previous actions taken by the Board on this item:**

<u>Meeting</u>	<u>Date</u>	<u>Action</u>
XCOM	9/14/2023	Accepted the technical memorandum titled, “Crude Oil Storage Tank Vent Snow Damage,” by Taku Engineering, dated July 2023, with direction for staff to forward the memo to Alyeska and state and federal regulators accompanied by a cover letter summarizing findings and recommendations with requests for appropriate action and a complete response. The report was transmitted on October 12, 2023.

4. **Summary of policy, issues, support, or opposition:** This report was drafted in response to Alyeska’s October 2023 request for additional information related to Taku Engineering’s calculations and assumption bases in the June 2023 “Crude oil Storage Tank Vent Damage” report.

In PWSRCAC's November 3, 2023 response letter, we asked how Alyeska would like to proceed: either by scheduling a meeting mid-December 2023 for a presentation on Taku Engineering's calculations and assumptions, or by providing the outstanding information needed so that the model and report can be refined appropriately. At this time, the Council has not received a response to our November 3, 2023, letter.

5. **Committee Recommendation:** At their October 2024 meeting, the TOEM Committee recommended the Board accept this report at the January 2025 Board meeting.

6. **Relationship to LRP and Budget:** Work associated with this project was included in the FY2025 budget under contract 5000.25.01 in an amount not to exceed \$25,000.

## Report Acceptance: Calculations Used in Tank Vent Headspace Report 4-3

7. **Action Requested of the Board of Directors:** Accept the report titled “2022 Tank Pressure/Vacuum Pallet Damage: Crude Oil Storage Tank Headspace Gas Assessment,” by Taku Engineering, LLC dated December 2024, as meeting the terms and conditions of contract number 5000, and for distribution to the public.
8. **Alternatives:** None recommended.
9. **Attachments:** “2022 Tank Pressure/Vacuum Pallet Damage: Crude Oil Storage Tank Headspace Gas Assessment,” by Taku Engineering, LLC, dated December 2024

# 2022 Tank Pressure/Vacuum Pallet Damage: Crude Oil Storage Tank Headspace Gas Assessment



Report Prepared for:



PWSRCAC Contract # 5081.22-01

PREPARED BY:

William Mott P.E.

 **taku**  
ENGINEERING

907.562.1247  
December 2024



The opinions expressed in this PWSRCAC commissioned report  
are not necessarily those of PWSRCAC.

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## APPENDIX A – Summary of Estimated Tank Bulk Headspace Oxygen Levels

## **ACRONYMS & ABBREVIATIONS**

ADEC – Alaska Department of Environmental Conservation

ADOL – Alaska Department of Labor

APSC – Alyeska Pipeline Service Company

BWT – Ballast Water Treatment

ETF – East Tank Farm

FLIR - Forward Looking InfraRed

HP – High Pressure

LP – Low Pressure

MSCFH – Thousand Standard Cubic Feet Per Hour

O<sub>2</sub> – Oxygen

PWSRCAC - Prince William Sound Regional Citizens' Advisory Council

Taku – Taku Engineering, LLC

VMT – Valdez Marine Terminal

# 1.0 BACKGROUND

## 1.1 GENERAL

During the winter of 2021-2022, snow accumulated on top of the crude oil tanks located within the East Tank Farm (ETF) at the Valdez Marine Terminal (VMT). Insufficient snow removal efforts caused glaciation of the snowpack on top of the tanks, inflicting damage to many of the pressure/vacuum pallets (also referred to as “vents”). In areas of significant damage, where the vents were completely sheared off due to snow, the tanks operated with open holes that freely released hydrocarbon vapors into the atmosphere.

These pallets are critical infrastructure for safe tank operation. During normal operations, the pallets remain seated and tank headspace pressure is managed with the tank vapor system. In the event of an upset, the pallets are designed alleviate significant tank pressure changes. The pallets allow gas exchange between the inside of the tank and the outside atmosphere, releasing vapors in an over pressurization event or drawing in air in the event of a vacuum, preventing tank structural damage.

Following notification about the pallet damage, several current and former Alyeska employees approached Prince William Sound Regional Citizens’ Advisory Council (PWSRCAC) with concerns over safety to personnel and property stemming from the pallet damage and Alyeska’s response.

On March 31, 2022, Taku participated in a meeting to discuss the pallet damage and Alyeska Pipeline Service Company’s (APSC or Alyeska) response. APSC personnel who attended that meeting included Klint VanWingerden, Brian Huey, Chris Steves, and Weston Branshaw. PWSRCAC staff in attendance were Donna Schantz, Austin Love, and William Mott (Taku Engineering, on behalf of PWSRCAC).

Given Taku Engineering’s familiarity with the VMT and tank operations, and our technical background, PWSRCAC requested Taku’s assistance with addressing issues raised by concerned employees and Alyeska’s overall response. Taku’s efforts focused on the assessment of tank headspace conditions during the period of the peak oxygen (O<sub>2</sub>) content in the low-pressure vapor header, and Alyeska’s interpretations of the tank headspace gas quality during subsequent tank snow clearing efforts.

## 1.2 INFORMATION PROVIDED BY APSC AT THE MARCH 31, 2022 MEETING

During the March 31, 2022 meeting, APSC provided information on the tank damage and response that had been undertaken to address the damage. The following key points were discussed:

- The hydrocarbon vapor release was discovered through an “olfactory test,” which entailed technicians smelling hydrocarbon vapors while doing their rounds. Following the initial discovery, APSC used Forward Looking InfraRed (FLIR) cameras to identify hydrocarbon vapors leaking from damaged pallets on the tanks.
- The crude tanks are normally operated with a slight positive pressure in the headspace. Once significant damage was noted on a tank, the tank vapor system operations was shifted to maintain the headspace under a very slight negative pressure (vacuum) to alleviate hydrocarbon vapor release into the atmosphere.
- Instrumentation for monitoring O<sub>2</sub> content in the vapor system (including the headspace of the tanks) is limited to a single point in the ETF low-pressure header.
- The percent O<sub>2</sub> in the low-pressure header peaked at 5.59% on March 17, 2022, at 12:13 p.m. according to Alyeska’s instrumentation for monitoring O<sub>2</sub> content in the vapor system. Alyeska noted

that the system is set to shut down at 8% O<sub>2</sub> and that at its peak, the O<sub>2</sub> concentration in the header as recorded was below the safety shut down point.

- During the March 31 meeting, APSC indicated that 11 of the pallets had been fully sheared from the tanks by the snowpack. Ultimately, Alyeska reported 12 significantly damaged pallets on Tanks 1, 2, 3, 4, 6, 10, 13, and 14. Multiple pallets were significantly damaged on Tank 2 (3 pallets) and Tank 4 (3 pallets).
- During the March 31 meeting, Alyeska indicated that they had used the tank thief hatches to access the headspace of crude tanks to monitor the O<sub>2</sub> concentrations of the tank headspaces to determine if it was safe to put workers on top to clear snow.

### 1.3 SUMMARY OF CONCERNS

A study of the data and information Alyeska provided to the Alaska Department of Labor (ADOL) and the information provided at the Alyeska-PWSRCAC March 31, 2022 meeting, brought to light several concerns:

- Tank headspace gas mixing is limited to passive flow divertors at the tank vapor inlet and outlet nozzles; this means that gas mixing within the tank is not instantaneous and that the gas mixture in the tank headspace is not homogeneous. As such, when the VMT crude tanks had significantly damaged pallets and were operated at a slight negative pressure (vacuum), air was drawn into the tank at the damaged pallets and the gases in the tank headspaces contained areas with different proportions of flammable gases. The exact size and location of those flammable regions is dependent on several parameters including: the magnitude of the tank vent damage, the level of the negative pressure (vacuum), the age of the crude in the tank (the amount of remaining light ends off gassing), and the degree of mixing in the tank.
- In the March 31, 2022 meeting, Alyeska indicated that the peak O<sub>2</sub> content in the low-pressure header (5.59%) was well below the safety actionable setpoint of 8% and therefore not a concern. However, the low-pressure header is a blend, or an “average” of headspace gases from 16 tanks (15 tanks at the time of the incident as Tank 94 was out of service). **A slight increase in the O<sub>2</sub> content of the header could represent a major O<sub>2</sub> excursion in one or more tanks.**
- Alyeska indicated that they were using the thief hatches as the monitoring point to define the O<sub>2</sub> content of each tank headspace to determine if it was safe for personnel to be on top of the tanks for snow clearing. This assumes that the gas quality at a thief hatch represents the vapor quality throughout the headspace. As noted above, crude headspace mixing is limited to passive diverters. The headspace is not homogeneous and testing at a single point should **not** be taken as representative of the entire headspace. Additionally, the thief hatch on the northern tanks (odd numbered tanks) is located very close to the high-pressure nozzle and between the high-pressure nozzle and the closest pallet. Therefore, the quality of the gases at those thief hatches will be very close to the quality of the gases in the high-pressure header, rather than representative of the bulk quality of the tank headspace gases.
- APSC should not solely be using the “olfactory test” to identify vapor leaks. The olfactory test relies on a technician’s ability to smell crude vapors while conducting rounds. That test is subjective and doesn’t account for the variability in the sense of smell from person to person, or the dangers in breathing in hydrocarbon vapors. Fixed hydrocarbon monitoring would provide more objective monitoring and detection when upsets occur.
- The existing fixed O<sub>2</sub> and flow monitoring points in the VMT vapor system are insufficient to allow APSC to understand the quality of the vapor space gases in any individual crude tank.

- APSC has not provided all of the available information on the flowrates and quality of each of the vapor streams in the VMT vapor system during the period of the greatest O<sub>2</sub> excursion in the low-pressure header. Without all of the pertinent data from the system, numerous assumptions must be made in order to estimate the average O<sub>2</sub> content in the headspaces of each of the 14 ETF crude tanks. Additional data, as requested from Alyeska in 2022 by PWSRCAC, would improve the accuracy of the gas quality estimates. Taku can update this study and report if APSC provides the requested data.

## 2.0 DETAILED DISCUSSION OF CONCERNS

**From an analysis of the information provided, Alyeska does not have sufficient instrumentation and monitoring equipment to accurately define what is occurring in each tank headspace. As such, Alyeska's report that the peak O<sub>2</sub> content in the low-pressure header was 5.59% during this upset, is not indicative of safe tank headspace gas quality nor does it provide an accurate representation of the true O<sub>2</sub> content within the headspace of any individual tank. The analysis below details the process for arriving at this conclusion, including a discussion of gas testing locations and gas mixing within the headspace.**

Alyeska indicated that the tanks are normally operated under a slight pressure. As depicted below, when a tank pallet is sheared off a tank operating at a slight pressure, the headspace is open to the atmosphere and hydrocarbon vapors migrate out of the tank resulting in fugitive emissions. These fugitive emissions are what Alyeska's technicians detected in their "olfactory test." When there is a leak and the tank is operating at a slight pressure, there will be a flammable region (depicted as yellow in Figure 1, below) in the emissions cloud. The size and magnitude of the flammable region will vary and be impacted by the leak rate, temperature, and outside wind speed.

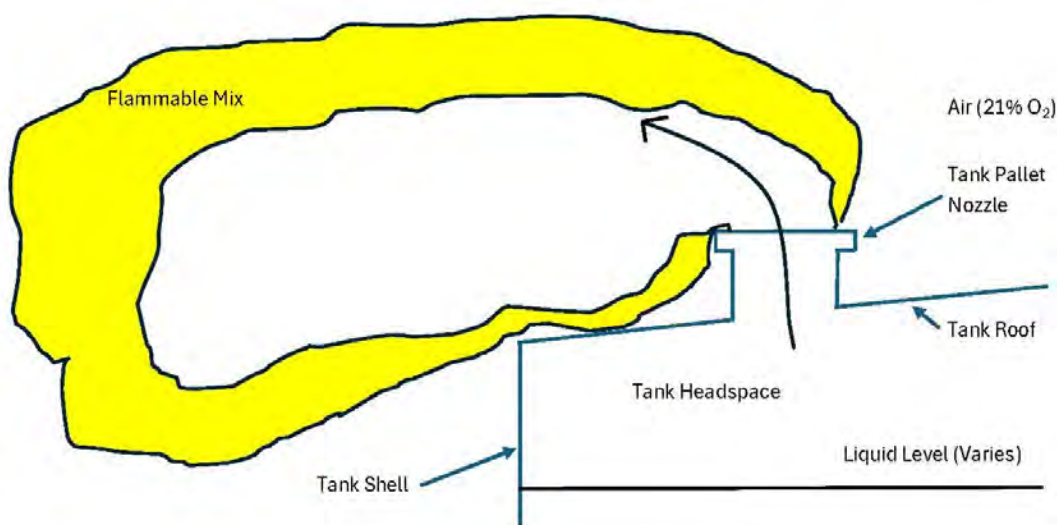


Figure 1 - Tank Emissions at Sheared Pallet (Operating under positive pressure)

Alyeska noted that when leaking pallets were discovered on a subject tank, the operating mode for that tank was shifted to operate with the headspace under a slight negative pressure (vacuum) to limit the release of hydrocarbon vapors to the atmosphere. Whenever there is a significant tank leak and the tank headspace is

under a slight vacuum, the air migrating into the tank will create zones where the O<sub>2</sub> concentration is high enough for a flammable/explosive mixture to exist (depicted as yellow in Figure 2 below). Again, this is due to air moving into the tank and the fact that the current mechanisms for headspace gas mixing do not result in a homogeneous gaseous mixture. The size and magnitude of that flammable region will be impacted by the leak rate, temperature, the amount of mixing in the headspace, the volume and age of the oil in the tank, and the magnitude of the operating negative pressure (vacuum). A significant leak in a single tank will also increase the bulk average O<sub>2</sub> content of that tank headspace.

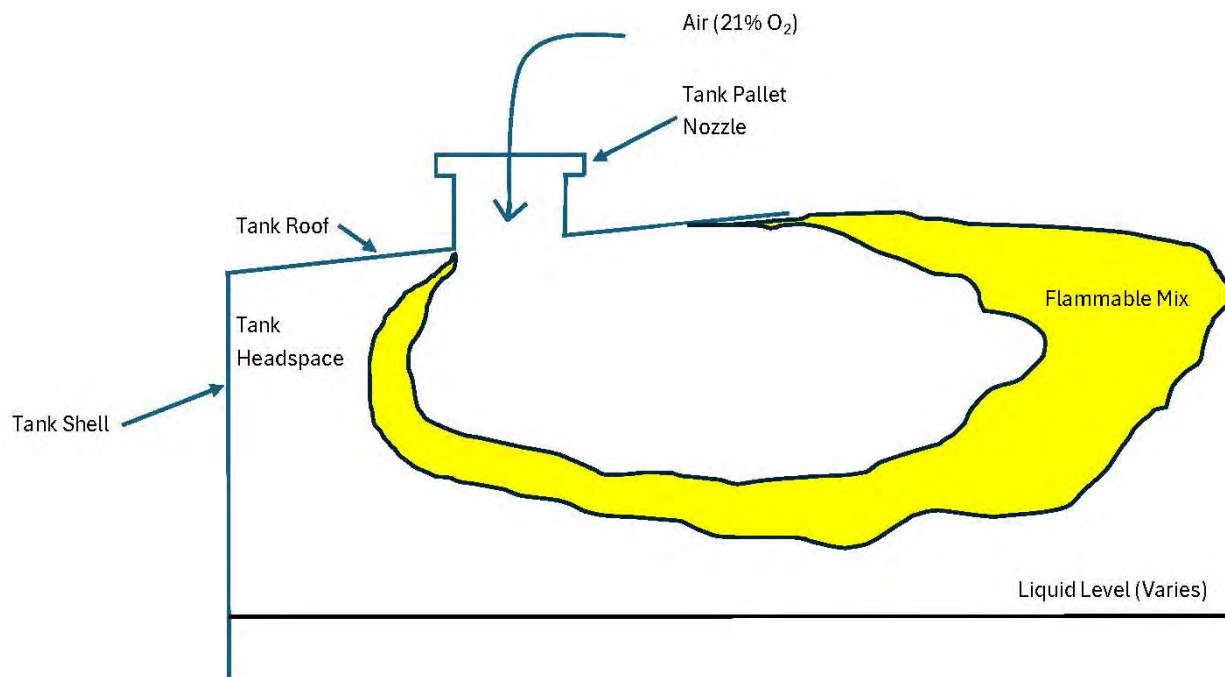


Figure 2 – Air Migration into a Sheared Pallet (Operating under negative pressure - vacuum)

The quality of gas mixing in the crude tank headspace has been a concern for Alyeska for many years. In the past, the close proximity of the high- and low-pressure header nozzles caused the gas flow in the headspace to “short circuit” as the gases move directly between the two nozzles rather than mix in the tank headspace, thus causing ineffective headspace vapor mixing. In early 2000, in recognition of these concerns, and to improve mixing and better mining of the headspace gases, Alyeska retrofitted gas diverters into some of the high- and low-pressure vapor nozzles. It is not known how many of the tanks have diverters installed or how much mixing energy is imparted by the diverters. However, given the size of the tanks, the tank headspaces cannot be assumed to be homogeneous, even with these diverters in place.

During the March 31, 2022 meeting, Alyeska reported that they used the tank thief hatches to sample headspace gases to determine if the tank headspaces were safe to put workers on top of the tanks for snow clearing. Reliance on testing at the thief hatches as the primary means of defining the headspace gas quality was imprudent as the thief hatches on the odd numbered tanks are located close to the high-pressure header between the high-pressure header and the closest pressure/vacuum pallets. That means that the

quality of the gases at the thief hatched on the odd numbered tanks will closely mirror the quality of the high-pressure header, not the bulk tank headspace.

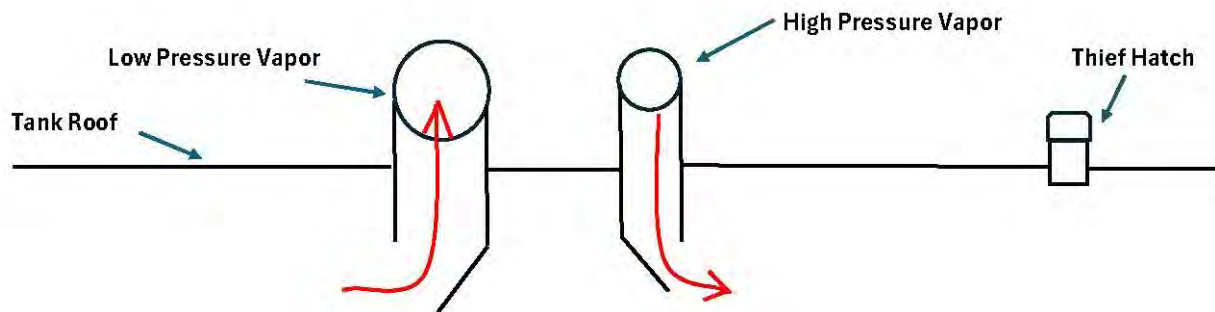


Figure 3 – Vapor Nozzle/Thief Hatch Proximities for Odd Numbered Crude Tanks

Figure 3 presents a basic sketch showing the inert (high pressure or inert) nozzle, the vent (low pressure outlet) nozzle, and the thief hatch for the seven northern ETF tanks (odd # tanks). As seen from this visual representation, based on the tank vapor nozzle locations, the orientation of the vapor diverters (if installed on a given tank), and the relative location of the thief hatch, gas readings at the thief hatch will be similar to the quality of the high-pressure header gases entering the tank rather than representing the average or bulk quality of the tank headspace.

The southern (even numbered tanks) are configured in a slightly different manner. The thief hatches are located very close to the low-pressure (vent) nozzle between the pallets and the low-pressure vapor nozzle. The quality of the gases at the thief hatches on the even numbered tanks is more likely to represent the gas quality in the tank vent header. However, it will not provide any indication of localized areas of flammable gases in the vicinity of the damaged pallets (in tanks operating at a slight vacuum).

During Feb/March 2022 upset, it is probable that any gas measurements that APSC collected at the thief hatches to define the headspace gas quality may have significantly underestimated the amount of oxygen in the tank headspaces. Conclusions drawn from those measurements likely caused Alyeska to underestimate the risk associated tank-top work and to miscommunicate the safety risks to tank farm workers.

Figure 4 shows the roof of Crude Oil Storage Tank 11, depicting the locations of the inlet and outlet nozzles, the thief hatch, the pressure vacuum pallets, and the vapor flow direction that would be expected if vapor diverters were installed (red arrows). In this configuration, as seen visually in the diagram, the headspace gases at the thief hatch will be similar to the quality of the high pressure (inert) gas than the bulk of average quality of the tank headspace. Gas testing collected at thief hatches on the northern tanks (odd # tanks) is very unlikely to include O<sub>2</sub> that enters the tank through damaged pressure vacuum pallets.

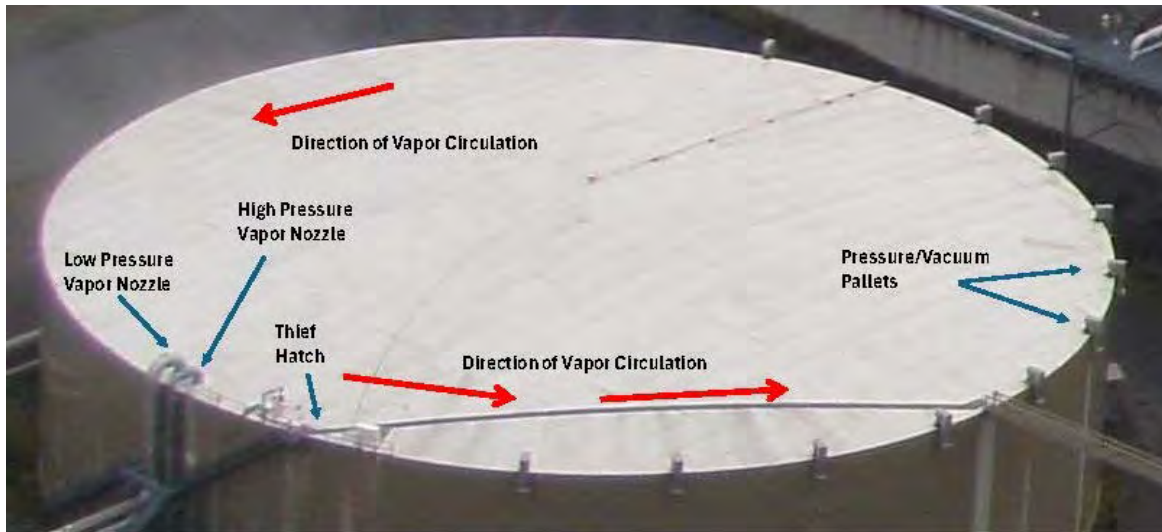


Figure 4 – Tank 11 Roof Appurtenances

## 3.0 DETAILED HEADSPACE ASSESSMENT

### 3.1 JUSTIFICATION FOR ASSESSMENT

The data that Alyeska collected at the thief hatches during the pressure vacuum pallet damage incident, did not represent the average bulk gas quality of the tank headspace and did not consider local flammable vapor areas that existed at significantly damaged pallets (in tanks operating at a slight vacuum). Likewise, the limited gas quality data available from fixed instrumentation in the vapor system represents a mixed average quality for all tanks and does not represent the gas quality in any individual tanks.

A comprehensive post-incident assessment should include consideration of all hazards that were present during the incident. The post incident investigation should define those hazards and determine if they were accurately communicated to the workers clearing the tanks. Further, a detailed post-incident assessment should include the development of the processes and instrumentation necessary to alleviate future similar risks to the greatest extent possible.

PWSRCAC has requested the post-incident investigation reports from APSC, which have not been provided to date. However, the communications between PWSRCAC and Alyeska suggest that Alyeska believes that they have fully defined the risks associated with the incident without assessing the flammability of the headspace gases during the incident.

The intent of this assessment was to utilize the data provided to the ADOL to better identify the conditions and risks associated with the tank vent damage. This assessment includes both an assessment of the likelihood of localized areas of flammable gas as well as an estimate of the average flammability of each of the crude tank headspaces during the peak O<sub>2</sub> excursion in the low-pressure header.

**Alyeska does not have sufficient instrumentation and monitoring equipment to accurately define what is occurring in each tank headspace. The equipment that they have in place to measure flowrate and O<sub>2</sub> concentration data is limited to a single point in the East Tank Farm. They should have the capability to measure the flow and quality of the gases from each tank. Without that information, they cannot define the risks to their workers and cannot define what specific actions are necessary to operate each tank safely during a system upset.**

Without additional data that APSC may have on hand, Taku was forced to make several assumptions to bridge data gaps caused by either the withholding of key data, or the lack of data due to insufficient instrumentation. It is probable that Alyeska has data that could be used in lieu of some of these assumptions. That additional information could be used to refine this assessment and better define the risks that were incurred during the plant upset.

## 3.2 ASSUMPTIONS AND DATA

### Key Assumptions

When making assumptions for this assessment, the assumptions were in a conservative manner and should not be viewed as a worse-case scenario. The following assumptions are based on the time that the oxygen content of the Low-Pressure Header peaked (3/17/2022, 12:13 p.m.):

- There was no flow in the balancing line between the High- and Low-Pressure Headers.
- There was no flow in line from Berth 4 separator (normally closed).
- There was no flow in the Compressor Recycle Line.
- Pallets with little to no damage were not leaking measurably.
- Tanks operating under a slight positive pressure at the time of the peak O<sub>2</sub> concentrations in the low-pressure header were not leaking O<sub>2</sub> into the vapor system.
- Oxygen flowing into the tanks operating at a slight pressure passed through the tank to the low-pressure nozzle and did not vent through the damaged pallets.
- Several tanks were operating at null pressure. This assessment assumed that the O<sub>2</sub> ingress at those tanks was similar to that of the tanks operating at a slight vacuum. This is a conservative approach as the tanks operating at a slight vacuum would logically be allowing more O<sub>2</sub> into the tank through each damaged pallet.
- Ballast Water Treatment (BWT) Tank 94 was not connected to the vapor system (out of service for repairs).
- The contents of the high pressure (HP) and low pressure (LP) headers were well mixed and relatively homogeneous at the locations of the existing monitors.
- This assessment assumes steady state operations for the purpose of estimating the quality of the tank headspace gases – data provided to Taku indicated that there were no major changes to the operating pressure (or vacuum) of any of the tanks in the hours preceding the incident.
- The flowrates in and out of Tank 93 were assumed to be approximately 1/15<sup>th</sup> of the total high- and low-pressure vapor flow to and from the tanks. The calculations were run varying the assumed fraction of the vapor flowrates (from 1/30<sup>th</sup> to 1/7<sup>th</sup>) of the total vapor flowrates. These changes did not significantly change the findings resulting from the model.
- Crude vapor flammability starts at about 10% O<sub>2</sub>. This value is impacted by several other parameters. However, anything less than 10% O<sub>2</sub> was considered non-flammable for the purpose of this study. Anything greater than 10% O<sub>2</sub> was considered potentially flammable.
- Air was leaking into significantly damaged pallets at a uniform rate per damaged pallet (for tanks not operating at a positive pressure).

## Key Data

The following key data was provided to the ADOL regarding conditions at 3/17/2022, 12:13 p.m., and was used as a basis for this analysis:

- Low Pressure Header O<sub>2</sub> Content: 5.57% (two readings, 5.55% & 5.59%. Avg 5.57%).
- BWT Low Pressure Vapor Header O<sub>2</sub> Content: 3.51% (two readings, 3.537% & 3.491%. Avg 3.51%).
- High Pressure Header O<sub>2</sub> Content: 4.45% (two readings, 4.436% & 4.61%. Avg 4.45%).
- Scrubber Outlet O<sub>2</sub> Content: 4.82%.
- Flue Gas Scrubber Flowrate: 126.0 MSCFH.
- Low Pressure Header Flowrate: 641.8 MSCFH.
- Ultimately, 12 significantly damaged pallets were discovered on Tanks 1, 2, 3, 4, 6, 10, 13, and 14. Damaged vents that were reported to have been blinded or plugged prior to 3/17/22 were assumed not to be contributing to the tank headspace oxygen content. Tanks 1 and 3 were reported to have been operating at a slight pressure during the excursion on 3/17. The damaged pallets on Tanks 1 and 3 were assumed not to be contributing to the elevated O<sub>2</sub> in the system at the time of peak O<sub>2</sub> concentration in the header.

## 3.3 LOW PRESSURE HEADER FLOWRATE CALCULATIONS

The flowrate into the compressors (641.8 MSCFH) is the sum of the flow from the LP header and the flue gas scrubber flow (126.0 MSCFH).

Therefore:

$$\text{The LP Header flowrate from the ETF \& BWT} = 641.8 \text{ MSCFH} - 126.0 \text{ MSCFH} = 515.8 \text{ MSCFH}$$

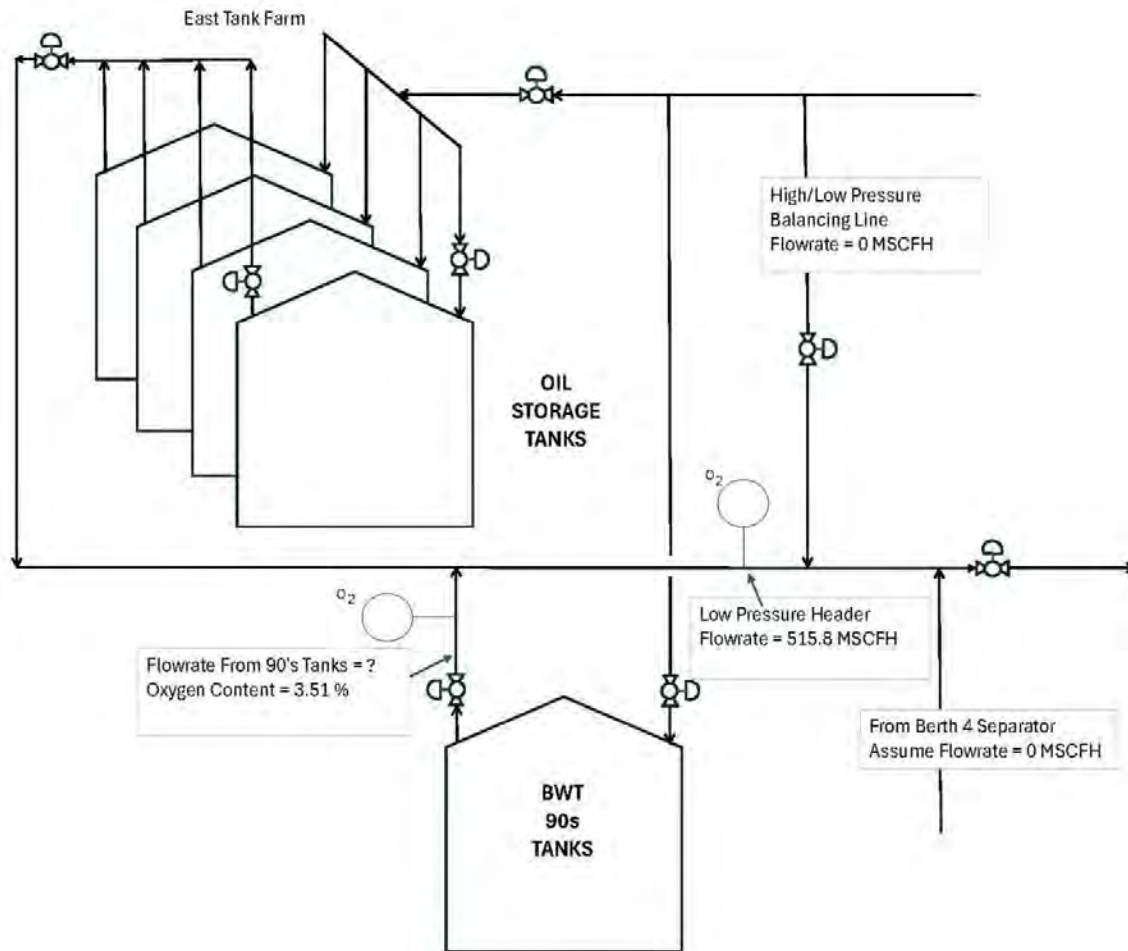


Figure 5 – LP Header Flow Diagram

### 3.4 BWT TANK 93 FLOWRATE CALCULATIONS

We can assume that the volume of oxygen into Tank 93 is the same as the volume of oxygen out of the tank. Further, during the incident, the vapor system was handling the vapor for 15 tanks. An initial assumption was made that 1/15<sup>th</sup> of the total low pressure header flow originated from Tank 93 (this assumption was tested by varying the fraction of the LP flow from Tank 93 from 1/7<sup>th</sup> of the total flow to 1/30<sup>th</sup> of the total flow, the nature of the findings did not measurably change).

From Section 3.3, the overall flow in the LP header from Tank 93 and the ETF crude tanks was approximately 515.8 MSCFH. Based on the assumption above, the LP gas flowrate from Tank 93 was 515.8/15 or 34.33 MSCFH.

We also know from the data provided that the O<sub>2</sub> content in the BWT LP header was 3.51%. We can assume that the HP O<sub>2</sub> flowrate into Tank 93 is equal to the LP O<sub>2</sub> flowrate out of Tank 93. Therefore, the O<sub>2</sub> flowrate out of Tank 93 was approximately 3.51% \* 34.33 MSCFH ≈ 1.2 MSCFH.

The HP vapors going into Tank 93 originate from the HP header. The O<sub>2</sub> content in the HP header was 4.45%. Therefore, the O<sub>2</sub> content of the HP vapors going into Tank 93 was 4.45%. Using the O<sub>2</sub> flowrate into Tank 93 and the % O<sub>2</sub> flowing into Tank 93, we can estimate the HP vapor flowrate into Tank 93.

% O<sub>2</sub> in Tank 93 HP header  $\approx$  (HP O<sub>2</sub> Flowrate into Tank 93/ HP Vapor Flowrate into Tank 93)\*100, rearranging

$$\begin{aligned}\text{HP Vapor Flowrate into Tank 93} &\approx \text{O}_2 \text{ flowrate into Tank 93/the \% O}_2 \text{ in the HP Header} \\ &\approx (1.2 \text{ MSCFH} / 4.45\%) * 100 \approx 27.1 \text{ MSCFH}\end{aligned}$$

Again, assuming that the HP vapor flow to the BWT tanks is 1/15<sup>th</sup> of the total flow, then the HP vapor flowrate into the ETF crude tanks was:

$$\begin{aligned}\text{HP Vapor flow to ETF Crude Tanks} &\approx 14 * 27.1 \text{ MSCFH} \approx 379 \text{ MSCFH} \\ \text{O}_2 \text{ Flowrate in the HP Header} &\approx 379 \text{ MSCFH} * 4.45\% \approx 16.9 \text{ MSCFH}\end{aligned}$$

### 3.5 ETF CRUDE TANK VAPOR FLOWRATE ESTIMATIONS

The LP vapor flow from the ETF crude tanks is approximately the difference between the total tank LP vapor flow and the LP vapor flow from Tank 93, or:

$$\text{LP vapor flow from ETF crude tanks} \approx 515.0 \text{ MSCFH} - 34.33 \text{ MSCFH} \approx 480.7 \text{ MSCFH}$$

The total O<sub>2</sub> flowrate from all crude tanks and from the BWT tank can be used to calculate the % O<sub>2</sub> from the ETF tanks by subtracting the O<sub>2</sub> flowrate through Tank 93, from the total O<sub>2</sub> flowrate from all tanks:

$$\text{Volumetric O}_2 \text{ LP Flow from the ETF crude tanks} \approx (5.57\% * 515.8 \text{ MSCFH}) - 1.2 \text{ MSCFH} \approx 27.5 \text{ MSCFH}$$

The O<sub>2</sub> flowrate in the low-pressure header was the sum of the O<sub>2</sub> flowing in from the high-pressure header, plus the O<sub>2</sub> leaking into the tanks at the damaged pallets. Or:

$$\text{Volumetric Flowrate of O}_2 \text{ into the tanks through damaged pallets} \approx 27.5 \text{ MSCFH} - 16.9 \text{ MSCFH} \approx 10.6 \text{ MSCFH}$$

Regardless of pallet damage, significant volumes of O<sub>2</sub> would not seep into the tanks that were operating normally with intact pallets and operating under a slight pressure. If a tank had damaged pallets and was operating under a slight pressure, hydrocarbon vapors would migrate out of the tank rather than air migrating in. Two of the tanks with noted pallet damage (Tanks 1 and 3) were operating with their headspaces under pressure on March 17, and would have been leaking hydrocarbon out of the tank rather than allowing air to seep into the headspace. For the purposes of this assessment, we assumed that these tanks were not contributing to the elevated O<sub>2</sub> in the low-pressure header. To maintain a conservative approach to the assessment, we did not attempt to account for the O<sub>2</sub> leaking out of Tanks 1 and 3 at the damaged pallets.

Ultimately, it was determined that there were 12 significantly damaged pressure vacuum pallets on the crude tanks after the snow was removed from the tank roofs. For the sake of this study, any pallets that were reported to have been blinded or plugged prior to 3/17/22 were assumed to not be leaking at the time of the O<sub>2</sub> excursion. There were six pallets located on five different tanks that were identified with significantly damaged but had not yet been repaired by 3/17/22. The assessment assumed that all of the errant O<sub>2</sub> in the system was being introduced through these five pallets. Again, additional information from Alyeska that would allow for improved assumptions was requested nearly 24 months ago but has still not been received.

We assumed that the five significantly damaged pallets each allowed the same volume of O<sub>2</sub> to migrate into the tanks. On that basis, the volume of O<sub>2</sub> ingress at each significantly damaged pallet was approximated by:

$$10.6 \text{ MSCFH} / 5 \text{ pallets} \approx 2.12 \text{ MSCFH}$$

We were provided the positions for the vent and inert vapor valves on each tank on March 17 during the O<sub>2</sub> excursion. However, the inert and vent valve positions did not align with the pressure/vacuum operating

mode of the ETF tanks. Further attempts to use the vent valve positions to estimate the percentage of vapor flow to each crude tank resulted in obvious errors. Since the vent valve positions did not align with the tank pressure/vacuum operating mode, it is assumed that the vent and inert valve position data was in error, the valve positions were dynamic (being changed frequently) or the tank levels were dynamic.

Since the inert and vent valve position data appeared to have inherent flaws, this study assumed that vapor flowrates into and out of each of the crude tanks were the same. The average O<sub>2</sub> ingress rate through each significantly damaged pallet was then used to calculate the average O<sub>2</sub> content of each crude tank headspace,

A summary of the results of these findings is provided in Appendix A.

## 4.0 SUMMARY/FINDINGS

### 4.1 GENERAL

This assessment was undertaken to determine if the headspaces may have been flammable during this period that the tanks had damaged pallets. This study was intended to assess the potential for localized areas of flammable tank headspace gases and to estimate the bulk oxygen levels in the VMT crude tanks at the time of the highest levels of oxygen in the low-pressure header.

In Government Letter No. 50082 (to the ADOL), APSC indicated that the highest level of oxygen measured in the low-pressure header was 5.59% at 12:13 p.m. on March 17, 2022. During the March 31, 2022 meeting, they followed this with a discussion that indicated that this oxygen level was below 8% and was therefore not an actionable level that would trigger their automated Safety System.

Applying this “safe” actionable level across the tank farm only makes sense if one assumes that the gas chemistry in each tank is the same and that there are no localized areas of high O<sub>2</sub> concentrations. That may be a valid assumption during normal operating conditions. However, during abnormal conditions such as those experienced in February and March of 2022, that assumption is invalid and could have resulted in a catastrophic incident.

**Alyeska should have proceeded under the understanding that the O<sub>2</sub> concentrations in the tank headspaces varied significantly from tank-to-tank and noted that a slight increase in the O<sub>2</sub> content of the low-pressure header may be indicative of a major excursion in the O<sub>2</sub> content of the headspace in one or more tanks.**

**A comprehensive post-accident assessment for this incident should define the actual risks that were incurred. That should include an assessment of whether the tank headspaces were flammable during the damage occurrence and ensuing response. If Alyeska provides the information that has been requested, Taku will update this study to ensure that we are accurately representing the tank headspace quality at the time of the incident.**

### 4.2 FINDINGS

- The O<sub>2</sub> levels estimated in this study represent an average concentration in each headspace. That should not be misinterpreted to suggest that the tanks with lower O<sub>2</sub> concentrations were entirely safe. **Because the headspaces are not well mixed, there were areas of combustible gas concentrations in all of the tanks that were operating at a slight vacuum and had major unrepaired pallet damage.** Tanks 1, 2, 3, 4, 6, 10, 13, and 14 had major pallet damage during the 2022 incidents.

- At the time of the highest O<sub>2</sub> content in the low-pressure header, the bulk or average O<sub>2</sub> levels on one or more of the crude tank headspaces were estimated to be within the flammable range.
- Alyeska has not provided sufficient data to calculate the exact headspace concentrations in each tank. The results provided in Appendix A are estimates based on the limited information that Alyeska has provided. If Alyeska provided the additional information requested, more accurate results could be achieved.
- The instrumentation for vapor flowrates and O<sub>2</sub> monitoring in the vapor system (including the headspace of the tanks) is limited and insufficient to allow operators to manage the system in the event of abnormal conditions such as the 2022 pallet damage incident.
- The O<sub>2</sub> concentration in the low-pressure header peaked at 5.59% on March 17, 2022, at 12:13 p.m. Alyeska noted that the system is set to shut down at 8% O<sub>2</sub> and that at its peak, the O<sub>2</sub> concentration in the header was well below that point. This suggests that during the upset, they did not understand that tanks with significantly damaged pallets and operating at a vacuum had areas of flammable gas mixtures in the headspace and that some of the tanks may have had bulk gas qualities that were fully within the flammable range.
- The O<sub>2</sub> monitoring and response system seems to be focused on the safety and protection of the powerplant and vapor management system but not on the safety and protection of the crude tanks.
- Alyeska indicated that they had used the tank thief hatches for access to monitor the headspace of each tank to define the O<sub>2</sub> concentrations of the tank headspaces. The use of a thief hatches to determine the quality of an entire headspace inaccurately depicts the headspace gas quality. In this situation, the use of gas quality measurements collected at thief hatches likely underestimated the O<sub>2</sub> content in the tank headspace and resulted in miscommunicating the job hazards to the tank-top workers.

### 4.3 OPPORTUNITIES TO IMPROVE THIS STUDY

There are a number of gaps in the data and information provided by Alyeska. In order to proceed with this study, a number of assumptions were made to accommodate for the limited data provided. Alyeska should cooperate with PWSRCAC providing additional information in order to improve this model. The additional data that should be provided includes:

- The BWT header gas flowrates or vapor valve positions for Tank 93.
- Confirmation that the flow in balancing line between the High- and Low-Pressure Headers was 0 or provide the flowrate and gas quality data for that line.
- Confirmation that there was no flow in line from Berth 4 separator (no tank loading).
- Confirmation that there was no flow in Compressor Recycle Line or provide the flowrate and gas quality data for that line.
- Confirmation that instrumentation for monitoring O<sub>2</sub> content in the ETF vapor system (including the headspace of the tanks) is limited to a single point in each ETF header (high and low pressure).
- Clarification of the relationship between the inert/vent valve positions, and the tank headspace operating pressure.

Once this additional data is provided, Taku is willing to revise the assessment to reflect the additional data received.

## APPENDIX A

# Summary of Estimated Tank Headspace Bulk Oxygen Levels

	Tank #													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
HP Flow Into Tank (MSCFH)	27.1	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3
O <sub>2</sub> into Each Tank thru Inert Line (MSCFH)	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
# of Unrepaired Significantly Damaged Pallets	1	1	0	2	0	0	0	0	0	1	0	0	1	0
Operating Mode	Press	Vac	Press	Vac	Null	Null	Null	Null	Press	Vac	Vac	Vac	Vac	Vac
# of Significantly Damaged Pallets Leaking O <sub>2</sub> into tank*	0	1	0	2	0	0	0	0	0	1	0	0	1	0
Estimated O <sub>2</sub> into Tank thru Damaged Pallets (MSCFH)	0.00	2.12	0.00	4.24	0.00	0.00	0.00	0.00	0.00	2.12	0.00	0.00	2.12	0.00
Estimated LP Flow from Each Tank (MSCFH)	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3
Estimated Total O <sub>2</sub> out of Each Tank (MSCFH)	1.21	3.33	1.21	5.45	1.21	1.21	1.21	1.21	1.21	3.33	1.21	1.21	3.33	1.21
Estimated Bulk Percent of O <sub>2</sub> out of Each Tank	3.5%	9.7%	3.5%	15.9%	3.5%	3.5%	3.5%	3.5%	3.5%	9.7%	3.5%	3.5%	9.7%	3.5%

\* On 3/17/22

**Briefing for PWSRCAC Board of Directors – January 2025**

**ACTION ITEM**

**Sponsor:** Hans Odegard and Ashlee Hamilton  
**Project number and name or topic:** Approval of Anchorage Office Move

1. **Description of agenda item:** The Board of Directors is asked to authorize the Executive Director to sign a lease with Michael Investments LLC to relocate the Anchorage office location to the RAM Building, 2525 Gambell Street, Suite 305, Anchorage, AK 99503. The current lease for the Anchorage office at 3709 Spenard Road, Suite 100, expires on June 30, 2025. Notice of lease termination or election to exercise the 2nd 1-year lease extension of our current lease must be given by March 31, 2025, with the rate continuing at \$5,950.95 per month. Note that this location is considered Class B commercial property, and is not a first class office building.

The proposed new lease's initial term is for a period of 62 months, commencing on May 1, 2025, and ending on June 30, 2030. Rent commencement is set for July 1, 2025. The monthly base rent will be \$2.00 per rentable square foot (approximately 4,037 rentable square feet) and will increase by 3% annually. The table below shows the base rental costs at the RAM Building:

			<b>Base Rent</b>	
<b>Lease Year</b>			<b>per RSF</b>	<b>Monthly Rent</b>
May 1, 2025	to	June 30, 2025	\$ -	\$ -
July 1, 2025	to	June 30, 2026	\$ 2.00	\$ 8,074.00
July 1, 2026	to	June 30, 2027	\$ 2.06	\$ 8,316.22
July 1, 2027	to	June 30, 2028	\$ 2.12	\$ 8,558.44
July 1, 2028	to	June 30, 2029	\$ 2.18	\$ 8,800.66
July 1, 2029	to	June 30, 2030	\$ 2.25	\$ 9,083.25

Regarding the financial details of the new location, the landlord will provide 2 months of abated rent. A Security Deposit of \$9,083.25 is required, and the landlord will be asking for \$17,157.25, representing July 2025 rent and Security Deposit. PWSRCAC will be receiving rent-free occupancy from the Commencement date through June 30, 2025. Commencing in 2026, the Council will also be required to pay pass-through costs, which are additional expenses including the proportionate share of any increase in the landlord's taxes and operational expenses compared to the base year (2025). The landlord is responsible for providing and paying for various utilities and services, including landscaping, electric, water, sewer, telephone lines, gas, elevator, janitorial, exterior grounds maintenance, HVAC, miscellaneous supplies, security, premises management, and other services required by the lease agreement consistent with first-class office buildings in the area.

Notwithstanding any other provisions, the landlord shall not collect more than 100% of taxes or operational expenses, shall not recover any cost item more than once, and shall

## REVISED BRIEFING Approval of Anchorage Office Lease and Relocation 4-4

not include in operational expenses any costs exceeding those reasonably incurred by prudent operators of similar first-class office buildings in the area. If the combined taxes and operational expenses in 2026 or later exceed the base year, the tenant shall pay their proportionate share of the increase, based on the higher of actual occupancy or 95% building occupancy. The tenant's proportionate share is calculated as the fraction of the leased space's rentable square footage compared to the building's total rentable square footage.

2. **Why is this item important to PWSRCAC:** In order to operate efficiently, it is necessary for PWSRCAC to have adequate and cost-effective office space that includes sufficient storage for our historical documents. It is also important that the space be safe and secure for staff and visitors, and that it be located in an easily accessible part of Anchorage.

3. **Previous actions taken by the Board on this item:**

<u>Meeting</u>	<u>Date</u>	<u>Action</u>
Board	1/23/2014	Authorized staff to extend the current lease for five (5) years for the Anchorage office at 3709 Spenard Road at a not-to-exceed five year amount of \$353,772.
Board	5/29/2019	Authorized the Executive Director to sign a five-year lease extension with two one-year renewal options for the Anchorage office located at 3709 Spenard Road. The rent is \$5,950.95 per month or \$357,057 over the five year term.
Board	5/2/2024	Authorized the Executive Director to sign a one-year lease extension for the Anchorage office located at 3709 Spenard Road. The monthly rent is \$5,950.95, totaling \$71,411.40 over the one-year term.

4. **Summary of policy, issues, support, or opposition:** Not applicable.

5. **Committee Recommendation:** The Finance Committee has discussed the possibility of terminating the current lease at the end of its term for the Anchorage office and relocating to a new office and is in full support of a move. However, the Finance Committee will be meeting on January 14 to review the detail and costs for the 2525 Gambell Street, Suite 305 location, and a Finance Committee recommendation will be provided at the meeting. Staff is confident that this location, which was identified with the assistance of our real estate agent, Sam Steele, at Jack White Real Estate, fulfills all of our requirements in terms of location, safety, security, storage, and layout.

6. **Relationship to LRP and Budget:** The rental rate for our Anchorage office will increase by over \$2,000 per month, which will be accounted for in our FY2026 budget. To cover moving expenses, we currently have \$65,000 allocated in the Anchorage General and Administrative Budget (1050) for moving and relocation, which is a carryover from FY2024.

7. **Action Requested of the Board of Directors:** Transfer \$18,000 from contingency to 1050 – General & Administrative – Anchorage for the security deposit and first month rent, and authorize the Executive Director to sign a lease with Michael Investments LLC for a new Anchorage office location at the RAM Building, 2525 Gambell Street, Suite 305, commencing on May 1, 2025 in a not-to-exceed amount of \$533,989 over the five year term

**REVISED BRIEFING** Approval of Anchorage Office Lease and Relocation 4-4

plus any pass-through costs, and to terminate our current lease at 3709 Spenard Road, Suite 100 by the March 31, 2025 deadline.

Please note: total rent amount could increase slightly due to pass-through costs required per the lease.

8. **Alternatives:** We could execute the 2nd remaining 1-year lease extension option at our current location.

9. **Attachments:** Proposed office Lease, including floor plan, between Michael, Investments, LLC and PWSRCAC provided to Board members, only.

## Briefing for PWSRCAC Board of Directors – January 2025

**ACTION ITEM**

**Sponsor:** Danielle Verna and the Scientific Advisory Committee

**Project number and name or topic:** 9510 - Long-Term Environmental Monitoring Program

1. **Description of agenda item:** The Board is being asked to accept the 2024 Summary Report and Technical Supplement for the Council's Long-Term Environmental Monitoring Program (LTEMP) by Dr. Morgan Bender of Fjord & Fish Sciences, both dated December 2024. The report and technical supplement provide data and results from the 2024 sampling excursions in Port Valdez and the northern Gulf of Alaska coast for LTEMP, now in its 31<sup>st</sup> year.

The Board is also being asked to accept the 2024 Sediment Metals Report, a pilot study of LTEMP, by Dr. Morgan Bender of Fjord & Fish Sciences, dated December 2024. The report provides a summary of 23 metals analyzed in sediments collected adjacent to the Valdez Marine Terminal and Gold Creek reference site.

2. **Why is this item important to PWSRCAC:** The Oil Pollution Act of 1990 directs PWSRCAC to "devise and manage a comprehensive program of monitoring the environmental impacts of the operations of terminal facilities and crude oil tankers while operating in Prince William Sound" – LTEMP is designed to address this directive. LTEMP results are used to assess the environmental impacts of the Valdez Marine Terminal and the crude oil tankers operating in Prince William Sound, including the long-term impacts of the Exxon Valdez oil spill.

3. **Previous actions taken by the Board on this item:** The Long-Term Environmental Monitoring Program has been conducted by PWSRCAC since 1993, and many actions have been taken by the Board on this item since that time. In the interest of providing recent pertinent information, only the last five years of actions related to LTEMP are presented below. All historic actions pertaining to this agenda item are available for review upon request (for more information contact Danielle Verna).

<u>Meeting</u>	<u>Date</u>	<u>Action</u>
Board	5/2/2019	Authorized contract negotiations with Payne Environmental Consultants for sampling and analytical report work on mussels and sediments to be performed under LTEMP for FY20, at an amount not to exceed \$65,866; and authorized contract negotiations with Newfields Environmental Forensics Practice for analytical laboratory work and sample storage to be performed under LTEMP for FY20 at an amount not to exceed \$28,506. Authorized contract negotiations with Oregon State University for passive sample device purchase and analytical laboratory work on passive sampling devices to be performed under LTEMP for FY20, at an amount not to exceed \$20,590; and authorized contract work to commence prior to the start of FY20, as approximately \$20,000 of these funds will need to be expended in May and June 2019 because of the supply prerequisites and sampling timing.

## Report Acceptance: 2024 LTEMP 4-5

Board	9/19/2019	Accepted the report titled "Long Term Environmental Monitoring Program: 2018 Sampling Results and Interpretations" by Dr. James R. Payne and William B. Driskell, dated July 2019 as meeting the terms of the contract and for distribution to the public.
Board	5/7/2020	Accepted the report titled "Long-Term Environmental Program: 2019 Sampling Results and Interpretations," by Dr. James Payne and William B. Driskell, dated March 2020, as meeting the terms and conditions of contract number 951.20.04, and for distribution to the public.
Board	5/21/2020	Approved the following: Authorizing a contract negotiation with Payne Environmental Consultants Inc., for work to be performed under LTEMP, at an amount not to exceed \$115,064. Authorizing a contract negotiation with Newfields Environmental Forensics Practice, for work to be performed under LTEMP, at an amount not to exceed \$95,807. Authorizing a contract negotiation with the United States Geological Survey, for work to be performed under LTEMP, at an amount not to exceed \$65,371. Authorizing a contract negotiation with Oregon State University, for work to be performed under LTEMP, at an amount not to exceed \$22,030. Authorizing a contract work to commence prior to the start of FY2021, as approximately \$33,000 of these funds will need to be expended in May and June 2020.
Board	5/6/2021	Accepted the reports titled "Long Term Environmental Monitoring Program: 2020 Sampling Results & Interpretations," by Dr. James R. Payne and William Driskell, dated March 2021 as meeting the terms and conditions of contract 951.21.04, and for distribution to the public.
Board	5/21/2021	Authorized individual contracts with NewFields Environmental Forensics Practice, Oregon State University, and the USGS with the aggregate total not to exceed the amount approved in the final FY2022 LTEMP budget (project #9510) for contract expenses, and delegated authority to the Executive Director to enter into individual contracts with the aforementioned consultants; and authorized that the contract work to commence prior to the start of FY2022 as approximately \$30,000 of these funds will need to be expended in May and June 2021.
Board	1/27/2022	Authorized a budget modification, adding \$53,880 to Project 9510-Long-Term Environmental Monitoring Program; and authorized a contract negotiation with Owl Ridge Natural Resource Consultants, to complete the LTEMP scope of work in RFP 951.21.06, and with Payne Environmental Consultants, to support Owl Ridge's work, at a total aggregate cost not to exceed \$77,000.
Board	6/21/2022	Approved an FY2023 budget modification, adding \$6,478 to project #9510 – Long-Term Environmental Monitoring Program, for contract expenses; and, approved a negotiation of a contract change order, for contract #951.22.06, with Owl Ridge Natural Resource Consultants, adding \$6,478 for compensation to archive the 1993-2021 LTLEMP data in the Alaska Ocean Observing System.
Board	1/26/2023	Authorized an FY2023 budget modification from the contingency fund to project #9510 – Long Term Environmental Monitoring Program adding \$836 for contract expenses and approval of negotiation of a contract change order, for contract #951.22.06, with Owl Ridge Natural Resource Consultants, adding \$5,058 for compensation to archive the 1993-2021 LTEMP data in the Alaska Ocean Observing System and extending the term of the contract to March 31, 2023. [Note: This change order would increase the total contract amount to \$68,007.]
Board	5/4/2023	Approved the following: a) authorization of individual contracts with Alpha Analytical and Owl Ridge Natural Resource Consultants, Inc. with the aggregate total not to exceed the amount approved in the final FY2024 LTEMP budget (Project #9510) for contract expenses, and b) authorization of contract work to commence prior to the start of the 2024 fiscal year to accommodate timing considerations and purchasing needs. It is estimated that up to \$15,000 of the above contract work may be performed before June 30, 2023.

## Report Acceptance: 2024 LTEMP 4-5

Board            9/19/2024      Authorized a budget modification in the amount of \$6,006 from the contingency fund to Project 9510 in the FY2025 budget and authorization for the Executive Director to carry out a corresponding change order to increase Contract 9510.25.06 with Fjord & Fish Sciences in an amount not to exceed \$61,731.

4.      **Summary of policy, issues, support, or opposition:** None.

5.      **Committee Recommendation:** The Scientific Advisory Committee has reviewed the summary report, technical supplement, and the metals report, and recommended the Board accept the material as final, via email poll in December 2024.

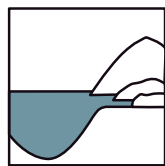
6.      **Relationship to LRP and Budget:** Work associated with this project was included in the FY2025 budget under contract 9510.25.06 in an amount not to exceed \$61,731.

7.      **Action Requested of the Board of Directors:** Accept the reports titled "Long-Term Environmental Monitoring Program 2024 Summary Report," "Long-Term Environmental Monitoring Program 2024 Technical Supplement," and "Long-Term Environmental Monitoring Program 2024 Sediment Metals Report" by Morgan Bender of Fjord & Fish Sciences dated December 2024, as meeting the terms and conditions of contract number 9510.25.06, and for distribution to the public.

8.      **Alternatives:** None.

9.      **Attachments:**

- A) Long-Term Environmental Monitoring Program 2024 Summary Report
- B) Long-Term Environmental Monitoring Program 2024 Technical Supplement
- C) Long-Term Environmental Monitoring Program 2024 Sediment Metals Report



fjord & fish  
sciences

December 2024

# Final

## 2024 Summary Report

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### Long-Term Environmental Monitoring Program

#### **PREPARED FOR**

Prince William Sound Regional Citizens' Advisory Council  
3709 Spenard Road, Suite 100  
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#### **PRESENTED BY**

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"The opinions expressed in this PWSRCAC commissioned report are not necessarily those of PWSRCAC. PWSRCAC Contract #9510.25.06."

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Acronyms and Abbreviations

ADEC.....	Alaska Department of Environmental Conservation
ANS .....	Alaska North Slope
BWTF .....	Ballast Water Treatment Facility
EPA.....	U.S. Environmental Protection Agency
EVOS.....	Exxon Valdez Oil Spill
LTEMP.....	Long-Term Environmental Monitoring Program
NOAA.....	National Oceanic and Atmospheric Administration
PAHs .....	Polycyclic aromatic hydrocarbons
PPB (or ng/g)....	Parts Per Billion (or nanograms per gram)
PWSRCAC .....	Prince William Sound Regional Citizens' Advisory Council
rSTD .....	Relative Standard Deviation

## 1. Abstract

Following the 1989 Exxon Valdez oil spill, concerned citizens and congressional legislation established the Prince William Sound Regional Citizens' Advisory Council (Council). The Council's mission is, citizens promoting the environmentally safe operation of the Valdez Marine Terminal and associated oil tanker activities within the spill-affected area. Since 1993, annual monitoring of marine sediments and intertidal blue mussels (*Mytilus trossulus*) has been conducted, focusing on polycyclic aromatic hydrocarbons, saturated hydrocarbons, and petroleum geochemical biomarkers essential for oil spill forensics. Sampling sites include areas with current oil tanker activities (e.g., loading, anchoring, transport routes), previously oiled sites from the Exxon Valdez spill, and reference locations with varying hydrocarbon sources.

Over the past 31 years of the Council's Long-Term Environmental Monitoring Program (LTEMP), the data have shown fluctuating hydrocarbon levels in sediments and mussels, with some measurements indicating toxic concentrations. Monitoring in the last two decades has generally recorded low levels of hydrocarbons. However, localized spikes—such as from the 2020 spill at the Valdez Marine Terminal—indicate small-scale oil releases. Low levels of petroleum hydrocarbons, traceable to Alaska North Slope crude oil, have been detected in marine sediments near the Valdez Marine Terminal. However, pyrogenic compounds from combustion processes are also prevalent. Similarly, in recent years, passive water sampling in Port Valdez and mussel sampling across Prince William Sound and the North Gulf of Alaska indicate low toxic hydrocarbon levels. An accompanying pilot study on metal accumulation in sediment samples revealed four metals—aluminum, copper, iron, and vanadium—that exceeded protective sediment quality guidelines and are significantly elevated in the terminal sediments compared to the Gold Creek reference site.

This extensive dataset contains over 280,000 accredited chemical measurements from sediments, mussels, and water collected at numerous remote and rural sites on the traditional lands and waters of the Chugach, Eyak, and Alutiiq/Sugpiaq peoples. This program provides valuable information about temporal trends in petroleum hydrocarbon contamination in the region and baseline data critical for detecting and monitoring lingering contamination, impacts from current activities, and potential future releases. Despite its breadth and annual analytical review focusing on hydrocarbon forensics and concentrations of concern, the dataset remains underutilized. It holds significant potential for further exploration, offering insights into environmental change, hydrocarbon weathering, fate and transport processes, lingering oil, and the biological impacts of hydrocarbons. The utility of the LTEMP in maintaining a robust baseline hydrocarbon database continues to be critical in light of rapid environmental change and continued petroleum pollution risk.

## 2. Introduction

The Long-Term Environmental Monitoring Program (LTEMP), managed by the Prince William Sound Regional Citizens' Advisory Council (PWSRCAC), is in its 31<sup>st</sup> year of monitoring hydrocarbons after the Exxon Valdez oil spill (EVOS) in 1989. Through LTEMP, we aim to determine the source of hydrocarbons and the potential adverse effects on the ecosystem from Alyeska Pipeline Service Company's Valdez Marine Terminal (terminal) and tanker activity. These data have been insightful in understanding the influence of terminal and non-terminal sources of hydrocarbons and environmental factors on hydrocarbon dynamics across Prince William Sound and the Gulf of Alaska.

Hydrocarbons are a highly diverse group of compounds that comprise the bulk of petroleum products like crude oil, fuel, and maritime products like hydraulic and motor oil. However, hydrocarbons are also readily created by marine and terrestrial plants, locked up in organic sediments and rocks, and produced by combustion. Hydrocarbons in the environment undergo weathering, including dissolution, evaporation, ultraviolet degradation, and microbial degradation. Weathering changes hydrocarbons' physical and chemical properties, altering their relative abundance, environmental fate, transport, and toxic potential. Polycyclic aromatic hydrocarbons (PAHs) are a group of hydrocarbons in oil with varying numbers of benzene rings that are relatively resistant to degradation and toxic to living organisms. This group of chemicals tends to adsorb rapidly on suspended materials and sediments and accumulate in biological tissues once released into the marine environment.

As a group, PAHs comprise hundreds of compounds, each with its degree of toxicity, and their mixtures can exhibit a wide range of toxicities. Specific hydrocarbons, patterns, and diagnostic compounds (i.e., (petrogeo)chemical biomarkers) aid in identifying specific hydrocarbon sources and indicate their weathering history (e.g., degree of weathering, degradation, dissolution). PAH profiles are used to identify petrogenic (of crude oil origin) or pyrogenic (of combustion origin) based on well-established pattern changes (e.g., on the ratio of parent and alkylated compounds). Chemical biomarkers, comprising the hopanes, steranes, terpenes, triaromatic, and monoaromatic steroids, are much more resistant to degrading in the environment and thus used to confirm sources (e.g., between different crude oils) even when the PAH patterns are heavily weathered. Saturated hydrocarbons (n-alkanes) are used to identify naturally occurring plant hydrocarbons and determine the degree of weathering and biodegradation.

While many aquatic organisms like fish can metabolize PAHs, marine invertebrates, such as Pacific blue mussels, are less able to metabolize these compounds efficiently. Pacific blue mussels also remain sedentary in a fixed location and filter particles from their immediate surroundings, and therefore serve as efficient natural samplers and indicators of overall environmental PAH exposure (Neff & Burns, 1996). Toxic responses to PAHs in aquatic

organisms include inhibiting reproduction, developmental effects, tissue damage, cellular stress, oxidative stress, damage to genetic material, and mortality. While the body of knowledge on the adverse effects of petroleum exposure is immense, specifics regarding PAH mixtures, exposure routes, duration and magnitude, species and life stages exposed, and other environmental factors that may act synergistically on organisms challenge the predictive ability of any hydrocarbon study and necessitate the continued monitoring efforts of LTEMP.

The ubiquity of hydrocarbons and hydrocarbon sources necessitates using multiple matrices to understand the source, environmental fate, and potential ecotoxicological effects. Marine sediments, which accumulate hydrocarbons, petrogeochemical biomarkers, and saturated hydrocarbons, are appropriate for source analysis and risk assessment. Sources investigated for the present study are those associated with terminal operations, including Alaska North Slope (ANS) crude oil pumped through the trans-Alaska pipeline and loaded into tankers at the terminal. Sessile filter-feeding organisms like intertidal blue mussels reflect the chemicals that bioaccumulate in local, native biota and can be an ecotoxicological risk. Passive sampling devices measure the dissolved, bioavailable fraction of hydrocarbons, which may pose a risk to organisms and the ecosystem.

The following study presents the 2024 results from the LTEMP and aims to determine the following:

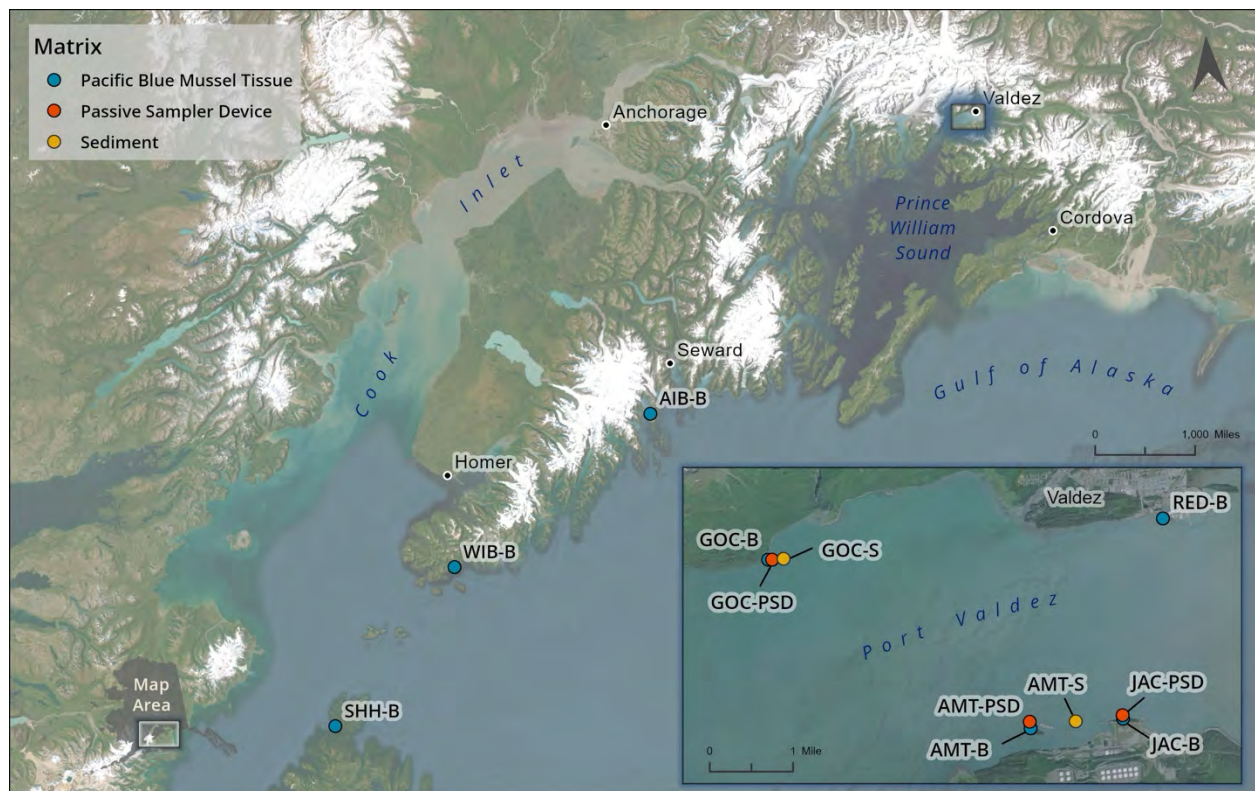
- The extent, if any, that the terminal and associated tankers' hydrocarbon fingerprint is present in 2024 samples with varying ranges from the terminal.
- The potential ecotoxicological risk posed by the measured hydrocarbon contribution from the terminal and tankers.
- The historical trends, ecotoxicological risk, and hydrocarbon fingerprint from mussels collected from extended sampling sites across greater Prince William Sound in 2024.
- The ecotoxicological relevance of these results, given other factors (e.g., environmental or anthropogenic) that may influence hydrocarbon presence and composition in 2024 samples.
- Recommendations for future monitoring of petroleum hydrocarbons at the terminal and in Prince William Sound.

### 3. Briefly, The Methods

Sediment, passive sampling device, and Pacific blue mussel tissue samples were collected in June of 2024 from annual monitoring stations in Port Valdez and those stations that were missed in the greater Prince William Sound and North Gulf of Alaska in 2023. The sampling program investigated three matrices: sediment, Pacific blue mussels, and seawater. Sediments were sampled at Alyeska's Valdez Marine Terminal and Gold Creek

(Figure 1). Pacific blue mussel samples were taken from four sites around the Port of Valdez with a focus on the terminal – Alyeska’s Valdez Marine Terminal (also referred to as Saw Island), Jackson Point, Gold Creek, and Valdez Small Boat Harbor entrance (RED - a site that is chemically different from the ANS terminal source signature and currently acts as a high human use, non-ANS reference site). Three Gulf of Alaska stations (i.e., Aialik Bay, Windy Bay, and Shuyak Harbor) planned to be included in the five-year survey in 2023 were instead included in the 2024 campaign due to weather preventing sampling in 2023. These sites are EVOS-oiled sites. Water was sampled with passive sampling devices at three sites in 2024 — Gold Creek, Jackson Point, and the terminal/Saw Island. Sampling was replicated using triplicates collected from each site across each matrix with three sediment grabs, three composite blue mussel samples, and three composite passive sampling device samples.

Samples were analyzed for PAHs, saturated hydrocarbons, and geochemical petroleum biomarkers using advanced analytical techniques at Alpha Analytical Laboratory in Mansfield, Massachusetts (sediments and tissues), and the Oregon State University Food Safety and Environmental Stewardship lab in Corvallis, Oregon (passive sampler, PAHs only). These are the same laboratories that have participated in the LTEMP effort for the last nine years. Briefly, the results continue to be of acceptable precision and accuracy and



**Figure 1. Long-Term Environmental Monitoring Program sites from the 2024 campaign in Port Valdez and the North Gulf of Alaska. The color of the points and labels represent differences in sampling matrices.**

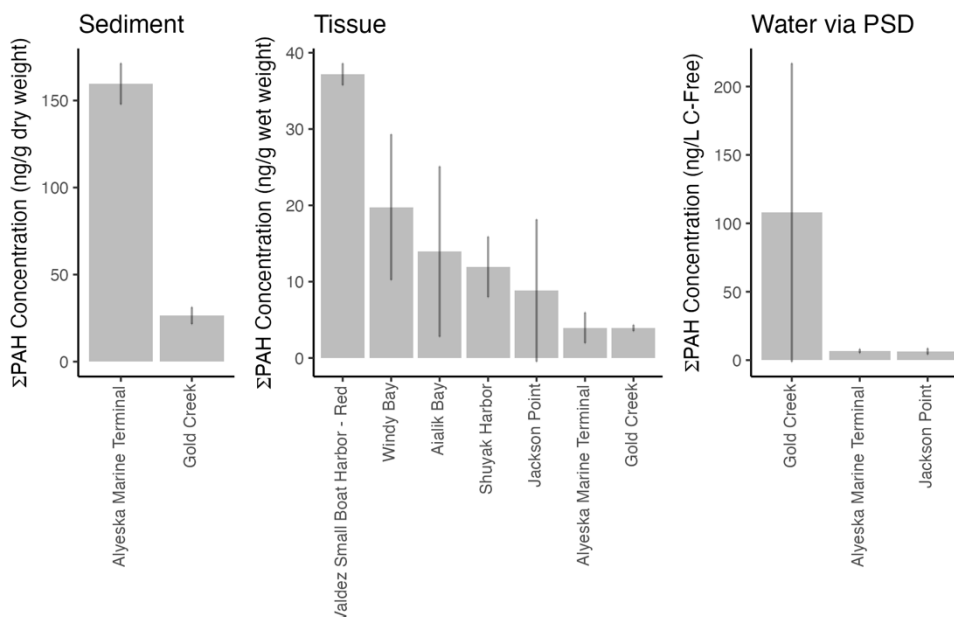
can be compared to previous years' data. The physical characteristics of sediments were also reported in laboratory results, though they are not presented herein.

Many compounds, especially in the mussel tissues, were below or near the analytical methods detection limit, or were not detected in the sample. Sediment and mussel tissue concentrations are plotted and discussed as a sum of multiple PAHs (sum PAH) either by dry weight or wet weight, and corrected by factors influencing bioavailability, like total organic carbon in sediments or lipid content in mussel tissues. Passive sampling device concentrations have been converted by the analytical lab into the dissolved-phase water concentration, C-free concentration. By converting the concentration units, comparisons can be made across other studies, areas, and ecotoxicological effect thresholds. Concentrations below the method level of detection threshold were provided by the lab as an estimate. These estimated concentrations were plotted on PAH profile figures and included in sum calculations; compounds that were not detected in a sample or were biased by laboratory issues (i.e., matrix interference) were not included in the sum calculations. Forensic interpretation was done using analyte profile pattern comparisons for ANS crude for PAH, geochemical petroleum biomarkers, and saturated hydrocarbons in sediment samples. Blue mussels and passive sampling devices tentative forensic assertions were made by qualitative ratios of parent to alkylated compounds and low and high molecular weight PAH compounds. Analytical results and calculations for all samples and all analytes, pattern profiles, forensic ratios, and laboratory blanks are presented in the Technical Summary (Fjord & Fish, 2024) to support the assertions made in this summary report.

## 4. Results & Discussion

### 4.1. Subtidal Marine Sediments

Hydrocarbons were detected in all sediments sampled at the terminal and Gold Creek sites in the low parts per billion range (ppb or ng/g). One (1) ng/g or one ppb can be visualized as the concentration of 50 drops in an Olympic-sized swimming pool. In 2024, the highest sum ( $\Sigma$ ) PAH concentrations were found at the terminal ( $159.6 \pm 11.7$  ng/g dry weight) compared to Gold Creek sediment ( $26.4 \pm 4.8$  ng/g dry weight; Figure 2). Parent and alkylated 3-ring phenanthrenes/anthracenes, 4-ring fluoranthenes/pyrenes, and heterocyclic dibenzothiophenes and naphthobenzothiophenes made up the bulk of PAHs at the terminal in 2024 (Figure 3). At Gold Creek, similar compounds made up the bulk of detectable PAHs but with greater contribution from naphthalenes and less from benzothiophenes. Greater variability in PAH analytes from the terminal sediments indicates a heterogeneous distribution, likely reflecting the distance of grab samples from the outfall pipe. For comparison, PAH concentrations across both Port Valdez sites are lower than those reported in Norwegian fjords, Nova Scotia small boat harbors, and the Baltic Sea (Oen et al., 2006; Davis et al., 2018; Pikkarainen, 2010). Present Port Valdez concentrations were



**Figure 2. Sum PAH concentrations for 2024 sediments, Pacific blue mussel tissues, and water sampled via passive sampling devices by site plotted at the mean  $\pm$  1 standard deviation. Note the unit difference between matrices (i.e., parts per billion for sediments and mussel tissues, and parts per trillion for passive sampling devices).**

more similar to those reported from sediments of Cook Inlet and St. Paul Island, Alaska (Nesvacil et al., 2016).

#### 4.1.1. Sediments - Ecotoxicological Interpretation

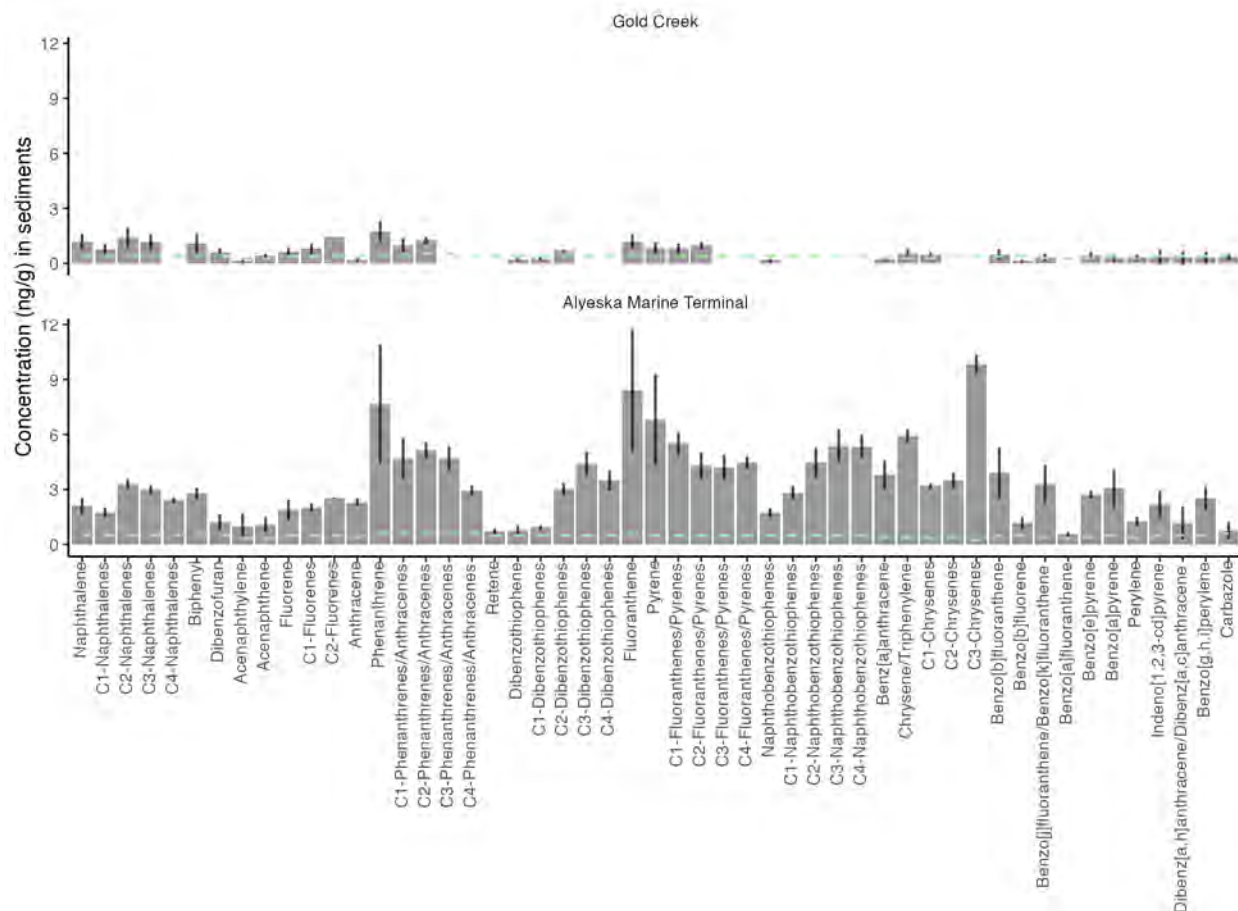
In 2024, individual and sum PAH concentrations in sediment at the terminal and Gold Creek sites pose little to no acute or chronic risk for marine organisms with concentrations of individual compounds and sums 1% or less than the U.S. Environmental Protection Agency (EPA) sediment quality PAH benchmarks for aquatic life (EPA, 2016). Individual PAH Threshold Effect Levels set by the National Oceanic and Atmospheric Administration (NOAA) were not exceeded for any analyte in the 2024 campaign (Lourenço et al., 2023). While these EPA benchmarks may not adequately represent benthic communities adapted to Port Valdez's cold and sediment-rich waters, past monitoring efforts around the terminal have indicated little to no change in the benthic community with varying PAH concentrations (Shaw & Blanchard, 2021). The total organic carbon concentration in the sediment is low (0.4–0.5%), which indicates a higher bioavailability of PAHs to marine organisms.

For nine higher molecular weight PAHs, the American and Canadian guidelines set a Threshold Effect Level at 1684 ng/g (Lourenço et al., 2023). For comparison, Denmark has the lowest known threshold for potential injury to aquatic life at 20 ng/g dry weight for the same group of PAHs. In 2024, this highly conservative threshold is exceeded at the Valdez

Marine Terminal (42.6 ng/g) but not at Gold Creek (6.4 ng/g). High molecular weight PAHs are detected in sediments, especially at the terminal, but concentrations of this group do not exceed any protective benchmarks. Carcinogenic PAHs are present in low concentrations at both sites.

#### 4.1.2. Sediments - Site-Specific Source Identification

The hydrocarbons in the 2024 terminal sediments are determined to be derived from ANS crude oil. Biomarker patterns closely match ANS crude oil; however, PAH profiles indicated ANS crude with other sources as high molecular weight PAHs with greater than four rings were overrepresented. The diagnostic biomarkers and their ratios confirm ANS crude oil as the source of hydrocarbons at the terminal. Additional hydrocarbons from non-ANS sources are present in the Ballast Water Treatment Facility (BWTF) effluent, contributing to the PAH profile and the elevated sum PAH concentration. The ratios of several PAHs differed between the terminal and Gold Creek, suggesting some pyrogenic sources at the terminal compared to more petrogenic sources at Gold Creek.



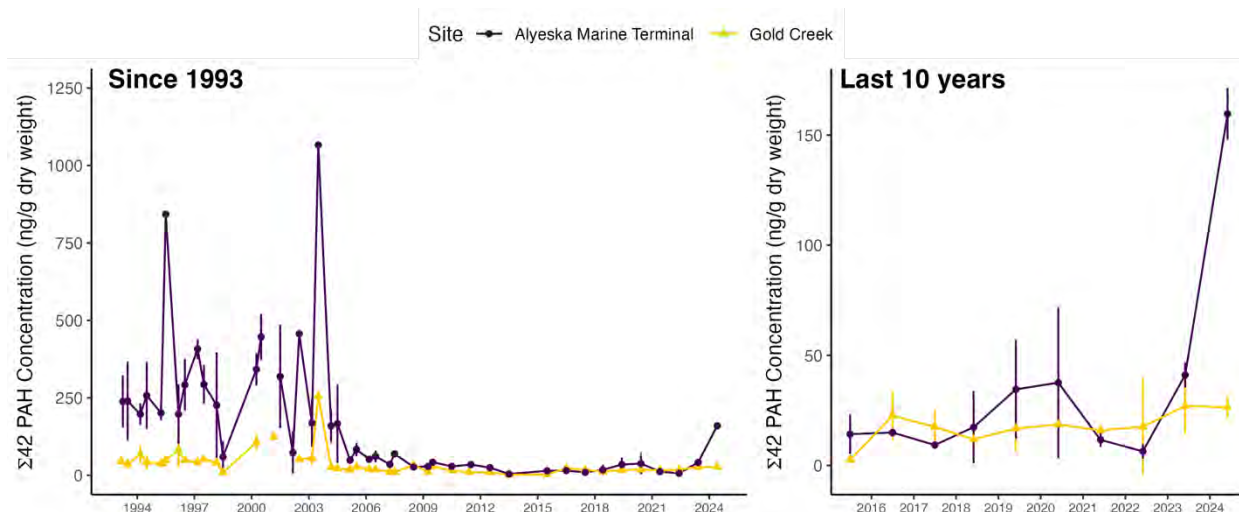
**Figure 3. 2024 PAH profiles from sediments sampled at Gold Creek and the terminal site plotted as the mean  $\pm$  1 standard deviation for the three replicate samples. A dashed, green line indicated the analyte-specific method detection limit.**

Accumulation of higher molecular weight alkylated PAHs, likely from local combustion sources, indicates residuals of prior PAH inputs inefficiently degraded over time. Diagnostic ratios point to wood and coal-type combustion and petrol emissions sources over diesel emissions at both sites. Saturated hydrocarbons at both sites reveal strong microbial degradation and weathering of the hydrocarbons, leaving the higher molecular weight saturated compounds (and, in some cases, terrestrial plant wax compounds).

At Gold Creek, chemical biomarkers were sparse compared to those at the terminal; still, petrogenic biomarker traces confirm the oil signal as a distant source. However, the PAH patterns are mixed petrogenic and pyrogenic. Gold Creek sediments are moderately weathered with a near complete loss of saturated hydrocarbons, except those contributed by terrestrial plants. In summary, hydrocarbon concentrations in the terminal sediments are linked to the terminal activities and are similar to incidents and activities reported in previous LTEMP reports (e.g., BWTF effluent, spills, and combustion) with residues that have undergone environmental degradation and accumulated over time. Gold Creek sediments show lower hydrocarbon levels and fewer constituents, likely indicative of less recent sources.

#### 4.1.3. Sediments - Historical Perspective

Hydrocarbon concentrations have varied widely throughout the LTEMP monitoring period from 1993 to the present (Figure 4). The highest sediment PAH concentrations were measured in the early 2000s. Since 2005, hydrocarbon concentrations have remained low. While recent years have seen similar hydrocarbon concentrations between the two sites, the 2024 terminal concentrations were substantially higher than values those at Gold Creek or any site in the last 18 years. Terminal sediments have generally contained higher, more



**Figure 4. Sum PAH concentrations in sediments over the duration of LTEMP (left panel) and the most recent decade (right panel). Note the differences in scale. Colors and shapes indicate the sampling site; mean values  $\pm$  1 standard deviation are plotted for each sampling event.**

variable PAH loads than Gold Creek, although considerable overlap in PAH concentration ranges between the two stations has persisted from 2008-2023. Comparing 2022 and 2023 terminal sediments, the increased hydrocarbon load seen in 2024 is from a broad swath of PAHs, including parent and alkylated 3, 4, and 5-ringed PAHs and higher molecular weight PAHs.

## 4.2. Pacific Blue Mussels

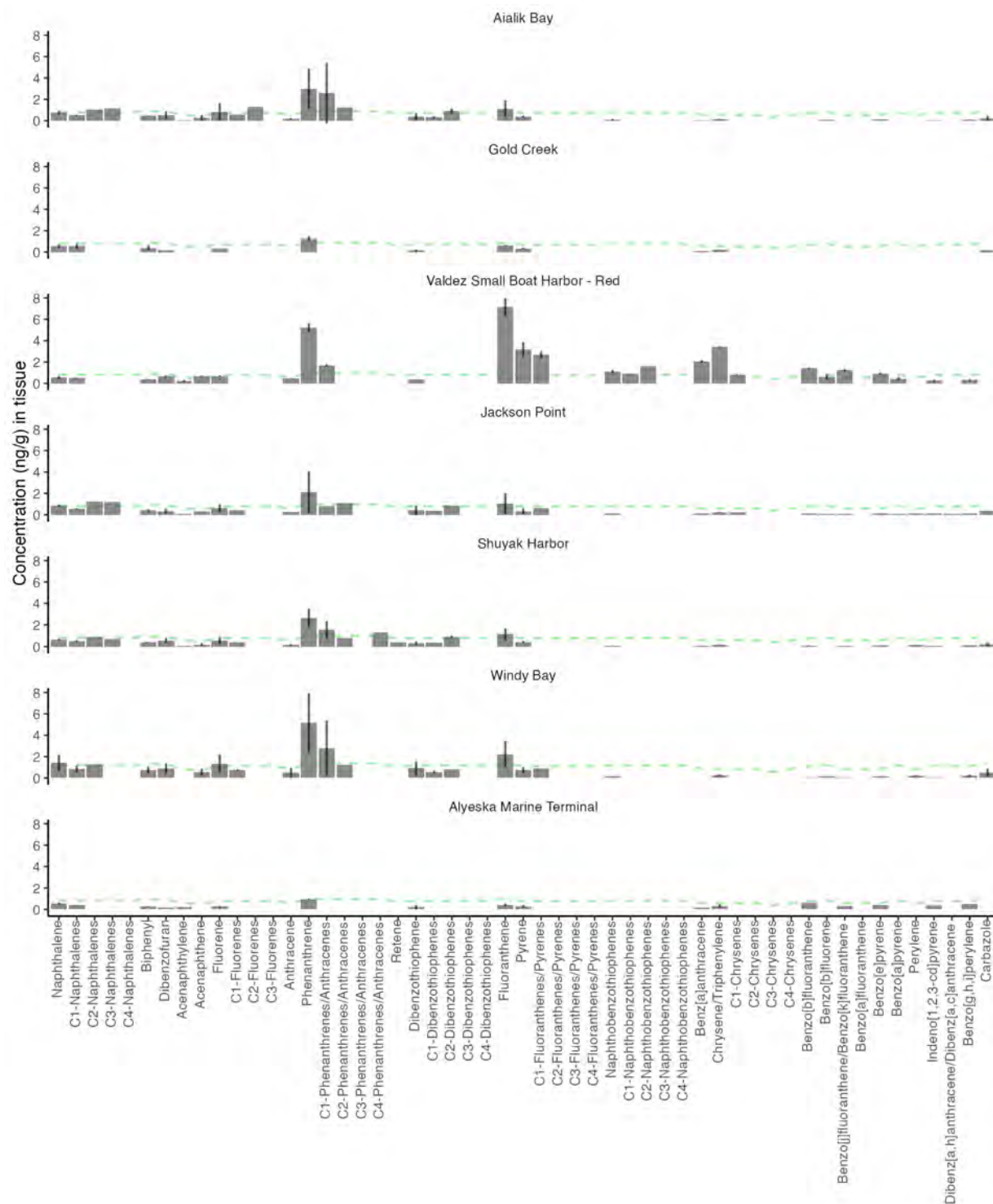
PAHs were detected in Pacific blue mussels at low to moderate concentrations at all sites in 2024 (Figure 2). As in previous years, the highest PAH concentrations were found at the Valdez Small Boat Harbor entrance, a non-ANS positive control site at the red harbor navigation light ( $39.1 \pm 1.6$  ng/g wet weight). The remote stations of Windy Bay, Aialik Bay, and Shuyak Harbor had elevated PAH levels compared to sites in Port Valdez. Gold Creek had the lowest PAH levels of all 2024 sites sampled ( $4.3 \pm 0.3$  ng/g wet weight). Variability between replicates was relatively high for mussels from remote sites and those from Jackson Point. At Windy Bay, a single group of compounds (C1-Phenanthrene/Anthracenes) in a single replicate drives the relatively high PAH values and should be interpreted cautiously.

Phenanthrene was the most abundant PAH at sites except for the Valdez Small Boat Harbor, where larger PAHs, such as fluoranthene, were more prevalent (Figure 5). The 2024 mussel tissue PAH concentrations in Port Valdez are comparable to those found in relatively pristine locations in national parks and forests around southcentral and southeast Alaska, and well below the high concentrations ( $>1000$  ng/g dry weight ( $138$  ng/g wet weight when using mean conversion factor from LTEMP mussel data)) found in the harbor at Skagway, Alaska (Rider, 2020). Mussels from the Valdez Small Boat Harbor and Windy Bay exceeded NOAA's national long-term monitoring status "Low Concentration" range ( $0$ – $173$  ng/g dry weight ( $0$ – $24$  ng/g wet weight)). The mussel community from Windy Bay, sampled every five years in LTEMP, was small and likely suffered from intense sea star predation (Figure 6), which may affect the sample quality, bioavailability, or toxicodynamics of PAHs in this community. Combined natural and pollutant stressors can impose a higher risk to populations than toxicants alone (Gergs et al., 2013); however, no published scientific evidence was located specifically linking predation pressure with increased body burden.

Like the Valdez Small Boat Harbor location, fluoranthene was also the most abundant PAH in mussels in a Norwegian fjord with moderate human activity where sum PAH concentrations were comparable to this study (Schøyen et al., 2017). Mussel tissue PAH concentrations were comparable to those measured in pelagic zooplankton in Valdez Arm (Carls et al., 2006) and to mussels caged two kilometers or greater from an oil rig in the North Sea (Sundt et al., 2011). Zebra Mussels sampled from the Great Lakes had lower PAH body burdens ( $12.6$ – $8.7$  ng/g 16 PAHs; Metcalfe et al., 1997) than mussels sampled from the Valdez Small Boat Harbor.

### 4.2.1. Mussels - Ecotoxicological Interpretations

At the 2024 tissue concentrations, no adverse biological effects are predicted at the low exposure levels (Bowen et al., 2018). Similar mussel tissue concentrations did not elicit early warning signs for genotoxicity or cellular toxicity in laboratory and field studies (Hylland et al., 2008; Sundt et al., 2011). Sampled mussels did not approach the calculated food safety threshold for bivalves in the European Union nor the U.S. Food and Drug Administration risk criteria levels for vulnerable populations developed after the BP Deepwater Horizon oil spill (Rotkin-Ellman et al., 2012; Shen et al., 2020).



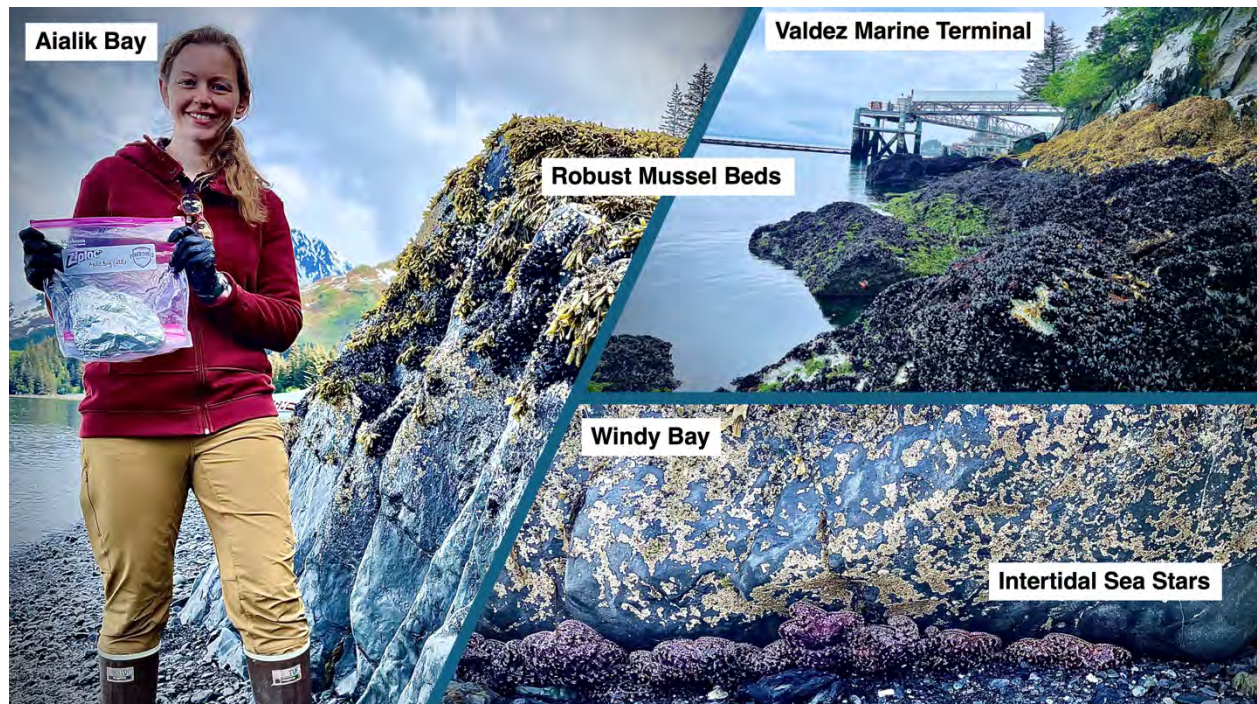
**Figure 5. 2024 PAH profiles from Pacific blue mussels plotted as the mean  $\pm$  1 standard deviation for the three replicate samples. A dashed, green line indicates the analyte-specific method detection limit.**

#### 4.2.2. Mussels - Site-Specific Source Identification

As tissue hydrocarbon concentrations and chemical compositions are driven by the bioavailability of compounds, environmental conditions, and physiological, cellular, and molecular processes in the mussels, which govern exposure, uptake, metabolism, and elimination, source identification analysis should be performed cautiously.

In 2024, Gold Creek, Jackson Point, and Valdez Marine Terminal (i.e., Saw Island) mussels exhibited similar PAH profiles with very few PAHs and petroleum biomarkers detected, indicating low available petroleum hydrocarbons. When PAHs were above detection limits (e.g., phenanthrene and fluoranthene), clear pyrogenic patterns were seen in Aialik Bay, Valdez Small Boat Harbor, Shuyak Harbor, and Windy Bay. Windy Bay, Aialik Bay, and Shuyak Harbor are historically oiled sites from the Exxon Valdez oil spill, and hydrocarbon ratios and biomarkers indicated heavily weathered petrogenic hydrocarbon sources mixed with pyrogenic sources of diesel combustion emissions and/or wood/coal combustion.

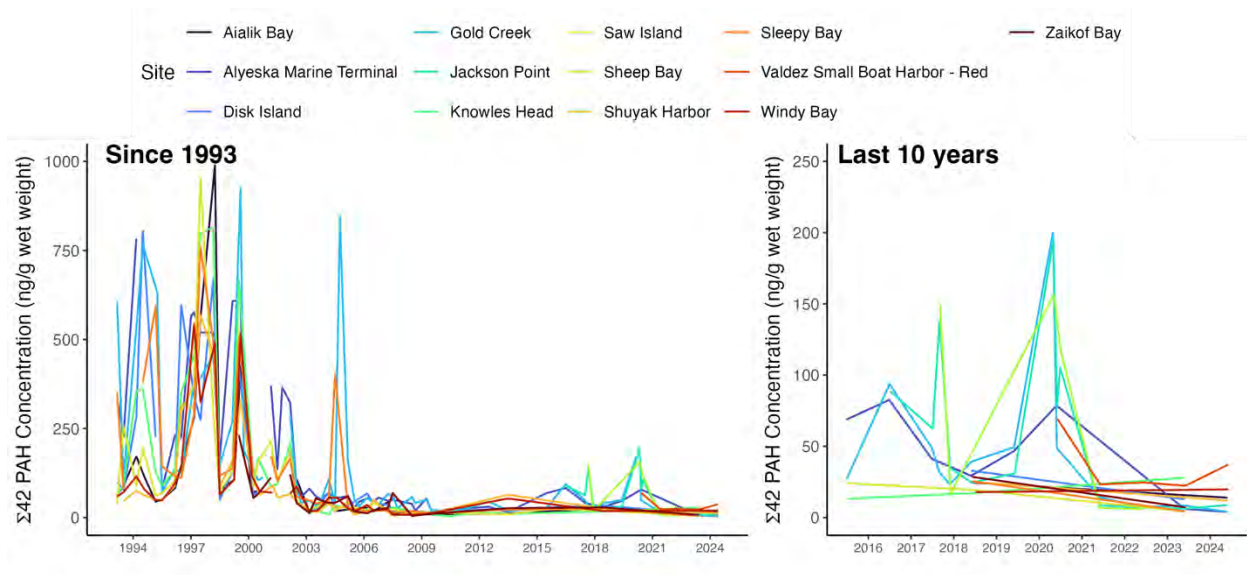
Diagnostic ratios of PAHs strongly support pyrogenic sources of hydrocarbons at the Valdez Small Boat Harbor; this site also had the least weathered hydrocarbon input as interpreted by higher saturated hydrocarbon levels compared to other sites.



**Figure 6. Examples of 2024 mussel sampling sites with Danielle Verna sampling a mussel-covered boulder in Aialik Bay (left), the mussel-covered rocks near the Valdez Marine Terminal at Saw Island (top right), and numerous purple sea stars (likely *Pisaster ochraceus*) in the absence of robust mussel beds in Windy Bay (bottom right).**

### 4.2.3. Mussels - Historical Perspective

Historical trends in Pacific blue mussel tissue PAH concentrations are variable, reflecting known oil spill incidents in 2004 at Gold Creek, and 2017 and April 2020 spills at the terminal mirroring high concentrations found in sediments pre-2005 (Figure 7). Within the larger trend, PAH variability and mean tissue concentrations have stabilized since ~2010 in the absence of known spills. In non-spill conditions, mussel tissue concentrations have remained below < 1,000 ng/g wet weight, indicating the mussels are likely not under PAH exposure-induced stress. However, high values have been recorded following spill incidents (e.g., 244,000 ng/g wet weight after the April 2020 terminal spill, not shown in Figure 7), a value likely to induce adverse effects at the molecular to the individual level for organisms. Expanded sampling stations (e.g., Aialik Bay, Windy Bay, and Shuyak Harbor) have shown less variability in recent years, likely due to less exposure to recent spill events and the bias of less frequent sampling. The 2024 PAH concentrations in Port Valdez mussel tissues are within the historical range of locations with limited human use and not oiled during the Exxon Valdez oil spill (Boehm et al., 2004).



**Figure 7. Sum PAH concentrations in Pacific blue mussel tissue (left) over the entire duration of the LTEMP; note concentrations > 1000 ng/g wet weight (i.e., known spill events) were removed for clarity - for reference, (e.g., max post-spill concentration >200 000 ng/g wet weight), and (right) the last decade with all current LTEMP mussel monitoring sites. Colors distinguish sampling sites, and mean values are plotted for each sampling event.**

### 4.3. Seawater

In 2024, petroleum hydrocarbons were found at low seawater concentrations at all Port Valdez sites (Figure 2). These hydrocarbon concentrations represent the dissolved constituents (C-free). They are not traditional total water concentrations, but in this report, the passive sampling device C-free concentrations are used as a proxy for water concentrations of PAHs. These dissolved concentrations represent the bioavailable fraction and can be directly associated with exposure levels for organisms in the water, such as sensitive early-life stage fish. In 2024, the highest relative passive sampling device-derived water concentrations were measured at Gold Creek ( $107.9 \pm 108.9$  ng/L), followed by Valdez Marine Terminal / Saw Island ( $6.7 \pm 1.3$  ng/L) and Jackson Point ( $6.4 \pm 2.2$  ng/L).

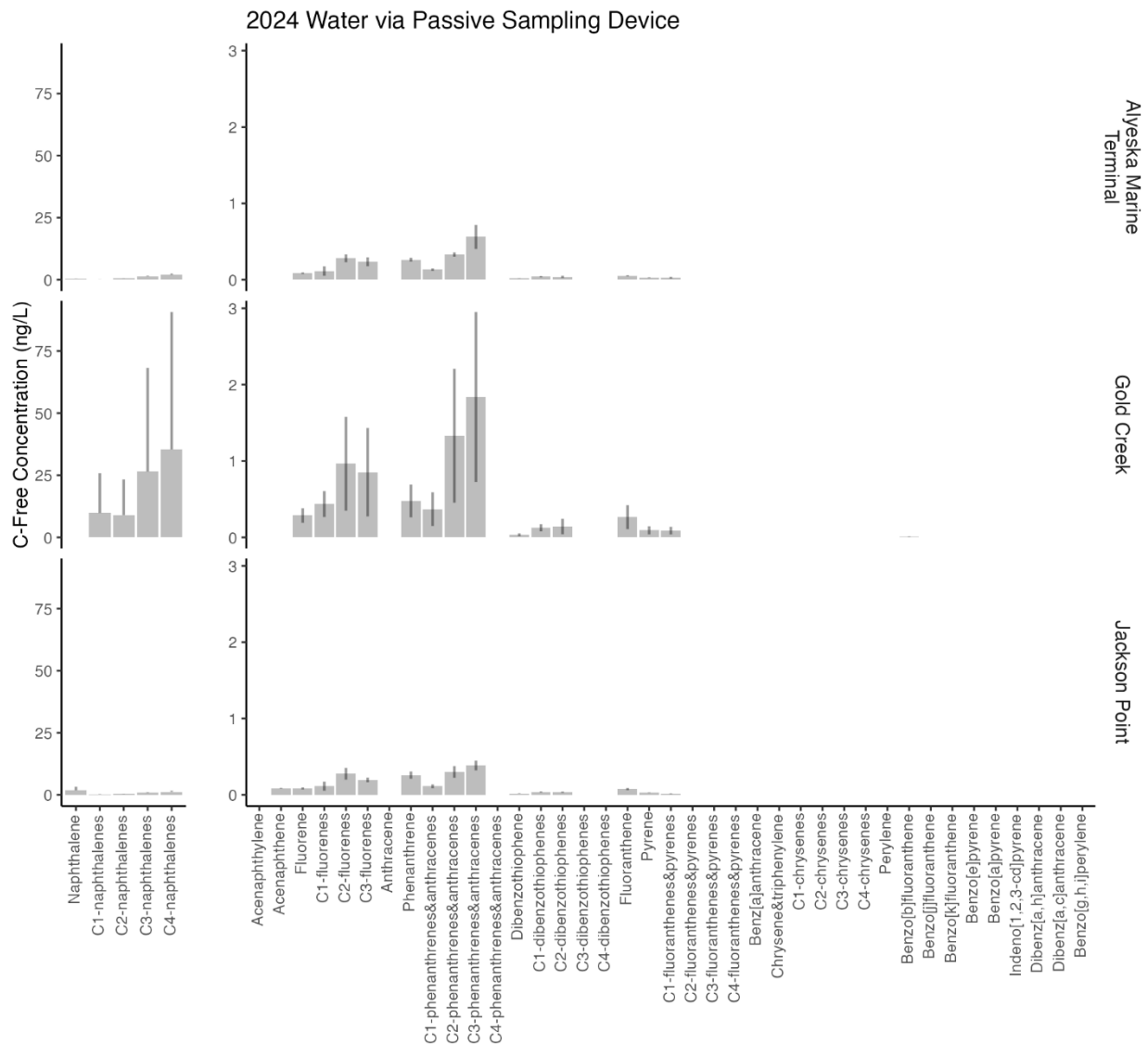
The typical LTEMP dissolved hydrocarbon pattern of dominating and heavily water-washed naphthalenes was present at all sites and in most replicates (Figure 8). Smaller, 2–3 ring PAHs comprised 97–99% of the sum concentrations, indicating the more readily water-soluble fraction. Other PAHs detected at lower concentrations at all sites were fluorenes, fluoranthenes, dibenzothiophenes, phenanthrenes, and anthracenes. At Gold Creek, parent and alkylated naphthalenes, fluorenes, and phenanthrene contributed to the increase in overall load compared to the other Port Valdez stations.

Present dissolved PAH concentrations from the passive sampling devices are comparable to water concentrations at unoiled sites and sites with medium human activity around Prince William Sound (Short et al., 2008; Lindeberg et al., 2017). The present passive sampling device-derived water concentrations in Port Valdez were all at least two to three orders of magnitude below published water quality standards and those of polluted areas across the United States (EPA, 2002).

#### 4.3.1. Seawater - Ecotoxicological Interpretations

Concentrations reported in the Port Valdez subsurface seawater derived by passive sampling devices are below those reported to cause adverse effects even in marine organisms' most sensitive life stages. The 2024 PAH concentrations in the parts per trillion range (i.e., one drop in 20 Olympic-sized swimming pools) are an order of magnitude lower than those reported to cause developmental and delayed effects in herring and salmon early life stages (Incardona et al., 2015). However, no analytical lower limit measured from water or tissues has been identified for developmental cardiac effects in herring (Incardona et al., 2023). Naphthalene, while present at greater concentrations than other PAHs, is of low toxicological concern at present concentrations and is not a carcinogen.

Water quality guidelines set by the U.S. and Canada to represent the lowest observed acute effect concentration are not exceeded by any individual PAH or the sum PAHs (set at 300 ug/L). In 2024, water concentrations did not exceed conservative, protective individual PAH threshold concentrations set for Brazil, British Columbia, Canada, or the United Kingdom (Lourengo et al., 2023).



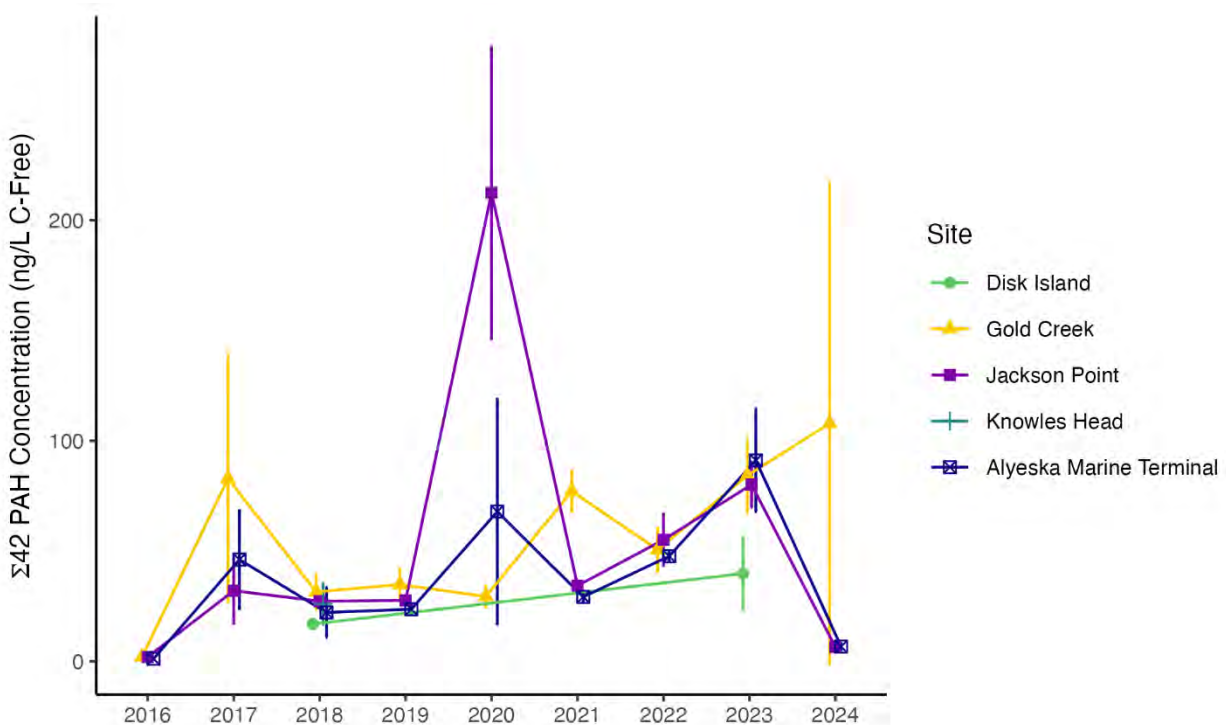
**Figure 8. PAH profiles in water sampled via passive sampling devices placed at Valdez Marine Terminal, Gold Creek, and Jackson Point in 2024. Values represent mean  $\pm$  standard deviation for the three replicates. Note the changes in scale between the Naphthalenes on the left and the other PAHs.**

#### 4.3.2. Seawater - Site-Specific Source Identification

Seawater primarily reflects petrogenic sources of hydrocarbons with few higher molecular weight PAHs. One striking observation is the prominent naphthalene peak with ascending alkylation, indicative of a water-washed and weathered petrogenic source in all samples. Several samples were also relatively high in the parent naphthalene compound, indicating a fresh hydrocarbon source. Weak pyrogenic signals are present, and ratios indicate diesel emissions sources across all sites.

## 4.3.3. Seawater - Historical Perspective

2024 marked one of the lowest years on record for seawater hydrocarbon concentrations around the Valdez Marine Terminal. Gold Creek had uncharacteristically high variability between replicates, leading to the highest average concentration in Gold Creek seawater since passive sampler monitoring began. Higher concentrations of the volatile parent naphthalene and alkylated naphthalenes were seen in some replicates of the Gold Creek sample. These levels could be explained by variability in the recovery efficiencies in the laboratory quantification process. PAH concentrations in passive samplers have remained low since the 2016 inclusion of passive sampling device-derived water concentrations into LTEMP (Figure 9). A peak in PAH levels is seen at the terminal adjacent site, Jackson Point, following the 2020 terminal spill. Passive sampler PAH profiles have also remained consistent, with high naphthalene spikes dominating PAH profiles, as noted in previous LTEMP reports (Payne & Driskell, 2021).



**Figure 9. Sum PAH concentrations in seawater derived by passive sampling device at five sites for 2016–2024. Sites are distinguished by color and shape and plotted by mean  $\pm 1$  standard deviation. Note that 2016 values only include parent PAHs, no alkylated PAHs were quantified in 2016.**

## 5. Holistic Interpretation

In 2024, we saw agreement on low-level PAHs at similar concentrations across the three standard LTEMP stations in Port Valdez (i.e., Gold Creek, Valdez Marine Terminal, and Jackson Point). While an increase in sum PAH concentrations in sediments was seen at the terminal, which was determined to be of ANS origin, levels are still predicted not to cause adverse effects to marine life. Sites were not ranked similarly by the three matrices (Table 1). Gold Creek has more heterogeneous hydrocarbon dispersion with the greatest variability across all matrices. While Gold Creek mussels exhibit baseline PAH levels, PAHs dissolved in seawater were elevated compared to other sites. The high variability in the passive sampling-derived seawater measurement could explain this difference. Mussel PAH levels found at the Valdez Small Boat Harbor were higher than those of other stations but could not be confirmed by sediment or passive sampler results as these samples were not taken. As each matrix measures a different section of the environmental hydrocarbon load, the differences between matrices are likely not in error but rather reflect differences in the accumulation, degradation, elimination, and dispersion of hydrocarbons across the sites.

As in the expanded site sampling in 2023, the expanded LTEMP sites at Aialik Bay, Windy Bay, and Shuyak Harbor had average PAH concentrations more similar to those of the Valdez Small Boat Harbor. Notably, these sites had high variability between samples, so interpreting these relatively elevated hydrocarbon levels was challenging. As mentioned, Windy Bay had a noticeably different intertidal community, with few mussels, than other LTEMP sampling locations. Understanding the background and current use of these sites, such as historic logging regions or high cruise boat traffic, provides context to these findings, highlighting the importance of maintaining LTEMP sampling over time and space.

**Table 1. A tabular visualization of the calculated mean sum PAH concentrations and variability between replicates for all sites sampled in the 2024 LTEMP campaign across the three sediment, mussel tissue, and seawater matrices. Red colors indicate higher values, and blue colors indicate lower values relative to the measurements made in 2024 in that matrix. The relative standard deviation (rSTD) was calculated using the standard deviation divided by the mean sum PAH measurement, displayed as the scaled, yellow horizontal bar plots. Units for sum PAH measurements are ng/g dry weight, ng/g wet weight, and ng/L for the sediments, tissues, and seawater, respectively.**

2024 Sampled Site	Sediment		Tissue		Seawater	
	$\Sigma$ PAH	rSTD	$\Sigma$ PAH	rSTD	$\Sigma$ PAH	rSTD
Alyeska Marine Terminal	159.6	0.1	6.0	0.03	6.7	0.2
Gold Creek	26.4	0.2	4.3	0.08	107.9	1.0
Jackson Point			15.1	0.03	6.4	0.3
Valdez Small Boat Harbor			39.1	0.04		
Aialik Bay			17.8	0.04		
Windy Bay			24.2	0.04		
Shuyak Harbor			15.0	0.04		

The ubiquity of hydrocarbons in the environment complicates tracing sources, understanding ecotoxic thresholds, and following dynamics over time and space. Environmental samples, like sediments, can accumulate multiple hydrocarbon sources over

time, resulting in a mixed or unresolved profile. Organisms such as blue mussels can accumulate, eliminate, or alter hydrocarbon compounds, complicating identifying the sources. Passive sampling devices are designed to complement the biological and toxicological interpretations by measuring just the dissolved compounds available to aquatic organisms (the bioavailable fraction) but are not well suited for hydrocarbon forensics. The forensic agreement between the 2024 samples is a mixed source petrogenic signal closer to the terminal and the pyrogenic signal of stations further away. This is consistent with the forensic determinations made in the last 5 years. Again, strong pyrogenic and mixed sources contribute to blue mussel hydrocarbon profiles at the Valdez Small Boat Harbor. As blue mussel tissues did not provide robust forensic data (e.g., few biomarkers of detection), the interpretation of the expanded LTEMP sampling locations is limited. Further analysis using available data is possible.

The ecotoxicological risk to organisms from the hydrocarbon levels present in the sediments, mussel tissue, and dissolved in the water from 2024 was low. Previous work focusing on how low levels of hydrocarbon exposure can influence ecologically and commercially important fish species in Prince William Sound has found profound effects on heart development (Incardona et al., 2021). Recent herring research reveals that analytical chemistry with detection levels in the sub parts per billion level (ng/g) is not sensitive enough to distinguish between exposure and background concentrations in water or embryo tissue even when crude oil-induced effects on heart development and PAH-induced enzymatic response were detected (Incardona et al., 2023). Instead, enzymatic induction related to nominal crude oil exposure (e.g., CYP1A induction) is directly related to cardiac deformities in herring. It may provide a more sensitive assessment of injury at the low end of PAH exposure levels (Incardona et al., 2023).

### A Note on Site Selection

A review of original LTEMP documentation (KLI 1993a, 1994) and more recent written reports (Payne & Driskell, 2020, 2018) has shed light on the original site selection criteria (Table 2).

Sites were chosen to fall into one of the following three categories:

1. EVOS oiled sites
2. Sites with active or potential oil pollution-causing activities related to terminal and tanker operations
3. Reference sites to act as background control sites

Additionally, sites must be accessible by boat and skiff for safe sampling, have a robust mussel community, and contain suitable soft bottom sediments at a subtidal depth for sediment sampling (a widespread sampling technique used previously at all sites).

## 2024 Long-Term Environmental Monitoring Program – Final Summary Report

**Table 2. Overview of the full suite of LTEMP sampling locations, the original purpose of site selection, and significant notes or events found in the literature supporting that selection. Colors represent categories, with gray indicating the active terminal and tanker sites, pink for EVOS-oiled sites, and blue for non-EVOS-impacted reference sites.**

Site	Code	Purpose	1 <sup>st</sup> Year	Significant Events / Notes
Jackson Point	JAC-B   PSD	Active - Terminal, Distance	2016	"Evaluate a potential PAH gradient to either side of the BWTF outfall" – Payne & Driskell 2020
Terminal / Saw Island	AMT-B   SAW-B   PSD	Active - Terminal	1993	Closest mussel bed, multiple terminal spills
Terminal / BWTF Effluent Outfall	AMT-S	Active - Terminal	1993	Outfall of Ballast Water Treatment Facility, multiple terminal spills
Zaikof Bay (Hitchinbrook Entrance)	ZAB1-B   ZAB2-B	Active - Tanker Transport Hazard Area	1999   2023	Hinchinbrook Entrance site, moved to a less protected outer bay location in 2023
Knowles Head	KNH-B   PSD	Active - Tanker Anchorage Area	1993	"Clean site" – Payne & Driskell 2020; "Undisturbed Control Site" – Payne & Driskell 2018
Disk Island	DII-B   PSD	EVOS Oiled	1993	"known to have fresh-looking, residual EVOS oil" – Payne & Driskell 2018, confirmed by 2001 sampling - Lindeberg et al., 2018; visible sheen during early survey years
Shuyak Harbor	SHH-B	EVOS Oiled	1993	"Selected as an EVOS oiled site" (KLI 1993, Survey Report), no other reference to oiling found
Sleepy Bay	SLB-B	EVOS Oiled	1993	
Windy Bay	WIB-B	EVOS Oiled	1993	"Windy Bay (WIB) was selected as a heavily-oiled EVOS site on the Kenai Peninsula. Extensive logging in the area was taken into consideration during station selection within the bay; the site was positioned on the southeast end of the bay somewhat removed from the log transfer facility and the most heavily logged areas." (KLI 1994)
Sheep Bay	SHB-B	non-EVOS-impacted control in PWS	1993	
Gold Creek	GOC-S   B   PSD	non-EVOS-impacted control in Port Valdez	1993	"Reference site", several small diesel spills, FW input, upstream mining, 6 km from terminal, "less likely to be affected by AMT [Alyeska Marine Terminal] or tanker operations and because it had also been sampled as part of the AMT permit program in the past" (KIL, 1994)
Aialik Bay	AIB-B	non-EVOS-impacted control in Gulf of AK	1993	2024 observation-lots of large cruise boat and pleasure boat traffic, kayaking groups, camp sites

## 6. Future Perspective

The 2024 LTEMP sampling for hydrocarbons was complimented by sediment sampling for trace metals. This work will be framed in light of the hydrocarbon findings to assess potential metal accumulation in sediments. Heavy metal monitoring is routinely done in other petroleum and hydrocarbon monitoring efforts, including forensic studies in marine sediments and offshore petroleum industry monitoring efforts, although typically focusing on mercury, lead, cadmium, and barium (e.g., Norwegian Environmental Agency, 2020). The recent 2019 Alaska Department of Environmental Conservation (ADEC) report cites that the principal water quality concerns from the terminal BWTF effluent are zinc, total aromatic hydrocarbons, and whole effluent toxicity (ADEC 2019). The 2024 sediment sampling was accompanied by sediment sampling for 23 metals, and the results are presented in a separate report (Fjord & Fish, 2024b). These results show that four metal levels—aluminum, copper, iron, and vanadium—exceeded protective sediment quality guidelines and are significantly elevated in the terminal sediments compared to Gold Creek.

Frequent reanalysis of LTEMP's aims and methodology is necessary to maintain the utility of such a robust monitoring program even in its 31<sup>st</sup> year. While maintaining the program's integrity with the three matrix approaches, efforts must be taken to ensure that future monitoring and reporting are conducted to guarantee comparability to previous analyses and utility for future projects. A review of contemporary hydrocarbon biomonitoring study designs confirms the validity of using multiple matrices, including intertidal mussels (Kasiotis & Emmanouil, 2015), sediments, and passive sampling devices with a suite of hydrocarbon (e.g., beyond the 16 EPA parent PAHs), petro-geochemical markers for more definitive forensic determination. These matrices are suitable for trend- and problem-oriented monitoring, the two main objectives of LTEMP (Beyer et al., 2017).

The following represents a list of potential additions, subtractions, and alterations in methodology that could be considered for future LTEMP cycles.

### **Expand sampling efforts**

#### **1. Add a seawater sample**

Place a passive sampling device at the Valdez Small Boat Harbor (RED) to allow for direct comparability for mussels sampled from this site during the annual Port Valdez sampling. Considerations must be made to allow for safe vessel traffic.

#### **2. Increase biological sampling effort**

From sediment sampling sites, include wild-caught resident fish species (e.g., sculpin) PAH analysis in muscle, liver, and bile.

#### **3. Gather additional recent sources**

Together with the triannual ANS chemical characterization, include potential sources that have hampered LTEMP's forensic strength, including a new BWTF effluent sample and freshwater running out of Gold Creek.

### **Increase project visibility**

#### **1. Draft a scientific manuscript**

Pursue scientific publishing for greater visibility and utilization of LTEMP data; abstract already submitted for a poster presentation at the January 2025 Alaska Marine Science Symposium.

#### **2. Archive data**

Continue to work with data librarians at the National Center for Ecological Analysis & Synthesis (NCEAS) and the Alaska Ocean Observing System (AOOS) for external data management and archival.

#### **3. Improve program dissemination**

Address broader community concern for local pollution issues using alternative dissemination methods (e.g., short explainer video, updates to the PWSRCAC LTEMP website, popular science articles, participating at community events like the Prince William Sound Natural History Symposium, attending and presenting at relevant conferences, creating educational content). Community needs identified through these outreach projects could be integrated with LTEMP data interpretation and future sampling programs.

#### **4. Project coordination**

Project awareness and coordination with other EVOS monitoring programs, including lingering oil ADEC projects (GeoSyntec, 2023), Gulf Watch, and other Exxon Valdez Oil Spill Trustee Council (EVOSTC) related programs.

### **Evaluate specific aspects of LTEMP.**

#### **1. Changes in intertidal community**

Evaluate the suitability of the Windy Bay site, where few blue mussels were found in 2024.

#### **2. Address high variability in sampling**

Recently, high variability has been observed at remote mussel sampling sites. To counteract the light sampling effort over time, it might be a good idea to increase the sample size at these sites.

## 7. Conclusion

In the 31<sup>st</sup> year of the LTEMP run by PWSRCAC, concentration, source, and potential ecotoxicological effects of hydrocarbons were assessed in marine subtidal sediments and Pacific blue mussels, and dissolved in the nearshore waters via passive sampling devices. The hydrocarbon fingerprints in the 2024 samples vary by site, with those at or near the Valdez Marine Terminal revealing ANS crude and its associated products as the primary hydrocarbon source. Hydrocarbons found in Pacific blue mussels from Gold Creek, Aialik Bay, Windy Bay, Shuyak Harbor, and the Valdez Small Boat Harbor cannot be linked directly to the terminal operations. However, these samples revealed various sources, including petroleum and combusted petroleum products. Low potential environmental and toxicological risk is posed by hydrocarbons contributed by the terminal and tankers in 2024. Surprisingly, concentrations of toxic hydrocarbons were similar at the remote site of Windy Bay and the Valdez Small Boat Harbor, a site of high human activity and potential chronic petroleum pollution. Passive sampling devices continue to report low levels of bioavailable hydrocarbons in the water column within Port Valdez.

Since 1993, hydrocarbon concentrations in Prince William Sound have been generally low, with localized spikes corresponding to events like the April 2020 oil spill at the terminal. Following an all-time low in the mid-2010s, hydrocarbon concentrations in sediments and mussels have slowly increased across all sites. However, they are still below any threshold for adverse effects on aquatic life. A 2024 accompanying pilot study on metals accumulated in sediment revealed several metals in terminal sediments that exceeded national protective sediment quality guidelines, thus warranting further investigation. The utility of the LTEMP in maintaining a robust baseline hydrocarbon database continues to be critical in light of rapid environmental change and continued petroleum pollution risk.

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# Final

## 2024 Technical Supplement

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### Long-Term Environmental Monitoring Program

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## ACRONYMS AND ABBREVIATIONS

°C	Degrees Celsius
AIB	Aialik Bay
AMT	Alyeska Marine Terminal [officially known as the Valdez Marine Terminal]
ANS	Alaska North Slope [Crude Oil]
BWTF	Ballast Water Treatment Facility
cm	Centimeter
CV	Calibration Verification
DII	Disk Island
DQO	Data Quality Objective
EPA	U.S. Environmental Protection Agency
FID	Flame Ionization Detector [FID chromatogram]
FSES	Food Safety and Environmental Stewardship [Oregon State University lab]
GC/MS	Gas Chromatography/Mass Spectrometry
GOC	Gold Creek
HOT	Site of the April 2020 oil spill at the Valdez Marine Terminal
HMW	High Molecular Weight [PAH]
JAC	Jackson Point
KNH	Knowles Head
LMW	Low Molecular Weight [PAH]
LTEMP	Long-Term Environmental Monitoring Program
mL	Milliliter
MDL	Method Detection Limit
ng/g	Nanogram per Gram
OSU	Oregon State University
PAH	Polycyclic Aromatic Hydrocarbons
pg/μL	Picogram per Microliter
PSD	Passive Sampling Device
PWSRCAC	Prince William Sound Regional Citizens' Advisory Council
QC	Quality Control
RED	Valdez Small Boat Harbor Entrance [red light]
SAW	Saw Island
SHB	Sheep Bay
SHH	Shuyak Harbor
SHC	Saturated Hydrocarbons
SIM	Specific Ion Monitoring
SLB	Sleepy Bay
SOP	Standard Operating Procedure
WIB	Windy Bay
ZAB	Zaikof Bay

# Executive Summary

This technical supplement contains information on field sampling and analytical and data analysis methods used to monitor and assess environmental hydrocarbons and their potential environmental risk in Prince William Sound Regional Citizens' Advisory Council's (PWSRCAC) Long-Term Environmental Monitoring Program (LTEMP). Here, we have plotted and summarized all sediment, Pacific blue mussel tissue (*Mytilus trossulus*), and passive samples collected in the 2024 campaign in Port Valdez and selected extended sampling sites in the north Gulf of Alaska coast. This document should aid in the assertions made in the 2024 Long-Term Environmental Monitoring Program Summary Report (fjord & fish sciences, 2024).

# 1. Methods

## 1.1. Field Methods

### 1.1.1. Sediments and Mussel Tissue

In 2024, sediment sampling at Valdez Marine Terminal (Alyeska Marine Terminal (AMT)) and Gold Creek (GOC) took place on June 5 (Figure 1; Table 1). Samples were collected using a modified Van Veen grab and deployed to a depth of 65–67 meters (m) at AMT and 26–27 m at GOC from the salmon seining/fishing vessel, Equinox, contracted as a research vessel and fitted with an aluminum davit. For each replicate, a ~250 milliliters (mL) sample of the surface 1–5 centimeters (cm) was collected at each site, placed in a hydrocarbon-free jar, and frozen for hydrocarbons and total organic carbon analysis. Three replicates were taken at each site. Samples were frozen at the end of the sampling day and sent to the lab for analysis within a week of sampling.

The 2024 Port Valdez Pacific blue mussel (*Mytilus trossulus*) sampling was performed at Jackson Point (JAC) and Saw Island (AMT/SAW) on June 5, and at the Valdez Small Boat Harbor – RED (RED) and GOC on June 6. On June 11 and 12, blue mussel samples were collected from Shuyak Harbor (SHH), Aialik Bay (AIB), and Windy Bay (WIB) via float plane out of Homer. Three replicates of ~30 large mussels were collected by hand at each site. Sample replicates are usually taken from multiple locations spaced along 30 m of shoreline. Mussel samples were wrapped in aluminum foil and double bagged in plastic zip-locks, frozen, and shipped to the laboratory, where they remained frozen until analysis. The analytical lab performed dissections of a whole mussel, including all internal organs.

### 1.1.2. Passive Sampling Devices

In 2024, the Passive sampling devices (PSDs) were collected on June 5 at sites JAC and AMT/SAW, and on June 6 from GOC after a May 9 deployment. The PSDs are a low-density polyethylene membrane submerged in shallow water to absorb passing hydrocarbons. The PSD is intended to sample only a fraction of the total hydrocarbon analytes present, namely, freely dissolved compounds and labile complexes that diffuse into the membrane that, for biota, are the most bioavailable hydrocarbons. As a critical part of the method, various deuterated surrogate compounds are pre-infused into the membrane before deployment. This known starting concentration allows the time-integrated back calculation of dissolved chemical concentrations specific to the environmental conditions experienced by the PSDs. The PSDs were deployed in 4–7 m of water, attached to new polypropylene rope with hydrocarbon-free steel cables and shackles, anchored to a concrete cinder block at each location. At each site, three replicates of 5 PSDs were deployed such that they floated approximately 1 m above the seafloor. The PSDs were collected from stations, transferred to hydrocarbon-free Teflon bags, sealed, and stored at room temperature following LTEMP field protocols (2019 LTEMP PSD standard operating procedure (SOP)). A deployment field blank and a retrieval field blank were included in each annual analysis.

Samples were sent to the Oregon State University (OSU) Food Safety and Environmental Stewardship (FSES) lab in Corvallis, Oregon, for analysis and frozen at -20°C upon arrival.

## 1.2. Analytical Methods

### 1.2.1. Sediments and Mussel Tissue

Tissue and sediment samples were analyzed for semi-volatiles, biomarkers, and saturated hydrocarbon analytes at Pace Analytical Services (previously Alpha Analytical and NewFields) lab in Mansfield, Massachusetts. Extractions used the ALPHA OP-018 method for tissues and the ALPHA OP-013 method for sediments. Polycyclic aromatic hydrocarbons (PAH), sterane/triterpene petrogeochemical markers, and saturated hydrocarbons (SHC) are quantified as a concentration in the extracted sediments and mussel tissues. Parent PAHs, alkylated PAHs, and petrochemical markers are analyzed using selected ion monitoring gas chromatography/mass spectrometry (SIM GC/MS) via a modified U.S. Environmental Protection Agency (EPA) Method 8270 (aka 8270M). This analysis provides the concentration of 1) approximately 80 PAH, alkylated PAH homologs, individual PAH isomers, and sulfur-containing aromatics, and 2) approximately 50 tricyclic and pentacyclic triterpenes, regular and rearranged steranes, and triaromatic and monoaromatic steroids. Complete lists of PAH, SHC, and petrogeochemical markers are presented in Tables 2-4.

Using a modified EPA Method 8015B, SHC in sediments are quantified as total extractable materials (C9-C44) and as concentrations of n-alkanes (C9-C40) and selected (C15-C20) acyclic isoprenoids (e.g., pristane and phytane). A diluted Alaska North Slope (ANS) crude standard sample, collected in 2020, was run in parallel to sediment samples and used for forensic purposes.

Surrogates are novel or deuterated compounds added in known amounts to each raw sample to assess the efficiency of extraction and analysis by their final percent recovery. Surrogate recoveries are considered acceptable if they are between 50-130%. Surrogate percent recovery concentrations are acceptable across all analytes analyzed. One lab-performance quality control (QC) measure is the EPA-formulated, statistically derived, analyte-specific Method Detection Limit (MDL) that EPA defines as “the minimum measured concentration of a substance that can be reported with 99 percent confidence that the measured concentration is distinguishable from method blank results.” Alpha Analytics Laboratory’s method detection limits (MDLs) for hydrocarbons exceed the performance of most commercial labs and are within the lower detection limits needed for forensic purposes. Duplicate sediment and tissue samples were run for method QC and precision assessment.

### 1.2.2. Seawater Sampled by Passive Sampling Device

To remove any biofouling (e.g., periphyton or particulates), the PSD strips were cleaned in the laboratory by light scrubbing and sequential washing in 1 N HCl, 18 MΩ\*cm water, and twice with isopropanol, then dried. PSDs were extracted twice at room temperature with 200 mL n-hexane before the volume was reduced. 82 PAHs were quantified on a modified

Agilent 7890 gas chromatograph (GC) and Agilent 7000 triple quadrupole mass spectrometer. The internal standard, Perylene-D12, was added to each sample or parallel aliquots of bioassay samples immediately before analyses. Calculating freely dissolved water concentration of organic compounds was done following the lab-specific SOP. Continuing calibration verification (CV) analysis was performed at the start and end of every analytical batch (maximum of 15 samples). CVs met FSES data quality objectives (DQOs) with an average of 98% of the target analytes within 30% of the known value. Instrument blanks were analyzed after each CV, and in all cases, FSES DQOs were met for all target analytes. An over-spike analysis was performed to demonstrate instrument accuracy where the sample was spiked with target compounds post-extraction. The average percent recovery was 92.2%, meeting FSES DQOs.

### 1.3. Data Analysis

Data analysis and management were done using the R statistical program (R Core Team 2021). Briefly, data were reformatted to allow for individual locations and analytes to be accessed, and analysis nomenclature was reconciled against the historical dataset. All data with concentrations reported as “non-detect” by Alpha Analytics were removed for summary purposes. However, detected values under the method detection concentration were retained if no other issues were reported with the value. Any sample with matrix interference (i.e., “G” lab flag) was removed from the analysis for matrix interference. For sediment analysis, samples with negative detection and matrix interference were plotted for forensic determination. A select group of commonly used analytes was plotted to ease interpretation at the author’s discretion and ordered using previously used LTEMP standards when possible. Method detection limits were plotted for sediment (Figures 2-7) and tissue samples (Figures 8-21). Corrections for dry weight, total organic carbon, and lipid content are reported in the tables and text when appropriate. Data from multiple labs were merged to compare historical data (Auke Bay Lab, NewFields/Alpha Analytical, and GERG).

Passive sampling device data were extracted and merged into a single dataset. Common lab flags were “B” for background correction applied broadly to Naphthalene and Fluorene and “J”, which is close to the detection level and therefore estimated. For summary purposes, all data with concentrations reported as “non-detect” by FSES were not included in summary calculations and figures, though the qualitative data was included in tables for transparency purposes. PAH profiles were plotted for individual replicates for all sites (Figures 22-24).

### 1.4. Toxicological Interpretations

Multiple avenues were used to investigate the possibility of toxicological effects as no single standard exists, and development in the field of ecotoxicology is rapid. The most commonly accepted method is summing a select group of PAHs. This includes 44, 42, 16, and other specific PAHs, referred to as summed ( $\Sigma$ ) PAHs due to the various methods used. This metric is similar to the Total PAH metric used before the BP Deepwater Horizon oil spill in 2010, but accounts for the complex mixture and multitude of calculations that can

be used. Calculations were made of the relative proportion on low (2–3 ring) and high (4–6 ring) molecular weight PAHs as well as sum totals of known carcinogenic PAHs (i.e., benzo(a)pyrene, benz(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-c,d)pyrene).

Furthermore, these values were adjusted for dry and lipid weights for mussel tissues to aid in cross-study comparisons. Sediment values were compared to acute and chronic EPA sediment-quality benchmarks (Table 5), and tissue concentrations were compared against the most recently available published literature and concentration-of-concern guidelines, as appropriate (Table 6). Seawater samples are treated similarly (Table 8). Concentrations were compared to other field measurements across similar environments (sub-arctic, temperate fjord systems), areas with moderate human activity converted for wet or dry weight in tissues as appropriate, other lab studies with analogous aims as LTEMP (e.g., monitoring of ongoing petroleum operations, sublethal effects, chronic exposure).

Saturated hydrocarbons and petrogeochemical biomarkers were not a focus of toxicological interpretations as they are not known to have specific modes of toxic action.

## 1.5. Source Identification, Petroleum Fingerprinting, and Biomarker Analysis

Source identification through petroleum fingerprinting and petrogeochemical markers analysis was performed using ANS whole crude oil collected in 2020, and was run as laboratory standard with 2024 samples. For accurate comparisons, the ANS chemical profile is displayed for each replicate sediment sample (Figure 2-7). Profiles were scaled to C2-naphthobenzothiophenes for PAHs, T19-hopane for petrogeochemical markers, and n-heptacosane (C27) for saturated hydrocarbons to aid in interpretation. Profiles were qualitatively evaluated for the best match between individual replicates and potential ANS source using practices outlined in previous LTEMP reports (Payne and Driskell 2021; Wang et al. 2014; Stout and Wang 2016). ANS crude oil profile line is shown for illustrative purposes and does not suggest continuity between measured points where an analyte specific result is not available. Biomarkers in tissues were displayed in tabular form as few analytes were detected (Table 8). Common hydrocarbon diagnostic ratios of low and high molecular weight PAHs and petrogeochemical biomarkers were calculated for sediments and tissue samples for quantitative source identification (Table 9).

## 2. TABLES

**Table 1. Long-Term Monitoring Program sites sampled in 2024 for subtidal marine sediments, Pacific blue mussels and deployment/retrieval of the passive sampling devices. Coordinates are displayed in the WGS84 datum.**

Site	Latitude	Longitude	Matrix
AMT-S	61.0906	-146.3928	Sediment
GOC-S	61.1242	-146.4906	Sediment
AMT-B	61.0903	-146.4092	Pacific Blue Mussel Tissue
JAC-B	61.0901	-146.3757	Pacific Blue Mussel Tissue
GOC-B	61.1244	-146.4961	Pacific Blue Mussel Tissue
RED-B	61.1237	-146.3532	Pacific Blue Mussel Tissue
AIB-B	59.8792	-149.6569	Pacific Blue Mussel Tissue
WIB-B	59.2189	-151.5186	Pacific Blue Mussel Tissue
SHH-B	58.5017	-152.6250	Pacific Blue Mussel Tissue
GOC-PSD	61.1243	-146.4947	Water via Passive Sampler Device
JAC-PSD	61.0907	-146.3757	Water via Passive Sampler Device
AMT-PSD	61.0914	-146.4092	Water via Passive Sampler Device

Table 2. Analytes quantified in marine subtidal sediments of the 2024 Long-Term Environmental Monitoring Program

Analysis	Analyte	Analysis	Analyte
8270E-SIM(M)	cis/trans-Decalin	8270E-SIM(M)	17a(H)-Diahopane (X)
8270E-SIM(M)	C1-Decalins	8270E-SIM(M)	30-Normoretane (T17)
8270E-SIM(M)	C2-Decalins	8270E-SIM(M)	18a(H)&18b(H)-Oleananes (T18)
8270E-SIM(M)	C3-Decalins	8270E-SIM(M)	Moretane (T20)
8270E-SIM(M)	C4-Decalins	8270E-SIM(M)	30-Homohopane-22S (T21)
8270E-SIM(M)	Naphthalene	8270E-SIM(M)	30-Homohopane-22R (T22)
8270E-SIM(M)	C1-Naphthalenes	8270E-SIM(M)	Gammacerane/C32-Diahopane
8270E-SIM(M)	C2-Naphthalenes	8270E-SIM(M)	30,31-Bishomohopane-22S (T26)
8270E-SIM(M)	C3-Naphthalenes	8270E-SIM(M)	30,31-Bishomohopane-22R (T27)
8270E-SIM(M)	C4-Naphthalenes	8270E-SIM(M)	30,31-Trishomohopane-22S (T30)
8270E-SIM(M)	2-Methylnaphthalene	8270E-SIM(M)	30,31-Trishomohopane-22R (T31)
8270E-SIM(M)	1-Methylnaphthalene	8270E-SIM(M)	Tetrakishomohopane-22S (T32)
8270E-SIM(M)	Benzothiophene	8270E-SIM(M)	Tetrakishomohopane-22R (T33)
8270E-SIM(M)	C1-Benzo(b)thiophenes	8270E-SIM(M)	Pentakishomohopane-22S (T34)
8270E-SIM(M)	C2-Benzo(b)thiophenes	8270E-SIM(M)	Pentakishomohopane-22R (T35)
8270E-SIM(M)	C3-Benzo(b)thiophenes	8270E-SIM(M)	13b(H),17a(H)-20S-Diacholestane (S4)
8270E-SIM(M)	C4-Benzo(b)thiophenes	8270E-SIM(M)	13b(H),17a(H)-20R-Diacholestane (S5)
8270E-SIM(M)	Biphenyl	8270E-SIM(M)	13b,17a-20S-Methyldiacholestane (S8)
8270E-SIM(M)	C26 Tricyclic Terpane-22S (T6b)	8270E-SIM(M)	17a(H)20SC27/C29dia
8270E-SIM(M)	C26 Tricyclic Terpane-22R (T6c)	8270E-SIM(M)	17a(H)20rc27/C29dia
8270E-SIM(M)	C28 Tricyclic Terpane-22S (T7)	8270E-SIM(M)	Unknown Sterane (S18)
8270E-SIM(M)	C28 Tricyclic Terpane-22R (T8)	8270E-SIM(M)	13a,17b-20S-Ethylcholestane (S19)
8270E-SIM(M)	C29 Tricyclic Terpane-22S (T9)	8270E-SIM(M)	14a,17a-20S-Methylcholestane (S20)
8270E-SIM(M)	C29 Tricyclic Terpane-22R (T10)	8270E-SIM(M)	14a,17a-20R-Methylcholestane (S24)
8270E-SIM(M)	18a-22,29,30-Trisnorneohopane-TS (T11)	8270E-SIM(M)	14a(H),17a(H)-20S-Ethylcholestane (S25)
8270E-SIM(M)	C30 Tricyclic Terpane-22S	8270E-SIM(M)	14a(H),17a(H)-20R-Ethylcholestane (S28)
8270E-SIM(M)	C30 Tricyclic Terpane-22R	8270E-SIM(M)	14b(H),17b(H)-20R-Cholestane (S14)
8270E-SIM(M)	17a(H)-22,29,30-Trisnorhopane-TM	8270E-SIM(M)	14b(H),17b(H)-20S-Cholestane (S15)
8270E-SIM(M)	17a/b,21b/a 28,30-Bisnorhopane (T14a)	8270E-SIM(M)	14b,17b-20R-Methylcholestane (S22)
8270E-SIM(M)	17a(H),21b(H)-25-Norhopane (T14b)	8270E-SIM(M)	14b,17b-20S-Methylcholestane (S23)
8270E-SIM(M)	30-Norhopane (T15)	8270E-SIM(M)	14b(H),17b(H)-20R-Ethylcholestane (S26)
8270E-SIM(M)	18a(H)-30-Norneohopane-C29Ts (T16)	8270E-SIM(M)	14b(H),17b(H)-20S-Ethylcholestane (S27)
8270E-SIM(M)	C26,20R+C27,20S TAS		
8270E-SIM(M)	C28,20S TAS		

Table 2. Analytes quantified in marine subtidal sediments of the 2024 Long-Term Environmental Monitoring Program

Analysis	Analyte	Analysis	Analyte
8270E-SIM(M)	C27,20R TAS	8270E-SIM(M)	2-Methylantracene (2MA)
8270E-SIM(M)	C28,20R TAS	8270E-SIM(M)	9/4-Methylphenanthrene (9MP)
8270E-SIM(M)	3-Methylphenanthrene (3MP)	8270E-SIM(M)	1-Methylphenanthrene
8270E-SIM(M)	1-Methylphenanthrene (1MP)	8270E-SIM(M)	C1-Phenanthrenes/Anthracenes
8270E-SIM(M)	C24 Tetracyclic Terpane (T6A)	8270E-SIM(M)	C2-Phenanthrenes/Anthracenes
8270E-SIM(M)	C26 Tricyclic Terpane-22S (T6B)	8270E-SIM(M)	C3-Phenanthrenes/Anthracenes
8270E-SIM(M)	C26 Tricyclic Terpane-22R (T6C)	8270E-SIM(M)	C4-Phenanthrenes/Anthracenes
8270E-SIM(M)	18A-22,29,30-Trisnorhopane-TS (T11)	8270E-SIM(M)	Retene
8270E-SIM(M)	17A(H)-22,29,30-Trisnorhopane-Tm (T12)	8270E-SIM(M)	Anthracene
8270E-SIM(M)	17A/B,21B/A 28,30-Bisnorhopane (T14A)	8270E-SIM(M)	Carbazole
8270E-SIM(M)	18A(H)-30-Norhopane-C29TS (T16)	8270E-SIM(M)	Fluoranthene
8270E-SIM(M)	17A(H)-Diahopane (X)	8270E-SIM(M)	Benzo[b]fluorene
8270E-SIM(M)	Naphthalene-d8	8270E-SIM(M)	Pyrene
8270E-SIM(M)	Phenanthrene-d10	8270E-SIM(M)	C1-Fluoranthenes/Pyrenes
8270E-SIM(M)	2,6-Dimethylnaphthalene	8270E-SIM(M)	C2-Fluoranthenes/Pyrenes
8270E-SIM(M)	Dibenzofuran	8270E-SIM(M)	C3-Fluoranthenes/Pyrenes
8270E-SIM(M)	Acenaphthylene	8270E-SIM(M)	C4-Fluoranthenes/Pyrenes
8270E-SIM(M)	Acenaphthene	8270E-SIM(M)	Naphthobenzothiophenes
8270E-SIM(M)	2,3,5-Trimethylnaphthalene	8270E-SIM(M)	C1-Naphthobenzothiophenes
8270E-SIM(M)	Fluorene	8270E-SIM(M)	C2-Naphthobenzothiophenes
8270E-SIM(M)	C1-Fluorenes	8270E-SIM(M)	C3-Naphthobenzothiophenes
8270E-SIM(M)	C2-Fluorenes	8270E-SIM(M)	C4-Naphthobenzothiophenes
8270E-SIM(M)	C3-Fluorenes	8270E-SIM(M)	Benz[a]anthracene
8270E-SIM(M)	Dibenzothiophene	8270E-SIM(M)	Chrysene/Triphenylene
8270E-SIM(M)	4-Methyldibenzothiophene(4MDT)	8270E-SIM(M)	C1-Chrysenes
8270E-SIM(M)	2/3-Methyldibenzothiophene(2MDT)	8270E-SIM(M)	C2-Chrysenes
8270E-SIM(M)	1-Methyldibenzothiophene(1MDT)	8270E-SIM(M)	C3-Chrysenes
8270E-SIM(M)	C1-Dibenzothiophenes	8270E-SIM(M)	C4-Chrysenes
8270E-SIM(M)	C2-Dibenzothiophenes	8270E-SIM(M)	Benzo[b]fluoranthene
8270E-SIM(M)	C3-Dibenzothiophenes	8270E-SIM(M)	Benzo[j]fluoranthene/Benzo[k]fluoranthene
8270E-SIM(M)	C4-Dibenzothiophenes	8270E-SIM(M)	Benzo[a]fluoranthene
8270E-SIM(M)	Phenanthrene	8270E-SIM(M)	Benzo[e]pyrene
8270E-SIM(M)	3-Methylphenanthrene	8270E-SIM(M)	Benzo[a]pyrene
8270E-SIM(M)	2-Methylphenanthrene (2MP)	8270E-SIM(M)	Perylene

**Table 2. Analytes quantified in marine subtidal sediments of the 2024 Long-Term Environmental Monitoring Program**

<b>Analysis</b>	<b>Analyte</b>	<b>Analysis</b>	<b>Analyte</b>
8270E-SIM(M)	Indeno[1,2,3-cd]pyrene	EPA 8015D(M)	Norpristane (1650)
8270E-SIM(M)	Dibenz[a,h]anthracene/Dibenz[a,c]anthracene	EPA 8015D(M)	n-Heptadecane (C17)
8270E-SIM(M)	Benzo[g,h,i]perylene	EPA 8015D(M)	Pristane
8270E-SIM(M)	Hopane (T19)	EPA 8015D(M)	n-Octadecane (C18)
8270E-SIM(M)	C23 Tricyclic Terpane (T4)	EPA 8015D(M)	Phytane
8270E-SIM(M)	C24 Tricyclic Terpane (T5)	EPA 8015D(M)	n-Nonadecane (C19)
8270E-SIM(M)	C25 Tricyclic Terpane (T6)	EPA 8015D(M)	n-Eicosane (C20)
8270E-SIM(M)	C24 Tetracyclic Terpane (T6a)	EPA 8015D(M)	n-Heneicosane (C21)
8270E-SIM(M)	Benzo[a]pyrene-d12	EPA 8015D(M)	n-Docosane (C22)
8270E-SIM(M)	5B(H)Cholane	EPA 8015D(M)	n-Tricosane (C23)
9060A	Total Organic Carbon (Rep1)	EPA 8015D(M)	n-Tetracosane (C24)
9060A	Total Organic Carbon (Rep2)	EPA 8015D(M)	n-Pentacosane (C25)
9060A	Total Organic Carbon (Average)	EPA 8015D(M)	n-Hexacosane (C26)
D6913/D7928	Cobbles	EPA 8015D(M)	n-Heptacosane (C27)
D6913/D7928	% Coarse Gravel	EPA 8015D(M)	n-Octacosane (C28)
D6913/D7928	% Fine Gravel	EPA 8015D(M)	n-Nonacosane (C29)
D6913/D7928	Gravel	EPA 8015D(M)	n-Triacontane (C30)
D6913/D7928	% Coarse Sand	EPA 8015D(M)	n-Hentriacontane (C31)
D6913/D7928	% Medium Sand	EPA 8015D(M)	n-Dotriacontane (C32)
D6913/D7928	% Fine Sand	EPA 8015D(M)	n-Tritriacontane (C33)
D6913/D7928	Sand	EPA 8015D(M)	n-Tetatriacontane (C34)
D6913/D7928	% Silt Fine	EPA 8015D(M)	n-Pentatriacontane (C35)
D6913/D7928	% Clay Fine	EPA 8015D(M)	n-Hexatriacontane (C36)
D6913/D7928	Fines	EPA 8015D(M)	n-Heptatriacontane (C37)
EPA 8015D(M)	Nonane (C9)	EPA 8015D(M)	n-Octatriacontane (C38)
EPA 8015D(M)	Decane (C10)	EPA 8015D(M)	n-Nonatriacontane (C39)
EPA 8015D(M)	Undecane	EPA 8015D(M)	n-Tetracontane (C40)
EPA 8015D(M)	Dodecane (C12)	EPA 8015D(M)	n-Undecane
EPA 8015D(M)	Tridecane	EPA 8015D(M)	Tridecane (C13)
EPA 8015D(M)	2,6,10 Trimethyldodecane (1380)	EPA 8015D(M)	n-Hentatriacontane (C31)
EPA 8015D(M)	n-Tetradecane (C14)	EPA 8015D(M)	Total Petroleum Hydrocarbons (C9-C44)
EPA 8015D(M)	2,6,10-Trimethyltridecane (1470)	EPA 8015D(M)	Total Saturated Hydrocarbons
EPA 8015D(M)	n-Pentadecane (C15)	EPA 8015D(M)	o-terphenyl
EPA 8015D(M)	n-Hexadecane (C16)	EPA 8015D(M)	d50-Tetracosane

Table 3. Analytes quantified in intertidal mussels of the 2024 Long-Term Environmental Monitoring Program

ANALMETH	ANALYTE	ANALMETH ANALYTE	ANALMETH ANALYTE
EPA 8015D(M)	Nonane (C9)	EPA 8015D(I n-Octatriacontane (C38)	8270E-SIM(I 4-Methyldibenzothiophene(4MDT)
EPA 8015D(M)	Decane (C10)	EPA 8015D(I n-Nonatriacontane (C39)	8270E-SIM(I 2/3-Methyldibenzothiophene(2MDT)
EPA 8015D(M)	Undecane	EPA 8015D(I n-Tetracontane (C40)	8270E-SIM(I 1-Methyldibenzothiophene(1MDT)
EPA 8015D(M)	Dodecane (C12)	EPA 8015D(I Total Petroleum Hydrocarbons (C9-C44)	8270E-SIM(I C1-Dibenzothiophenes
EPA 8015D(M)	Tridecane	EPA 8015D(I Total Saturated Hydrocarbons	8270E-SIM(I C2-Dibenzothiophenes
EPA 8015D(M)	2,6,10 Trimethyldodecane (1380)	EPA 8015D(I d50-Tetracosane	8270E-SIM(I C3-Dibenzothiophenes
EPA 8015D(M)	n-Tetradecane (C14)	8270E-SIM( cis/trans-Decalin	8270E-SIM(I C4-Dibenzothiophenes
EPA 8015D(M)	2,6,10-Trimethyltridecane (1470)	8270E-SIM( C1-Decalins	8270E-SIM(I Phenanthrene
EPA 8015D(M)	n-Pentadecane (C15)	8270E-SIM( C2-Decalins	8270E-SIM(I 3-Methylphenanthrene
EPA 8015D(M)	n-Hexadecane (C16)	8270E-SIM( C3-Decalins	8270E-SIM(I 2-Methylphenanthrene (2MP)
EPA 8015D(M)	Norpristane (1650)	8270E-SIM( C4-Decalins	8270E-SIM(I 2-Methylanthracene (2MA)
EPA 8015D(M)	n-Heptadecane (C17)	8270E-SIM( Naphthalene	8270E-SIM(I 9/4-Methylphenanthrene (9MP)
EPA 8015D(M)	Pristane	8270E-SIM( C1-Naphthalenes	8270E-SIM(I 1-Methylphenanthrene
EPA 8015D(M)	n-Octadecane (C18)	8270E-SIM( C2-Naphthalenes	8270E-SIM(I C1-Phenanthrenes/Anthracenes
EPA 8015D(M)	Phytane	8270E-SIM( C3-Naphthalenes	8270E-SIM(I C2-Phenanthrenes/Anthracenes
EPA 8015D(M)	n-Nonadecane (C19)	8270E-SIM( C4-Naphthalenes	8270E-SIM(I C3-Phenanthrenes/Anthracenes
EPA 8015D(M)	n-Eicosane (C20)	8270E-SIM( 2-Methylnaphthalene	8270E-SIM(I C4-Phenanthrenes/Anthracenes
EPA 8015D(M)	n-Heneicosane (C21)	8270E-SIM( 1-Methylnaphthalene	8270E-SIM(I Retene
EPA 8015D(M)	n-Docosane (C22)	8270E-SIM( Benzo(b)thiophene	8270E-SIM(I Anthracene
EPA 8015D(M)	n-Tricosane (C23)	8270E-SIM( C1-Benzo(b)thiophenes	8270E-SIM(I Carbazole
EPA 8015D(M)	n-Tetracosane (C24)	8270E-SIM( C2-Benzo(b)thiophenes	8270E-SIM(I Fluoranthene
EPA 8015D(M)	n-Pentacosane (C25)	8270E-SIM( C3-Benzo(b)thiophenes	8270E-SIM(I Benzo[b]fluorene
EPA 8015D(M)	n-Hexacosane (C26)	8270E-SIM( C4-Benzo(b)thiophenes	8270E-SIM(I Pyrene
EPA 8015D(M)	n-Heptacosane (C27)	8270E-SIM( Biphenyl	8270E-SIM(I C1-Fluoranthenes/Pyrenes
EPA 8015D(M)	n-Octacosane (C28)	8270E-SIM( 2,6-Dimethylnaphthalene	8270E-SIM(I C2-Fluoranthenes/Pyrenes
EPA 8015D(M)	n-Nonacosane (C29)	8270E-SIM( Dibenzofuran	8270E-SIM(I C3-Fluoranthenes/Pyrenes
EPA 8015D(M)	n-Triacontane (C30)	8270E-SIM( Acenaphthylene	8270E-SIM(I C4-Fluoranthenes/Pyrenes
EPA 8015D(M)	n-Hentriacontane (C31)	8270E-SIM( Acenaphthene	8270E-SIM(I Naphthobenzothiophenes
EPA 8015D(M)	n-Dotriacontane (C32)	8270E-SIM( 2,3,5-Trimethylnaphthalene	8270E-SIM(I C1-Naphthobenzothiophenes
EPA 8015D(M)	n-Tritriacontane (C33)	8270E-SIM( Fluorene	8270E-SIM(I C2-Naphthobenzothiophenes
EPA 8015D(M)	n-Tetracontane (C34)	8270E-SIM( C1-Fluorenes	8270E-SIM(I C3-Naphthobenzothiophenes
EPA 8015D(M)	n-Pentatriacontane (C35)	8270E-SIM( C2-Fluorenes	8270E-SIM(I C4-Naphthobenzothiophenes
EPA 8015D(M)	n-Hexatriacontane (C36)	8270E-SIM( C3-Fluorenes	8270E-SIM(I Benz[a]anthracene
EPA 8015D(M)	n-Heptatriacontane (C37)	8270E-SIM( Dibenzothiophene	8270E-SIM(I Chrysene/Triphenylene

Table 3. Analytes quantified in intertidal mussels of the 2024 Long-Term Environmental Monitoring Program

ANALMETH	ANALYTE	ANALMETH ANALYTE	ANALMETH ANALYTE
8270E-SIM(M)	C1-Chrysenes	8270E-SIM( 18a(H)-30-Norneohopane-C29Ts (T16)	NOAA NOS C Percent Lipids
8270E-SIM(M)	C2-Chrysenes	8270E-SIM( 17a(H)-Diahopane (X)	2540G Moisture
8270E-SIM(M)	C3-Chrysenes	8270E-SIM( 30-Normoretane (T17)	
8270E-SIM(M)	C4-Chrysenes	8270E-SIM( 18a(H)&18b(H)-Oleananes (T18)	
8270E-SIM(M)	Benzo[b]fluoranthene	8270E-SIM( Moretane (T20)	
8270E-SIM(M)	Benzo[j]fluoranthene/Benzo[k]fluoranth	8270E-SIM( 30-Homohopane-22S (T21)	
8270E-SIM(M)	Benzo[a]fluoranthene	8270E-SIM( 30-Homohopane-22R (T22)	
8270E-SIM(M)	Benzo[e]pyrene	8270E-SIM( Gammacerane/C32-Diahopane	
8270E-SIM(M)	Benzo[a]pyrene	8270E-SIM( 30,31-Bishomohopane-22S (T26)	
8270E-SIM(M)	Perylene	8270E-SIM( 30,31-Bishomohopane-22R (T27)	
8270E-SIM(M)	Indeno[1,2,3-cd]pyrene	8270E-SIM( 30,31-Trishomohopane-22S (T30)	
8270E-SIM(M)	Dibenz[a,h]anthracene/Dibenz[a,c]anthr	8270E-SIM( 30,31-Trishomohopane-22R (T31)	
8270E-SIM(M)	Benzo[g,h,i]perylene	8270E-SIM( Tetrakishomohopane-22S (T32)	
8270E-SIM(M)	Naphthalene-d8	8270E-SIM( Tetrakishomohopane-22R (T33)	
8270E-SIM(M)	Phenanthrene-d10	8270E-SIM( Pentakishomohopane-22S (T34)	
8270E-SIM(M)	Benzo[a]pyrene-d12	8270E-SIM( Pentakishomohopane-22R (T35)	
8270E-SIM(M)	Hopane (T19)	8270E-SIM( 13b(H),17a(H)-20S-Diacholestane (S4)	
8270E-SIM(M)	C23 Tricyclic Terpane (T4)	8270E-SIM( 13b(H),17a(H)-20R-Diacholestane (S5)	
8270E-SIM(M)	C24 Tricyclic Terpane (T5)	8270E-SIM( 13b,17a-20S-Methylcholestane (S8)	
8270E-SIM(M)	C25 Tricyclic Terpane (T6)	8270E-SIM( 17a(H)20SC27/C29dia	
8270E-SIM(M)	C24 Tetracyclic Terpane (T6a)	8270E-SIM( 17a(H)20rc27/C29dia	
8270E-SIM(M)	C26 Tricyclic Terpane-22S (T6b)	8270E-SIM( Unknown Sterane (S18)	
8270E-SIM(M)	C26 Tricyclic Terpane-22R (T6c)	8270E-SIM( 13a,17b-20S-Ethylcholestane (S19)	
8270E-SIM(M)	C28 Tricyclic Terpane-22S (T7)	8270E-SIM( 14a,17a-20S-Methylcholestane (S20)	
8270E-SIM(M)	C28 Tricyclic Terpane-22R (T8)	8270E-SIM( 14a,17a-20R-Methylcholestane (S24)	
8270E-SIM(M)	C29 Tricyclic Terpane-22S (T9)	8270E-SIM( 14a(H),17a(H)-20S-Ethylcholestane (S25)	
8270E-SIM(M)	C29 Tricyclic Terpane-22R (T10)	8270E-SIM( 14a(H),17a(H)-20R-Ethylcholestane (S28)	
8270E-SIM(M)	18a-22,29,30-Trisnorhopane-TS (T1)	8270E-SIM( 14b(H),17b(H)-20R-Cholestane (S14)	
8270E-SIM(M)	C30 Tricyclic Terpane-22S	8270E-SIM( 14b(H),17b(H)-20S-Cholestane (S15)	
8270E-SIM(M)	C30 Tricyclic Terpane-22R	8270E-SIM( 14b,17b-20R-Methylcholestane (S22)	
8270E-SIM(M)	17a(H)-22,29,30-Trisnorhopane-TM	8270E-SIM( 14b,17b-20S-Methylcholestane (S23)	
8270E-SIM(M)	17a/b,21b/a 28,30-Bisnorhopane (T14a)	8270E-SIM( 14b(H),17b(H)-20R-Ethylcholestane (S26)	
8270E-SIM(M)	17a(H),21b(H)-25-Norhopane (T14b)	8270E-SIM( 14b(H),17b(H)-20S-Ethylcholestane (S27)	
8270E-SIM(M)	30-Norhopane (T15)	8270E-SIM( 5B(H)Cholane	

Table 4. Analytes quantified in seawater by passive sampling device of the 2024 Long-Term Environmental Monitoring Program

Analysis Method	Analytes	Analysis Met	Analytes	Analysis Met	Analytes
GC-MS/MS	1,2-dimethylnaphthalene	GC-MS/MS	Benzo[e]pyrene	GC-QQQ	C1-naphthalenes
GC-MS/MS	1,4-dimethylnaphthalene	GC-MS/MS	Benzo[ghi]perylene	GC-QQQ	C1-naphthalenes
GC-MS/MS	1,5-dimethylnaphthalene	GC-MS/MS	Benzo[j]fluoranthene	GC-QQQ	C1-phenanthrenes&anthracenes
GC-MS/MS	1,6and1,3-Dimethylnaphthalene	GC-MS/MS	Benzo[k]fluoranthene	GC-QQQ	C2-benz[a]anthracenes&chrysenes&triphenylenes
GC-MS/MS	1,8-dimethylnaphthalene	GC-MS/MS	Chrysene	GC-QQQ	C2-dibenzothiophenes
GC-MS/MS	1-methylnaphthalene	GC-MS/MS	Coronene	GC-QQQ	C2-fluoranthenes&pyrenes
GC-MS/MS	1-methylphenanthrene	GC-MS/MS	Cyclopenta[cd]pyrene	GC-QQQ	C2-fluorenes
GC-MS/MS	1-methylpyrene	GC-MS/MS	Dibenzo[a,e]fluoranthene	GC-QQQ	C2-naphthalenes
GC-MS/MS	2,3-dimethylantracene	GC-MS/MS	Dibenzo[a,e]pyrene	GC-QQQ	C2-phenanthrenes&C2-anthracenes
GC-MS/MS	2,6-diethylnaphthalene	GC-MS/MS	Dibenzo[a,h]anthracene	GC-QQQ	C3-dibenzothiophenes
GC-MS/MS	2,6-dimethylnaphthalene	GC-MS/MS	Dibenzo[a,h]pyrene	GC-QQQ	C3-fluorenes
GC-MS/MS	2-ethylnaphthalene	GC-MS/MS	Dibenzo[a,i]pyrene	GC-QQQ	C3-naphthalenes
GC-MS/MS	2-methylantracene	GC-MS/MS	Dibenzo[a,l]pyrene	GC-QQQ	C3-phenanthrenes&anthracenes
GC-MS/MS	2-methylnaphthalene	GC-MS/MS	Dibenzo[e,l]pyrene	GC-QQQ	C4-naphthalenes
GC-MS/MS	2-methylphenanthrene	GC-MS/MS	Dibenzothiophene	GC-QQQ	C4-phenanthrenes&C4-anthracenes
GC-MS/MS	3,6-dimethylphenanthrene	GC-MS/MS	Fluoranthene		
GC-MS/MS	5-methylchrysene	GC-MS/MS	Fluorene		
GC-MS/MS	6-methylchrysene	GC-MS/MS	Indeno[1,2,3-cd]pyrene		
GC-MS/MS	7,12-dimethylbenz[a]anthracene	GC-MS/MS	Naphthalene		
GC-MS/MS	9,10-dimethylantracene	GC-MS/MS	Naphtho[1,2-b]fluoranthene		
GC-MS/MS	9-methylantracene	GC-MS/MS	Naphtho[2,3-a]pyrene		
GC-MS/MS	Acenaphthene	GC-MS/MS	Naphtho[2,3-b]fluoranthene		
GC-MS/MS	Acenaphthylene	GC-MS/MS	Naphtho[2,3-e]pyrene		
GC-MS/MS	Anthanthrene	GC-MS/MS	Naphtho[2,3-j]andNaphtho[1,2-k]fluoranthene		
GC-MS/MS	Anthracene	GC-MS/MS	Naphtho[2,3-k]fluoranthene		
GC-MS/MS	Benz[a]anthracene	GC-MS/MS	Perylene		
GC-MS/MS	Benz[j]and[e]aceanthrylene	GC-MS/MS	Phenanthrene		
GC-MS/MS	Benzo[a]chrysene	GC-MS/MS	Pyrene		
GC-MS/MS	Benzo[a]fluorene	GC-MS/MS	Retene		
GC-MS/MS	Benzo[a]pyrene	GC-MS/MS	Triphenylene		
GC-MS/MS	Benzo[b]fluoranthene	GC-QQQ	C1-benz[a]anthracenes&chrysenes&triphenylenes		
GC-MS/MS	Benzo[b]fluorene	GC-QQQ	C1-dibenzothiophenes		
GC-MS/MS	Benzo[b]perylene	GC-QQQ	C1-fluoranthenes&pyrenes		
GC-MS/MS	Benzo[c]fluorene	GC-QQQ	C1-fluorenes		

Table 5. Sediment PAH loads and toxicity comparisons from 2024 samples.

Analyte (ng/g dry weight)	GOC-S-							Threshold Effect Level (CCME/NOAA)	Acute Potency Divisor (µg/kg Organic Carbon) <sup>5</sup>	Chronic Potency Divisor (µg/kg Organic Carbon) <sup>5</sup>
	AMT-S-24-1	AMT-S-24-2	AMT-S-24-3	GOC-S-24-1	GOC-S-24-2	GOC-S-24-3	24-2-DUP			
Naphthalene	2.560	2.060	1.710	1.380	0.937	1.680	0.737	34.6	1600000	385000
C1-Naphthalenes	1.970	1.450	1.810	0.929	0.641	1.030	0.471		1850000	444000
C2-Naphthalenes	3.000	3.340	3.530	1.410	1.100	2.150	0.942		2120000	510000
C3-Naphthalenes	2.740	3.030	3.200	1.370	0.768	1.650	0.815		2420000	581000
C4-Naphthalenes	2.320	2.370	2.570	-	-	-	-		2730000	657000
Acenaphthylene	1.640	1.080	0.226	0.147	0.120	0.187	0.048	5.87	1880000	452000
Acenaphthene	1.390	0.632	1.240	0.516	0.379	0.492	0.292	6.71	2040000	491000
Fluorene	2.120	1.240	2.270	0.720	0.558	0.876	0.407		2240000	538000
C1-Fluorenes	1.790	2.020	2.240	0.953	0.640	1.090	0.486		2540000	611000
C2-Fluorenes	2.540	2.550	2.500	-	-	1.440	-		2850000	686000
C3-Fluorenes	-	-	-	-	-	-	-		3200000	769000
Dibenzothiophene	0.580	0.688	1.050	0.267	0.146	0.252	0.119	-	-	-
C1-Dibenzothiophenes	0.802	0.891	1.060	0.347	0.178	0.298	0.163	-	-	-
C2-Dibenzothiophenes	2.880	2.760	3.430	0.636	-	0.726	-	-	-	-
C3-Dibenzothiophenes	4.090	3.960	5.150	-	-	-	-	-	-	-
C4-Dibenzothiophenes	3.010	3.400	4.070	-	-	-	-	-	-	-
Phenanthrene	5.400	6.150	11.400	2.060	1.480	2.400	1.110	86.7	2480000	596000
C1-Phenanthrenes/Anthracenes	3.420	5.460	5.170	1.180	0.698	1.440	0.638		2790000	670000
C2-Phenanthrenes/Anthracenes	4.630	5.340	5.420	1.410	-	1.110	-		3100000	746000
C3-Phenanthrenes/Anthracenes	4.430	4.220	5.470	-	-	-	-		3450000	829000
C4-Phenanthrenes/Anthracenes	2.740	-	3.140	-	-	-	-		3790000	912000
Anthracene	2.220	2.170	2.540	0.180	0.129	0.288	0.129	46.9	2470000	594000
Fluoranthene	4.700	11.100	9.440	1.210	1.070	1.710	0.782	113	2940000	707000
Pyrene	4.150	9.020	7.280	0.801	0.740	1.250	0.546	153	2900000	697000
C1-Fluoranthenes/Pyrenes	5.340	6.180	4.970	0.924	0.606	1.110	0.514		3200000	770000
C2-Fluoranthenes/Pyrenes	3.940	5.100	3.850	0.804	1.230	1.060	0.874	-	-	-
C3-Fluoranthenes/Pyrenes	3.960	3.680	4.960	-	-	-	-	-	-	-
C4-Fluoranthenes/Pyrenes	4.460	4.140	4.820	-	-	-	-	-	-	-
Benz[a]anthracene	4.680	3.310	3.370	0.219	0.160	0.369	0.101	74.8	3500000	841000
Chrysene/Triphenylene	5.630	6.260	5.950	0.515	0.458	0.878	0.302	108	3510000	844000
C1-Chrysenes	3.330	3.080	3.170	0.479	0.336	0.698	0.332		3870000	929000
C2-Chrysenes	3.280	3.230	3.970	-	-	-	-		4200000	1010000
C3-Chrysenes	-	9.460	10.200	-	-	-	-		4620000	1110000
C4-Chrysenes	-	-	-	-	-	-	-		5030000	1210000
Benzo[b]fluoranthene	5.460	3.410	2.830	0.483	0.374	0.870	0.216		4070000	979000
Benzo[j]fluoranthene/										
Benzo[k]fluoranthene	4.420	3.030	2.390	0.297	0.200	0.607	0.173		4080000	981000
Benzo[e]pyrene	2.920	2.750	2.510	0.395	0.286	0.736	0.262		4020000	967000
Benzo[a]pyrene	4.210	2.320	2.620	0.182	0.150	0.501	-	88.8	4020000	965000
Indeno[1,2,3-cd]pyrene	3.010	1.680	1.880	0.218	0.147	0.924	0.130		4620000	1110000

Table 5. Sediment PAH loads and toxicity comparisons from 2024 samples.

Analyte (ng/g dry weight)	AMT-S- 24-1	AMT-S- 24-2	AMT-S- 24-3	GOC-S- 24-1	GOC-S- 24-2	GOC-S- 24-3	GOC-S- 24-2- DUP	Threshol d Effect Level (CCME/ NOAA)	Acute Potency Divisor (µg/kg Organic Carbon) <sup>5</sup>	Chronic Potency Divisor (µg/kg Organic Carbon) <sup>5</sup>
Dibenz[a,h]anthracene/ Dibenz[a,c]anthracene	2.190	0.669	0.659	0.122	0.133	0.856	0.099	6.22	4660000	1120000
Benzo[g,h,i]perylene	3.220	1.990	2.340	0.205	0.185	0.811	0.102		4540000	1090000
Total Organic Carbon (Average)	0.485	0.557	0.518	0.472	0.494	0.533	-	-		
Sum 42 PAH (ng/g dry weight )	125.17	135.22	146.41	20.36	13.85	29.49	10.79			
Sum 42 PAH (ng/g DOC corrected)	258.09	242.76	282.64	43.13	28.03	55.33	-			
Sum 16 PAH <sup>1</sup> (ng/g dry weight)	57.00	56.12	58.15	9.26	7.22	14.70	5.17			
Sum low molecular weight PAH <sup>2</sup> (ng/g)	44.91	43.11	54.44	12.26	7.45	15.83	6.08			
Sum high molecular weight PAH <sup>3</sup> (ng/g)	65.98	77.66	74.70	6.46	5.79	11.64	4.17			
% low molecular weight PAH	40%	36%	42%	65%	56%	58%	59%			
% high molecular weight PAH	60%	64%	58%	35%	44%	42%	41%			
Sum of Carcinogenic PAH <sup>4</sup> (ng/g dry weight)	32.820	22.669	22.039	2.241	1.807	5.816	1.123			
Sum of 9 PAHs	37.220	44.000	46.820	5.590	4.519	9.131	3.202	1684		
1- 16 EPA Priority PAHs - naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo[a]anthracene, chrysene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, benzo[g,h,i]perylene, indeno[1,2,3-c,d]pyrene, and dibenz[a,h]anthracene										
2- Low molecular weight PAHs : naphthalenes - phenanthrenes (2-3-ring PAH)										
3- High molecular weight PAHs: fluoranthene - benzo (g,h,i)perylene (3-6 ring PAH)										
4 - Carcinogenic PAHs: benzo[a]pyrene, benz[a]anthracene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenz[a,h]anthracene, indeno[1,2,3-cd]pyrene										

Table 6. Mussel Tissue PAH loads from 2024 LTEMP samples.

ANALYTE (ng/g)	RED-B-24-		RED-B-24-		RED-B-24-		JAC-B-24-		JAC-B-24-		JAC-B-24-		AMT-B-24-		AMT-B-24-		AMT-B-24-		GOC-B-24-		GOC-B-24-		GOC-B-24-		SHH-B-24-	
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2
1 Naphthalene		0.526	0.435	0.666	0.909	0.843	0.734	0.603	0.481	0.541	0.655	0.408	0.617	0.606												
2 C1-Naphthalenes		0.451	0.478	0.571	0.528	0.613	0.487	0.397	-	0.375	0.821	0.31	0.614	0.394												
3 C2-Naphthalenes	-	-	-	-	1.26	-	-	-	-	-	-	-	-	0.88												
4 C4-Naphthalenes	-	-	-	-	1.17	-	-	-	-	-	-	-	-	0.704												
5 C3-Naphthalenes	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
6 Biphenyl		0.324	0.34	0.42	0.528	0.336	0.437	0.24	-	0.286	0.548	0.224	-	0.342												
7 Dibenzofuran		0.613	0.651	0.759	0.504	0.158	-	0.14	-	-	-	0.198	-	0.519												
8 Acenaphthylene		0.175	0.314	0.202	0.071	-	-	0.189	-	-	-	-	-	0.051												
9 Acenaphthene		0.731	0.611	0.66	0.306	-	-	-	-	-	-	-	-	0.33												
10 Fluorene		0.763	0.627	0.631	0.841	-	0.334	0.199	-	0.279	-	0.311	-	0.933												
11 C1-Fluorenes	-	-	-	-	0.433	-	-	-	-	-	-	-	-	0.404												
12 C2-Fluorenes	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
13 Dibenzothiophene		0.37	0.346	0.357	0.708	-	0.093	-	0.337	0.08	0.177	0.06	0.234	0.51												
14 C1-Dibenzothiophenes	-	-	-	-	0.356	-	-	-	-	-	-	-	-	0.343												
15 C2-Dibenzothiophenes	-	-	-	-	0.871	-	-	-	-	-	-	-	-	0.901												
16 C3-Dibenzothiophenes	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
17 C4-Dibenzothiophenes	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
18 Phenanthrene		5.66	4.8	5.16	4.35	0.977	0.979	0.994	0.955	0.933	1.46	1.05	1.24	3.58												
19 C1-Phenanthrenes/Anthracenes		1.76	1.57	1.72	0.812	-	-	-	-	-	-	-	-	2.45												
20 C3-Phenanthrenes/Anthracenes	-	-	-	-	1.1	-	-	-	-	-	-	-	-	0.786												
21 C2-Phenanthrenes/Anthracenes	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
22 C4-Phenanthrenes/Anthracenes	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
23 Anthracene		0.458	0.498	0.491	0.294	-	-	-	-	-	-	-	-	0.228												
24 Fluoranthene		8.01	6.34	7.11	2.17	0.441	0.496	0.534	0.33	0.386	0.667	0.622	0.578	1.71												
25 Benzo[b]fluorene		0.802	0.389	0.618	0.067	-	-	-	-	-	-	-	-	-												
26 Pyrene		3.96	2.71	2.89	0.626	0.133	0.229	0.37	0.311	0.155	0.311	0.267	0.4	0.458												
27 C1-Fluoranthenes/Pyrenes		3.01	2.44	2.57	0.587	-	-	-	-	-	-	-	-	-												
28 C2-Fluoranthenes/Pyrenes	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
29 C3-Fluoranthenes/Pyrenes	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
30 Naphthobenzothiophenes		1.25	1.06	1	0.137	-	-	-	-	-	-	-	-	0.078												
31 C1-Naphthobenzothiophenes	-	-	0.905	-	-	-	-	-	-	-	-	-	-	-												
32 C2-Naphthobenzothiophenes	-	-	1.64	-	-	-	-	-	-	-	-	-	-	-												
33 Benz[a]anthracene		2.05	1.93	2.16	0.126	-	-	0.171	-	-	-	0.06	-	0.046												
34 Chrysene/Triphenylene		3.45	3.46	3.38	0.256	0.165	0.236	0.482	0.278	0.168	0.246	0.233	0.243	0.194												
35 C1-Chrysenes		0.873	0.789	0.745	0.235	-	-	-	-	-	-	-	-	-												
36 Benzo[b]fluoranthene		1.37	1.41	1.46	0.115	-	-	0.593	-	-	-	-	-	0.061												
37 Benzo[j]fluoranthene/Benzo[k]fluoranthene		1.29	1.11	1.31	0.077	-	-	0.319	-	-	-	-	-	-												
38 Benzo[e]pyrene		0.983	0.779	0.957	0.112	-	-	0.414	-	-	-	-	-	-												
39 Benzo[g,h,i]perylene		0.232	0.248	0.415	0.148	-	-	0.505	-	-	-	-	-	0.114												
40 Benzo[a]pyrene	-	-	0.338	0.528	0.076	-	-	-	-	-	-	-	-	-												
41 Indeno[1,2,3-cd]pyrene	-	-	0.192	0.31	0.118	-	-	0.361	-	-	-	-	-	0.055												
42 Carbazole	-	-	-	-	0.386	-	-	-	-	-	-	-	-	0.413												
43 Perylene	-	-	-	-	0.147	-	-	-	-	-	-	-	-	0.168												
44 Dibenz[a,h]anthracene/Dibenz[a,c]anthracene	-	-	-	-	0.087	-	-	-	-	-	-	-	-	-												
45 Retene	-	-	-	-	-	-	-	-	-	-	-	-	-	-												

**Table 6. Mussel Tissue PAH loads from 2024 LTEMP samples.**

ANALYTE (ng/g)	RED-B-24-	RED-B-24-	RED-B-24-	JAC-B-24-	JAC-B-24-	JAC-B-24-	AMT-B-24-	AMT-B-24-	AMT-B-24-	GOC-B-24-	GOC-B-24-	GOC-B-24-	SHH-B-24-
	1	2	3	1	2	3	1	2	3	1	2	3	1
Percent Lipids (%)	1.64	2.11	2.25	1.54	1.69	1.74	2.04	1.84	1.78	1.92	1.5	2.01	1.81
Moisture (%)	85	85.9	85.5	83	86	85.4	85.3	84.9	85.1	85.8	83.4	84.8	84.5
Sum 42 PAH (ng/g wet weight )	36.55	31.47	34.55	17.02	3.17	3.50	6.13	2.36	2.84	4.16	3.26	3.69	14.15
Sum 42 PAH ( ng/g dry weight)	5.48	4.44	5.01	2.89	0.44	0.51	0.90	0.36	0.42	0.59	0.54	0.56	2.19
Sum 42 PAH (ng/g lipid corrected)	2228.90	1491.37	1535.73	1105.26	187.69	200.86	300.54	127.99	159.38	216.67	217.40	183.68	781.88
Sum 16 PAH <sup>1</sup> (ng/g wet weight)	28.68	25.02	27.37	10.57	2.56	3.01	5.32	2.36	2.46	3.34	2.95	3.08	8.37
Sum 16 PAH <sup>1</sup> (ng/g dry weight)	4.30	3.53	3.97	1.80	0.36	0.44	0.78	0.36	0.37	0.47	0.49	0.47	1.30
Sum low molecular weight PAH <sup>2</sup> (ng/g wet weight)	10.52	9.33	10.10	12.07	2.43	2.53	2.38	1.44	2.13	2.94	2.08	2.47	11.35
Sum high molecular weight PAH <sup>3</sup> (ng/g wet weight)	26.03	22.14	24.45	4.95	0.74	0.96	3.75	0.92	0.71	1.22	1.18	1.22	2.81
% low molecular weight PAH	29%	30%	29%	71%	77%	73%	39%	61%	75%	71%	64%	67%	80%
% high molecular weight PAH	71%	70%	71%	29%	23%	27%	61%	39%	25%	29%	36%	33%	20%
Sum of Carcinogenic PAH <sup>4</sup> (ng/g wet weight)	8.16	8.44	9.148	0.855	0.165	0.236	1.926	0.278	0.168	0.246	0.293	0.243	0.356

1 16 EPA Priority PAHs - naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo[a]anthracene, chrysene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene

2 Low molecular weight PAHs : naphthalenes - phenanthrenes (2-3-ring PAH)

3 High molecular weight PAHs: fluoranthene - benzo (g,h,i)perylene (3-6 ring PAH)

4 Carcinogenic PAHs: benzo[a]pyrene, benz[a]anthracene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenz[a,h]anthracene,

Table 6. Mussel Tissue PAH loads from 2024 LTEMP samples.

ANALYTE (ng/g)	SHH-B-24-	SHH-B-24-	AIB-B-24-	AIB-B-24-	AIB-B-24-	WIB-B-24-	WIB-B-24-	WIB-B-24-
	2	3	1	2	3	1	2	3
1 Naphthalene	0.635	0.716	0.915	0.622	0.739	0.827	1.13	2.25
2 C1-Naphthalenes	0.565	0.563	0.566	0.454	0.516	0.589	0.709	1.2
3 C2-Naphthalenes	-	-	1.04	-	-	-	1.3	-
4 C4-Naphthalenes	-	-	1.16	-	-	-	-	-
5 C3-Naphthalenes	-	-	-	-	-	-	-	-
6 Biphenyl	0.398	0.453	0.456	0.479	0.438	0.514	0.578	1.12
7 Dibenzofuran	0.822	0.396	0.927	0.32	0.377	0.343	1.23	1.09
8 Acenaphthylene	-	-	0.051	-	-	-	-	-
9 Acenaphthene	0.104	0.146	0.556	0.153	0.14	0.174	0.73	0.701
10 Fluorene	0.354	0.395	1.73	0.342	0.4	0.348	1.92	1.75
11 C1-Fluorenes	-	-	0.568	-	-	-	0.718	0.792
12 C2-Fluorenes	-	-	1.31	-	-	-	-	-
13 Dibenzothiophene	0.234	0.265	0.751	0.164	0.227	0.235	1.22	1.35
14 C1-Dibenzothiophenes	0.369	0.349	0.412	0.245	0.323	0.378	0.607	0.654
15 C2-Dibenzothiophenes	0.816	0.95	1.15	0.698	0.846	0.81	-	-
16 C3-Dibenzothiophenes	-	-	-	-	-	-	-	-
17 C4-Dibenzothiophenes	-	-	-	-	-	-	-	-
18 Phenanthrene	1.9	2.42	5.15	1.76	2.03	1.97	6.76	6.75
19 C1-Phenanthrenes/Anthracenes	1.14	0.938	5.83	0.954	0.97	0.981	13	4.59
20 C3-Phenanthrenes/Anthracenes	-	-	1.24	-	-	-	1.21	-
21 C2-Phenanthrenes/Anthracenes	-	-	-	-	-	-	-	-
22 C4-Phenanthrenes/Anthracenes	1.26	-	-	-	-	-	-	-
23 Anthracene	0.135	0.162	0.232	0.111	0.134	0.118	0.37	0.975
24 Fluoranthene	0.699	0.968	2.02	0.575	0.776	0.843	3.28	2.5
25 Benzo[b]fluorene	-	-	0.075	-	-	-	0.189	-
26 Pyrene	0.358	0.488	0.493	0.352	0.346	0.445	0.939	0.798
27 C1-Fluoranthenes/Pyrenes	-	-	-	-	-	-	0.89	-
28 C2-Fluoranthenes/Pyrenes	-	-	-	-	-	-	-	-
29 C3-Fluoranthenes/Pyrenes	-	-	-	-	-	-	-	-
30 Naphthobenzothiophenes	0.062	0.071	0.134	-	0.052	-	0.161	0.15
31 C1-Naphthobenzothiophenes	-	-	-	-	-	-	-	-
32 C2-Naphthobenzothiophenes	-	-	-	-	-	-	-	-
33 Benz[a]anthracene	0.079	0.047	-	0.046	-	0.041	-	-
34 Chrysene/Triphenylene	0.178	0.139	0.202	0.116	0.081	0.135	0.34	0.256
35 C1-Chrysenes	-	-	-	-	-	-	-	-
36 Benzo[b]fluoranthene	-	0.12	-	-	-	-	0.069	-
37 Benzo[j]fluoranthene/Benzo[k]fluoranthene	-	0.091	-	-	-	-	0.065	-
38 Benzo[e]pyrene	-	0.142	0.125	-	-	-	0.156	0.147
39 Benzo[g,h,i]perylene	0.108	0.122	0.127	0.076	0.077	0.306	0.124	0.164
40 Benzo[a]pyrene	-	-	-	-	-	-	-	-
41 Indeno[1,2,3-cd]pyrene	-	-	0.05	-	-	-	0.081	-
42 Carbazole	0.11	0.098	0.481	0.087	0.114	0.11	0.751	0.609
43 Perylene	-	-	-	-	-	0.252	0.194	-
44 Dibenz[a,h]anthracene/Dibenz[a,c]anthracene	-	-	-	-	-	-	-	-
45 Retene	0.418	-	-	-	-	-	-	-

Table 6. Mussel Tissue PAH loads from 2024 LTEMP samples.

ANALYTE (ng/g)	SHH-B-24- 2	SHH-B-24- 3	AIB-B-24- 1	AIB-B-24- 2	AIB-B-24- 3	WIB-B-24- 1	WIB-B-24- 2	WIB-B-24- 3
Percent Lipids (%)	1.5	1.53	2.19	2.46	1.56	2.29	2.69	1.68
Moisture (%)	84.3	84.3	83.2	83.1	82.4	83.4	80.7	78.9
Sum 42 PAH (ng/g wet weight)	7.52	7.46	23.44	5.56	6.21	7.03	34.17	22.87
Sum 42 PAH (ng/g dry weight)	1.18	1.17	3.94	0.94	1.09	1.17	6.60	4.83
Sum 42 PAH (ng/g lipid corrected)	501.00	487.39	1070.32	226.06	398.01	306.94	1270.41	1361.49
Sum 16 PAH <sup>1</sup> (ng/g wet weight)	4.55	5.81	11.53	4.15	4.72	5.21	15.81	16.14
Sum 16 PAH <sup>1</sup> (ng/g dry weight)	0.71	0.91	1.94	0.70	0.83	0.86	3.05	3.41
Sum low molecular weight PAH <sup>2</sup> (ng/g wet weight)	6.09	5.34	20.35	4.40	4.93	5.01	27.85	19.01
Sum high molecular weight PAH <sup>3</sup> (ng/g wet weight)	1.42	2.12	3.09	1.17	1.28	2.02	6.33	3.87
% low molecular weight PAH	81%	72%	87%	79%	79%	71%	81%	83%
% high molecular weight PAH	19%	28%	13%	21%	21%	29%	19%	17%
Sum of Carcinogenic PAH <sup>4</sup> (ng/g wet weight)	0.257	0.397	0.252	0.162	0.081	0.176	0.555	0.256
1 16 EPA Priority PAHs - naphthalene, acenaphthylene, benzo[a]pyrene, benzo[g,h,i]perylene, indeno[1,2,3-c,d]pyrene, and dibenz[a,h]anthracene								
2 Low molecular weight PAHs : naphthalenes - phenanthrenes								
3 High molecular weight PAHs: fluoranthene - benzo[a]pyrene - benzo[a]anthracene								
4 Carcinogenic PAHs: benzo[a]pyrene, benz[a]anthracene, dibenz[a,h]anthracene, and benzo[g,h,i]perylene								

Table 7. 2024 Water PAH concentrations quantified via passive sampling device

Analyte (ng/L C free)	GOC-PSD-24-1	GOC-PSD-24-2	GOC-PSD-24-3	JAC-PSD-24-1	JAC-PSD-24-2	JAC-PSD-24-3	AMT-PSD-24-1	AMT-PSD-24-2	AMT-PSD-24-3
Naphthalene	23.5	< 0.0387 U	36	0.998	3.44	1.07	0.317	0.457	0.415
C1-naphthalenes	0.333	28.3	0.652	0.103	0.322	9.19E-02	0.168	0.203	0.242
C2-naphthalenes	0.399	25.5	0.86	0.3	0.424	0.243	0.371	0.564	0.483
C3-naphthalenes	1.29	74.6	3.63	0.904	1.06	0.536	1	1.66	1.34
C4-naphthalenes	1.68	99.2	5.36	1.52	1.43	0.808	1.41	2.32	2.24
Acenaphthylene	< 0.0150 U	< 0.0148 U	< 0.0183 U	< 0.0177 U	< 0.0160 U	< 0.0158 U	< 0.0181 U	< 0.0217 U	< 0.0195 U
Acenaphthene	0.201	< 0.00718 U	0.305	8.79E-02	9.17E-02	8.03E-02	6.79E-02	< 0.0103 U	0.133
Fluorene	0.22	0.243	0.393	9.26E-02	9.20E-02	6.89E-02	7.97E-02	9.63E-02	8.12E-02
C1-fluorenes	0.239	0.542	0.524	8.56E-02	0.181	7.21E-02	0.146	0.154	4.38E-02
C2-fluorenes	0.567	0.651	1.67	0.358	0.266	0.205	0.224	0.32	0.298
C4-fluorenes	0.502	0.535	1.52	0.215	0.208	0.16	0.172	0.286	0.249
C3-fluorenes	-	-	-	-	-	-	-	-	-
Anthracene	< 0.00236 U	< 0.00227 U	< 0.00391 U	< 0.00371 U	< 0.00298 U	< 0.00290 U	< 0.00394 U	< 0.00528 U	< 0.00447 U
Phenanthrene	0.328	0.378	0.723	0.312	0.239	0.225	0.241	0.29	0.26
C1-phenanthrenes&anthracenes	0.242	0.239	0.623	0.139	0.104	9.18E-02	0.115	0.143	0.141
C2-phenanthrenes&anthracenes	0.763	0.889	2.34	0.387	0.265	0.246	0.3	0.356	0.333
C3-phenanthrenes&anthracenes	1.14	1.25	3.12	0.44	0.399	0.315	0.417	0.727	0.538
C4-phenanthrenes&anthracenes	< 0.127 U	< 0.118 U	< 0.269 U	< 0.251 U	< 0.186 U	< 0.178 U	< 0.274 U	< 0.394 U	< 0.320 U
Dibenzothiophene	2.25E-02	2.61E-02	5.37E-02	1.98E-02	1.71E-02	1.42E-02	1.59E-02	0.02	1.79E-02
C1-dibenzothiophenes	9.58E-02	0.101	0.178	4.37E-02	3.88E-02	3.17E-02	3.26E-02	4.75E-02	3.93E-02
C2-dibenzothiophenes	0.132	4.40E-02	0.246	4.23E-02	3.42E-02	2.68E-02	2.18E-02	4.62E-02	4.68E-02
C3-dibenzothiophenes	< 0.0251 U	< 0.0243 U	< 0.0403 U	< 0.0382 U	< 0.0311 U	< 0.0303 U	< 0.0404 U	< 0.0537 U	< 0.0455 U
C4-dibenzothiophenes	-	-	-	-	-	-	-	-	-

1-4: See Tables 5 &amp; 6

Table 7. 2024 Water PAH concentrations quantified via passive sampling device

Analyte (ng/L C free)	GOC-PSD-24-1	GOC-PSD-24-2	GOC-PSD-24-3	JAC-PSD-24-1	JAC-PSD-24-2	JAC-PSD-24-3	AMT-PSD-24-1	AMT-PSD-24-2	AMT-PSD-24-3
Fluoranthene	0.177	0.171	0.445	9.27E-02	7.13E-02	6.48E-02	4.58E-02	6.04E-02	4.98E-02
Pyrene	6.06E-02	6.03E-02	0.152	3.26E-02	2.55E-02	2.63E-02	2.52E-02	3.27E-02	2.52E-02
fluoranthenes&pyren	6.10E-02	5.61E-02	0.145	1.89E-02	1.10E-02	1.26E-02	1.62E-02	3.81E-02	2.33E-02
fluoranthenes&pyren	< 0.00171 U	< 0.00161 U	< 0.00348 U	< 0.00326 U	< 0.00245 U	< 0.00235 U	< 0.00354 U	< 0.00503 U	< 0.00412 U
fluoranthenes&pyren	-	-	-	-	-	-	-	-	-
fluoranthenes&pyren	-	-	-	-	-	-	-	-	-
Benz[a]anthracene	< 0.000974 U	< 0.000910 U	< 0.00204 U	< 0.00191 U	< 0.00141 U	< 0.00136 U	< 0.00209 U	< 0.00298 U	< 0.00244 U
Perylene	< 0.00154 U	< 0.00143 U	< 0.00324 U	< 0.00304 U	< 0.00224 U	< 0.00215 U	< 0.00332 U	< 0.00474 U	< 0.00388 U
Benzo[b]fluoranthene	5.28E-03	4.14E-03	1.20E-02	< 0.000949 U	< 0.000700 U	< 0.000673 U	< 0.00104 U	< 0.00148 U	< 0.00121 U
Benzo[e]pyrene	< 0.00120 U	< 0.00112 U	< 0.00252 U	< 0.00236 U	< 0.00174 U	< 0.00167 U	< 0.00258 U	< 0.00369 U	< 0.00302 U
Benzo[a]pyrene	< 0.00172 U	< 0.00161 U	< 0.00363 U	< 0.00340 U	< 0.00251 U	< 0.00241 U	< 0.00372 U	< 0.00531 U	< 0.00435 U
Benzo[j]fluoranthene	< 0.000812 U	< 0.000758 U	< 0.00171 U	< 0.00160 U	< 0.00118 U	< 0.00113 U	< 0.00175 U	< 0.00250 U	< 0.00205 U
Benzo[k]fluoranthene	< 0.000768 U	< 0.000717 U	< 0.00162 U	< 0.00152 U	< 0.00112 U	< 0.00107 U	< 0.00166 U	< 0.00236 U	< 0.00194 U
Indeno[1,2,3-cd]pyrene	< 0.000506 U	< 0.000472 U	< 0.00107 U	< 0.00100 U	< 0.000737 U	< 0.000708 U	< 0.00109 U	< 0.00156 U	< 0.00128 U
Sum 42 PAHs	31.95818	232.78964	58.9517	6.1921	8.7196	4.3894	5.1861	7.8212	6.9993
Sum 42 PAH w/o									
Naphthalene	4.756	5.190	12.450	2.367	2.044	1.641	1.920	2.617	2.279
Sum 16 PAHs <sup>1</sup>	24.492	0.856	38.030	1.616	3.960	1.535	0.777	0.936	0.964
Sum low molecular weight PAH <sup>2</sup>	31.654	232.498	58.198	6.048	8.612	4.286	5.099	7.690	6.901
Sum high molecular weight PAH <sup>3</sup>	0.304	0.292	0.754	0.144	0.108	0.104	0.087	0.131	0.098
Percent low molecular weight PAH	0.990	0.999	0.987	0.977	0.988	0.976	0.983	0.983	0.986
Percent high molecular weight PAH	0.010	0.001	0.013	0.023	0.012	0.024	0.017	0.017	0.014
Sum of Carcinogenic PAHs <sup>4</sup>	0.005	0.004	0.012	0.000	0.000	0.000	0.000	0.000	0.000
Analyte Count	21	19	21	20	20	20	20	19	20
Percent Naphthalene	0.851	0.978	0.789	0.618	0.766	0.626	0.630	0.665	0.674

<sup>1-4</sup>: See Tables 5 6

**Table 8. Mussel tissue biomarkers from 2024 LTEMP samples. All positive analyte detections are reported for every sample with positive detections (i.e., not all samples had positive detections).**

ANALYTE	RED-B-	RED-B-	RED-B-	JAC-B-	JAC-B-	JAC-B-	GOC-B-	SHH-	SHH-	SHH-	AIB-	AIB-	AIB-	WIB-	WIB-	WIB-
	24-1	24-2	24-3	24-1	24-2	24-3	24-3	B-24-	B-24-	B-24-	B-24-	B-24-	B-24-	B-24-	B-24-	B-24-
	1	2	3	1	2	3		1	2	3	1	2	3	1	2	3
1 Hopane (T19)	1.82	1.6	1.55	0.649	0.483	0.624	-	0.73	0.5	-	-	-	-	-	-	-
2 C23 Tricyclic Terpane (T4)	0.397	0.456	0.462	-	-	-	-	-	-	-	-	-	-	-	-	-
3 C24 Tricyclic Terpane (T5)	0.208	0.193	0.203	-	-	-	-	-	-	-	-	-	-	-	-	-
4 C24 Tetracyclic Terpane (T6a)	0.348	0.263	0.281	-	-	-	-	-	-	-	-	-	-	-	-	-
5 18a-22,29,30-Trisnorhopane-TS (T11)	0.513	0.389	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 30-Norhopane (T15)	1.09	1.49	0.958	0.523	-	0.373	-	-	-	-	-	-	-	-	-	-
7 30-Homohopane-22S (T21)	0.766	0.833	0.519	-	-	-	-	-	-	-	-	-	-	-	-	-
8 30,31-Bishomohopane-22S (T26)	3.14	3.71	3.9	2.93	3.52	2.1	-	4.96	3.86	5.13	4.72	5.49	4	5.11	5.42	4.7
9 13b(H),17a(H)-20S-Diacholestane (S4)	0.263	0.219	0.299	-	-	-	-	0.07	-	-	-	-	-	-	-	-
10 13b(H),17a(H)-20R-Diacholestane (S5)	0.202	0.168	0.119	-	-	-	-	-	-	-	-	-	-	-	-	-
11 17a(H)20SC27/C29dia	0.58	0.503	0.603	-	0.232	0.217	-	0.16	0.15	-	0.26	0.21	0.34	-	-	-
12 17a(H)20rc27/C29dia	0.688	0.652	0.747	0.159	0.186	0.224	0.218	0.18	0.16	0.15	-	0.26	0.18	-	-	-
13 14a,17a-20R-Methylcholestane (S24)	0.506	0.484	0.508	-	-	-	-	-	-	-	-	-	-	-	-	-
14 14a(H),17a(H)-20S-Ethylcholestane (S25)	0.202	0.29	0.209	-	-	-	-	-	-	-	-	-	-	-	-	-
15 14a(H),17a(H)-20R-Ethylcholestane (S28)	0.479	0.762	0.52	-	-	-	-	-	-	-	-	-	-	-	-	-
16 14b(H),17b(H)-20R-Cholestane (S14)	0.263	0.245	0.299	-	-	-	-	-	-	-	-	-	-	-	-	-
17 14b(H),17b(H)-20S-Cholestane (S15)	0.297	0.29	0.287	-	-	-	-	-	-	-	-	-	-	-	-	-
18 14b,17b-20R-Methylcholestane (S22)	0.337	0.297	0.251	-	-	-	-	-	-	-	-	-	-	-	-	-
19 14b,17b-20S-Methylcholestane (S23)	0.344	0.4	0.37	-	-	-	-	-	-	-	-	-	-	-	-	-
20 14b(H),17b(H)-20R-Ethylcholestane (S26)	0.425	0.406	0.478	-	-	-	-	-	-	-	-	-	-	-	-	-
21 14b(H),17b(H)-20S-Ethylcholestane (S27)	0.29	0.413	0.263	-	-	-	-	-	-	-	-	-	-	-	-	-
22 18a(H)-30-Norhopane-C29Ts (T16)	-	0.436	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 13b,17a-20S-Methyldiacholestane (S8)	-	0.239	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 14a,17a-20S-Methylcholestane (S20)	-	0.258	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Count	21	24	20	4	4	5	1	5	4	2	1	3	3	2	1	1

Table 9. Diagnostic Ratios for petroleum fingerprinting in marine sediment, intertidal mussel tissue, and seawater sampled by PSD for all replicates of the 2024 LTEMP campaign.

SAMPID	Matrix	Total Petroleum Hydrocarbons (C9-C44 ng/g)	Total Saturated Hydrocarbons (µg/g)	Ratio of T15/T19 <sup>1</sup>	Ratio of Pristane/ Phytane <sup>2</sup>	Ratio of Pristane/ C17 <sup>3</sup>	Ratio of Phytane/ C18 <sup>4</sup>	ANT/(ANT+ PHE) <sup>5</sup>	ΣLMW/ΣHMW <sup>6</sup>	FL/(FL + PYR) <sup>7</sup>	FLA/(FLA + PY R) <sup>8</sup>
Whole ANS Crude Oil		563000	77351.80	0.557	1.729	0.863	0.578	0.000	-	0.848	0.213
Cutoff Value (s)								0.100	1.000	0.500	0.400
1 AMT-S-24-1	Sediment	25.10	1.270	0.569	1.400	0.412	0.455	0.291	0.681	0.338	0.531
2 AMT-S-24-2	Sediment	33.90	1.490	0.572	3.750	0.714	0.235	0.261	0.555	0.121	0.552
3 AMT-S-24-3	Sediment	37.10	1.390	0.543	2.400	0.545	0.250	0.182	0.729	0.238	0.565
4 GOC-S-24-1	Sediment	21.90	1.020	0.575	6.333	1.462	0.429	0.080	1.897	0.473	0.602
5 GOC-S-24-2	Sediment	8.45	0.942	0.755	1.667	0.714	0.375	0.080	1.287	0.430	0.591
6 GOC-S-24-3	Sediment	27.10	1.310	0.709	15.000	4.615	0.364	0.107	1.360	0.412	0.578
7 GOC-S-24-2-DUP	Sediment	8.20	0.769	0.771	1.333	0.667	0.500	0.104	1.456	0.427	0.589
8 RED-B-24-1	Tissue	7.30	0.615	0.599	4.167	0.962	0.667	0.586	0.404	0.162	0.669
9 RED-B-24-2	Tissue	8.65	1.220	0.931	5.167	0.795	0.600	0.569	0.422	0.188	0.701
10 RED-B-24-3	Tissue	5.84	1.120	0.618	5.500	1.031	0.600	0.579	0.413	0.179	0.711
11 JAC-B-24-1	Tissue	1.43	0.652	0.806	0.465	2.323	31.000	0.333	2.441	0.573	0.776
12 JAC-B-24-2	Tissue	7.39	1.320	3.188	1.208	5.636	15.400	0.311	3.292	-	0.768
13 JAC-B-24-3	Tissue	5.26	0.722	0.598	0.477	1.850	8.158	0.336	2.637	0.593	0.684
14 AMT-B-24-1	Tissue	6.14	0.811	-	1.007	4.667	17.000	0.349	0.635	0.350	0.591
15 AMT-B-24-2	Tissue	4.44	0.592	-	0.427	2.792	19.625	0.257	1.563	-	0.515
16 AMT-B-24-3	Tissue	6.60	0.808	-	0.955	5.172	19.625	0.293	3.001	0.643	0.713
17 GOC-B-24-1	Tissue	4.51	0.570	-	0.245	0.897	14.300	0.314	2.399	-	0.682
18 GOC-B-24-2	Tissue	4.18	0.533	-	0.160	0.793	20.571	0.372	1.759	0.538	0.700
19 GOC-B-24-3	Tissue	4.49	0.664	-	0.369	1.625	20.143	0.318	2.024	-	0.591
20 SHH-B-24-1	Tissue	11.30	1.030	2.138	0.503	1.857	22.143	0.323	4.043	0.671	0.789
21 SHH-B-24-2	Tissue	5.51	1.200	3.072	0.431	1.886	30.600	0.269	4.285	0.497	0.661
22 SHH-B-24-3	Tissue	3.86	0.613	-	0.525	2.594	26.333	0.286	2.522	0.447	0.665
23 AIB-B-24-1	Tissue	4.97	1.110	-	1.286	10.909	35.000	0.282	6.581	0.778	0.804
24 AIB-B-24-2	Tissue	4.64	1.220	-	2.577	7.529	7.450	0.246	3.773	0.493	0.620
25 AIB-B-24-3	Tissue	3.44	1.020	-	1.148	5.182	21.286	0.277	3.851	0.536	0.692
26 WIB-B-24-1	Tissue	5.21	1.800	-	25.200	3.150	0.714	0.300	2.476	0.439	0.655
27 WIB-B-24-2	Tissue	3.72	0.996	-	0.653	4.683	26.727	0.327	4.401	0.672	0.777
28 WIB-B-24-3	Tissue	5.14	1.860	-	0.371	3.676	33.364	0.270	4.918	0.687	0.758

**Table 9. Diagnostic Ratios for petroleum fingerprinting in marine sediment, intertidal mussel tissue, and seawater sampled by PSD for all replicates of the 2024 LTEMP campaign.**

SAMPID	Matrix	Total Petroleum Hydrocarbons (C9-C44 ng/g)	Total Saturated Hydrocarbons (μg/g)	Ratio of T15/T19 <sup>1</sup>	Ratio of Pristane/Phytane <sup>2</sup>	Ratio of Pristane/C17 <sup>3</sup>	Ratio of Phytane/C18 <sup>4</sup>	ANT/(ANT+PHE) <sup>5</sup>	ΣLMW/ΣHMW <sup>6</sup>	FL/(FL + PYR) <sup>7</sup>	FLA/(FLA + PYR) <sup>8</sup>
29 GOC-PSD-24-1	Water PSD	31.958	-	-	-	-	-	0.000	104.167	0.784	0.745
30 GOC-PSD-24-2	Water PSD	232.790	-	-	-	-	-	0.000	797.483	0.801	0.739
31 GOC-PSD-24-3	Water PSD	58.952	-	-	-	-	-	0.000	77.185	0.721	0.745
32 JAC-PSD-24-1	Water PSD	6.192	-	-	-	-	-	0.000	41.941	0.740	0.740
33 JAC-PSD-24-2	Water PSD	8.720	-	-	-	-	-	0.000	79.887	0.783	0.737
34 JAC-PSD-24-3	Water PSD	4.389	-	-	-	-	-	0.000	41.328	0.724	0.711
35 AMT-PSD-24-1	Water PSD	5.186	-	-	-	-	-	0.000	58.474	0.760	0.645
36 AMT-PSD-24-2	Water PSD	7.821	-	-	-	-	-	0.000	58.613	0.747	0.649
37 AMT-PSD-24-3	Water PSD	6.999	-	-	-	-	-	0.000	70.203	0.763	0.664

<sup>1</sup> T15-Norhopane to T19-Hopane is a diagnostic ratio that identifies crude oil presence

<sup>2</sup> Higher values are indicative of greater marine biogenic sources over oil

<sup>3</sup> Higher values are indicative of greater weathering for oil and biogenic mixtures

<sup>4</sup> Higher values are indicative of oil-derived material and microbial degradation of the straight-chain alkanes

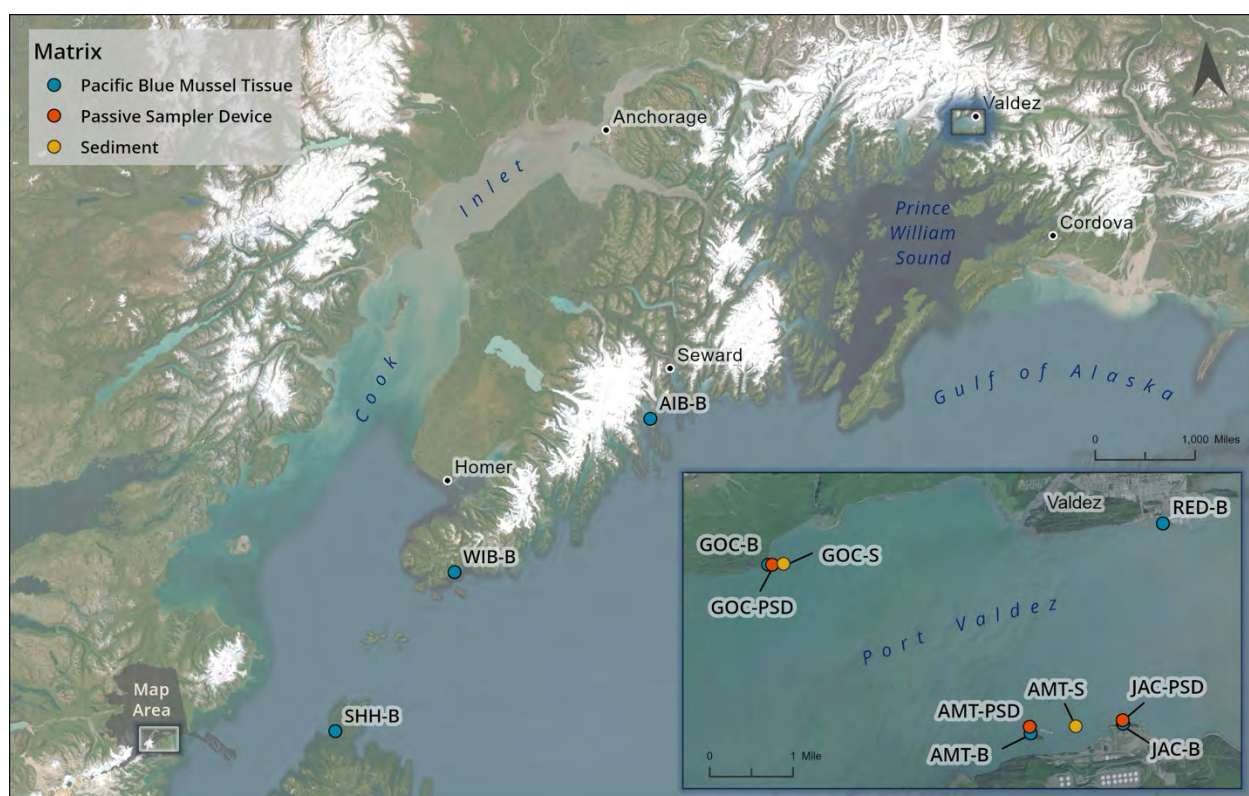
<sup>5</sup> Ratio of Anthracene to Anthracene+Phenanthrene is indicative of petrogenic sources with values <0.1 and pyrogenic with values >0.1 (Pies et al 2008)

<sup>6</sup> ΣLMW/ΣHMW; A higher prevalence of low molecular weight PAHs compared to high molecular weight PAHs (e.g., values >1) indicates petrogenic sources (Zang et al 2008)

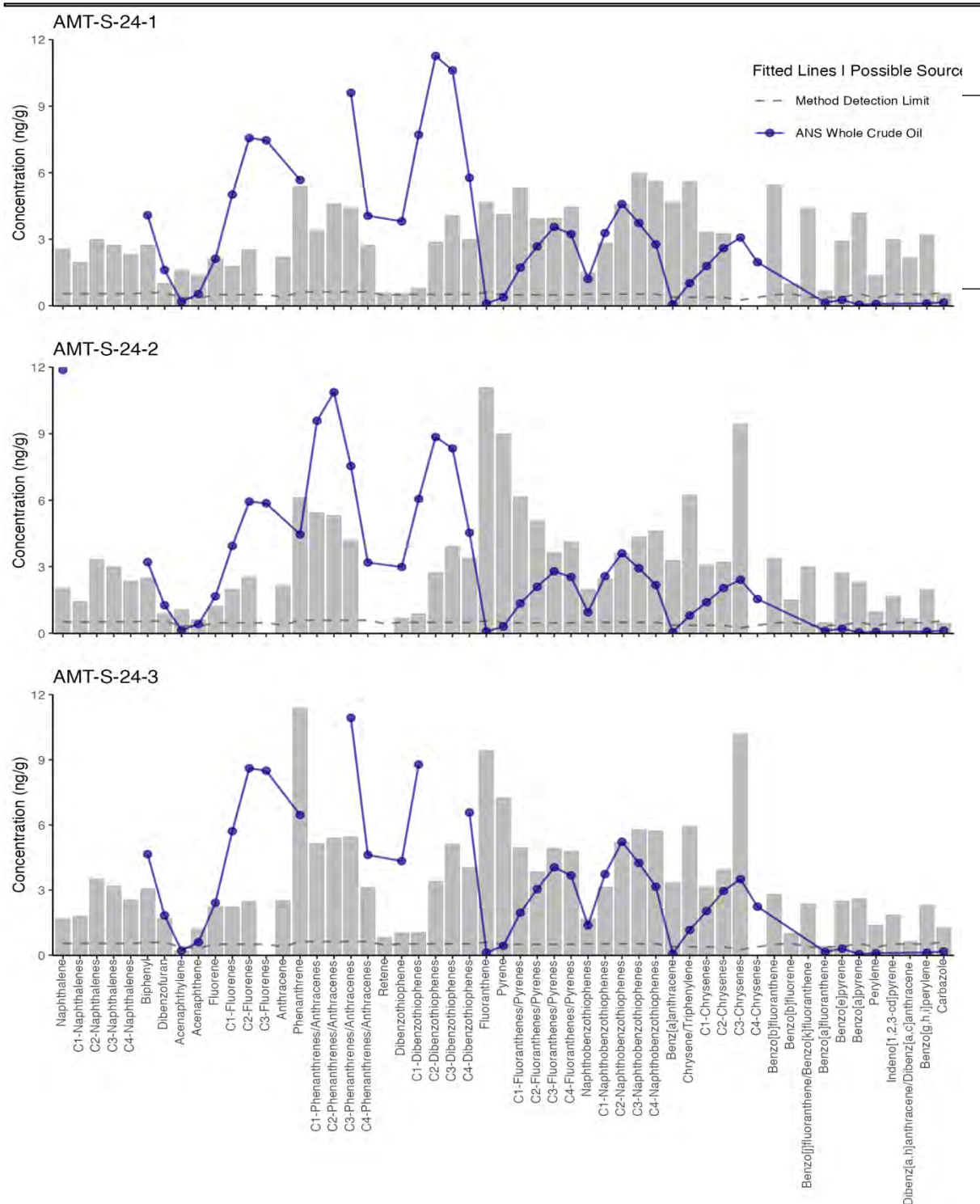
<sup>7</sup> FL/(FL + PYR); Flourene and pyrene ratios indicate types of emissions with values <0.5 suggesting petrol while values >0.5 diesel (Ravindra et al. 2008b)

<sup>8</sup> FLA/(FLA + PYR); Flouranthene and Pyrene ratios indicate types of combustion with values >0.4 indicating wood and coal combustion (De La Torre-Roche et al., 2009)

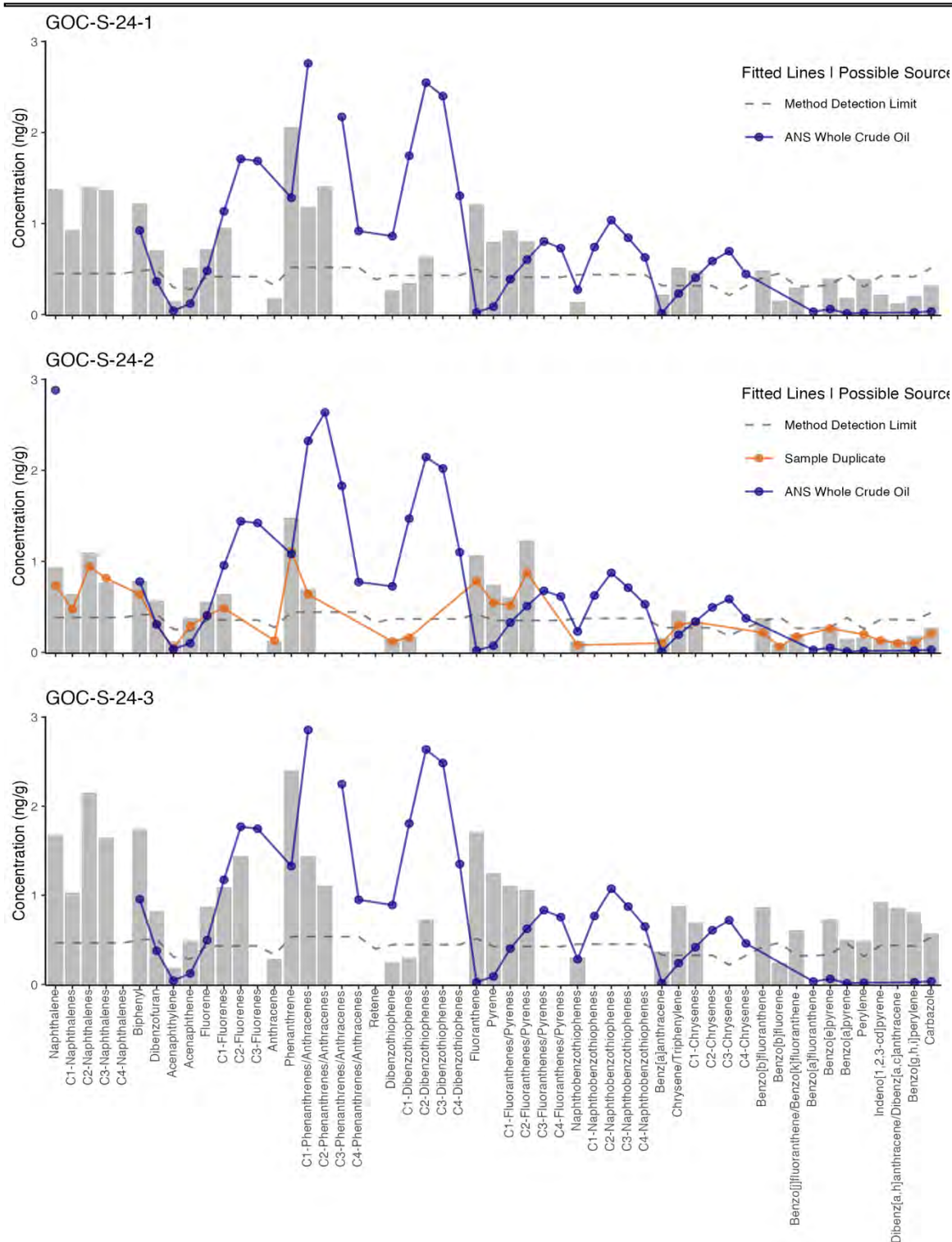
### 3. FIGURES



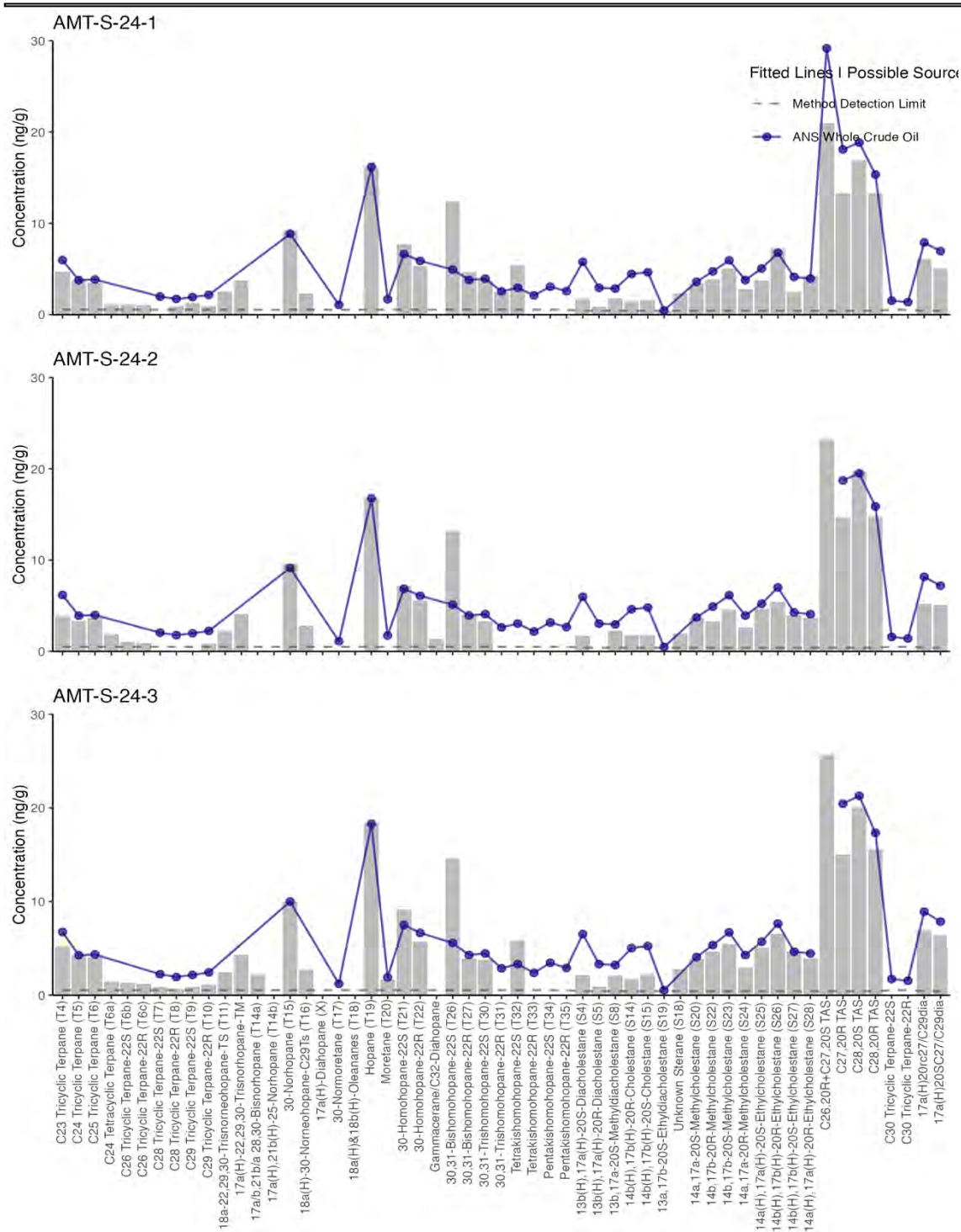
**Figure 1.** Long-Term Environmental Monitoring Program sites from the 2024 campaign.



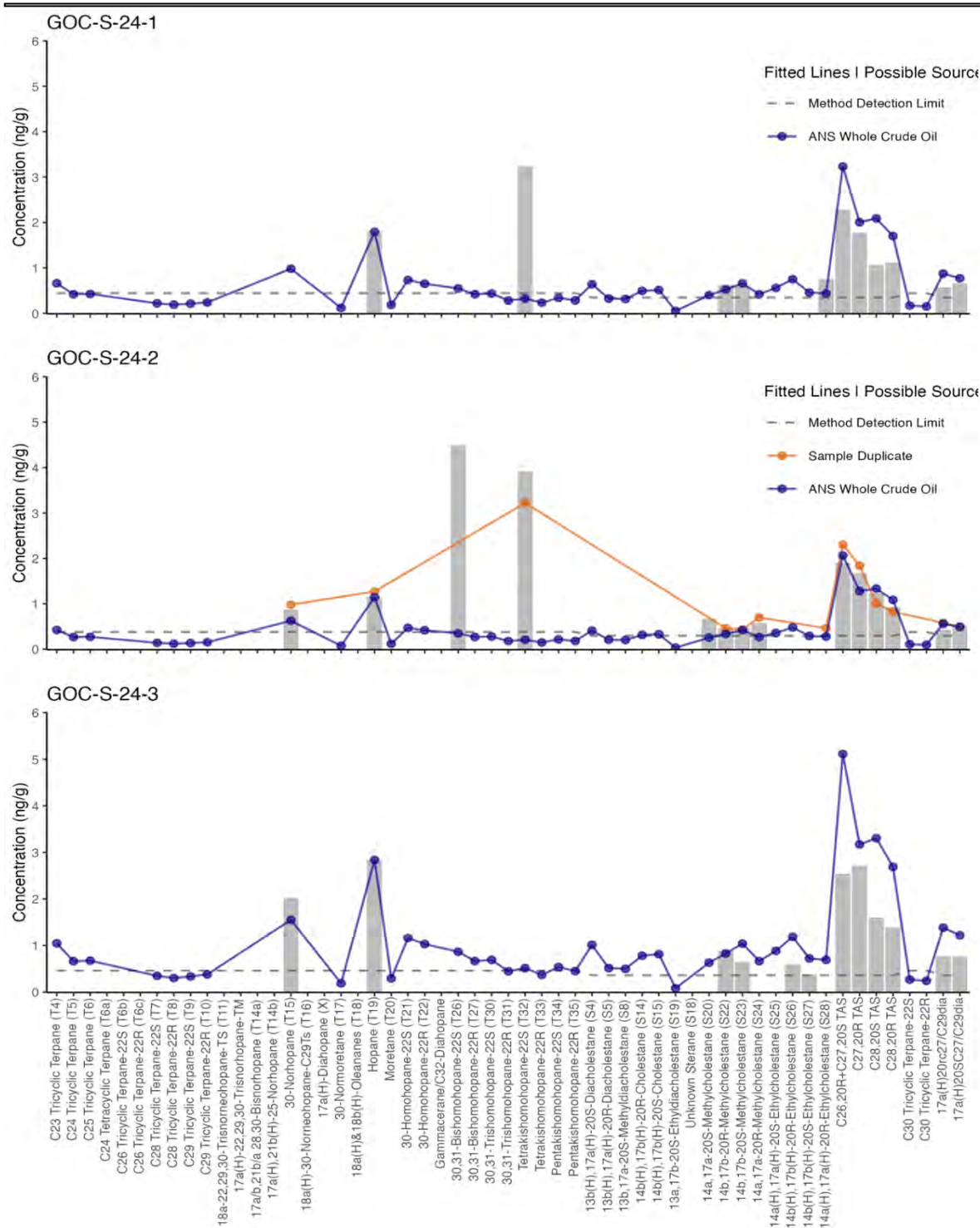
**Figure 2.** 2024 PAH profiles from individual sediment samples at the Valdez Marine Terminal (AMT) with the ANS potential source profile and the analyte-specific method detection limit superimposed as different lines. ANS profile lines are scaled to C2-Naphthobenzothiophenes and represent data only where points are present.



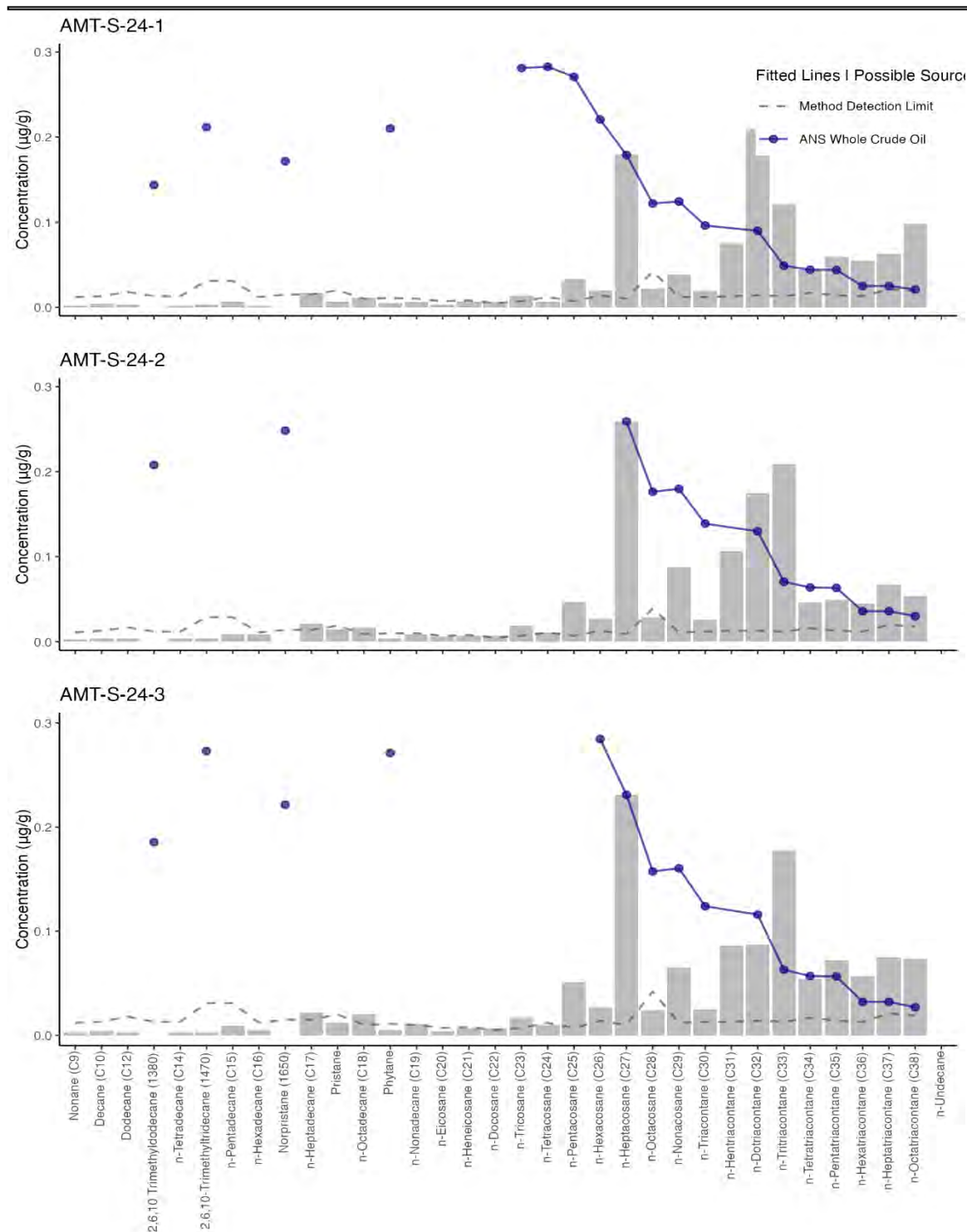
**Figure 3.** 2024 PAH profiles from individual sediment samples at the Gold Creek (GOC) reference site with the ANS potential source profile, sample duplicate, the analyte-specific method detection limit superimposed as different lines. ANS profile lines are scaled to Naphthobenzothiophenes in the third replicate and represent data only where points are present.



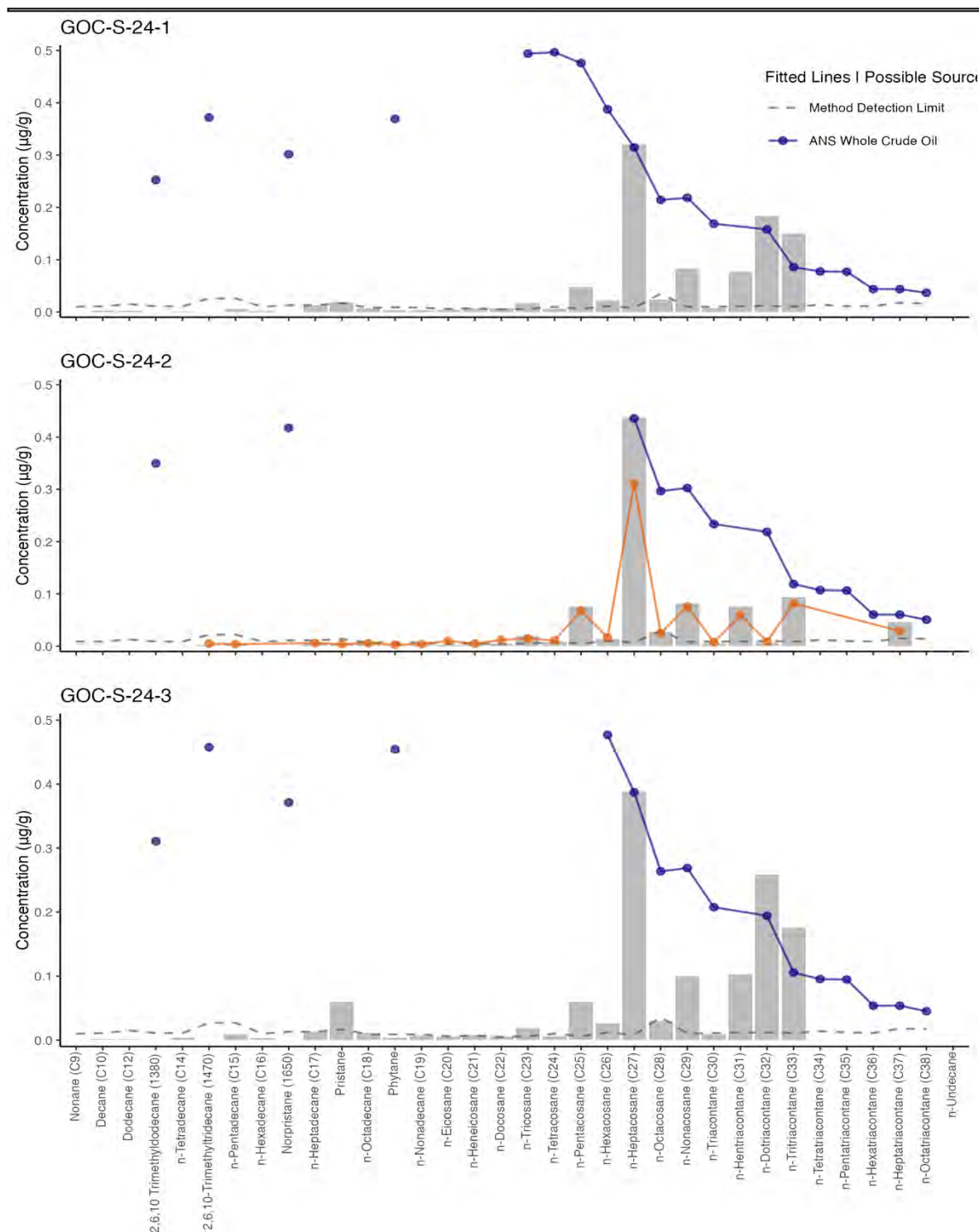
**Figure 4.** 2024 petro-geochemical profiles from individual sediment samples at the Valdez Marine Terminal (AMT) with the ANS potential source profile and the analyte-specific method detection limit superimposed as different lines. ANS profile lines are scaled to Hopane (T19) and represent data only where points are present.



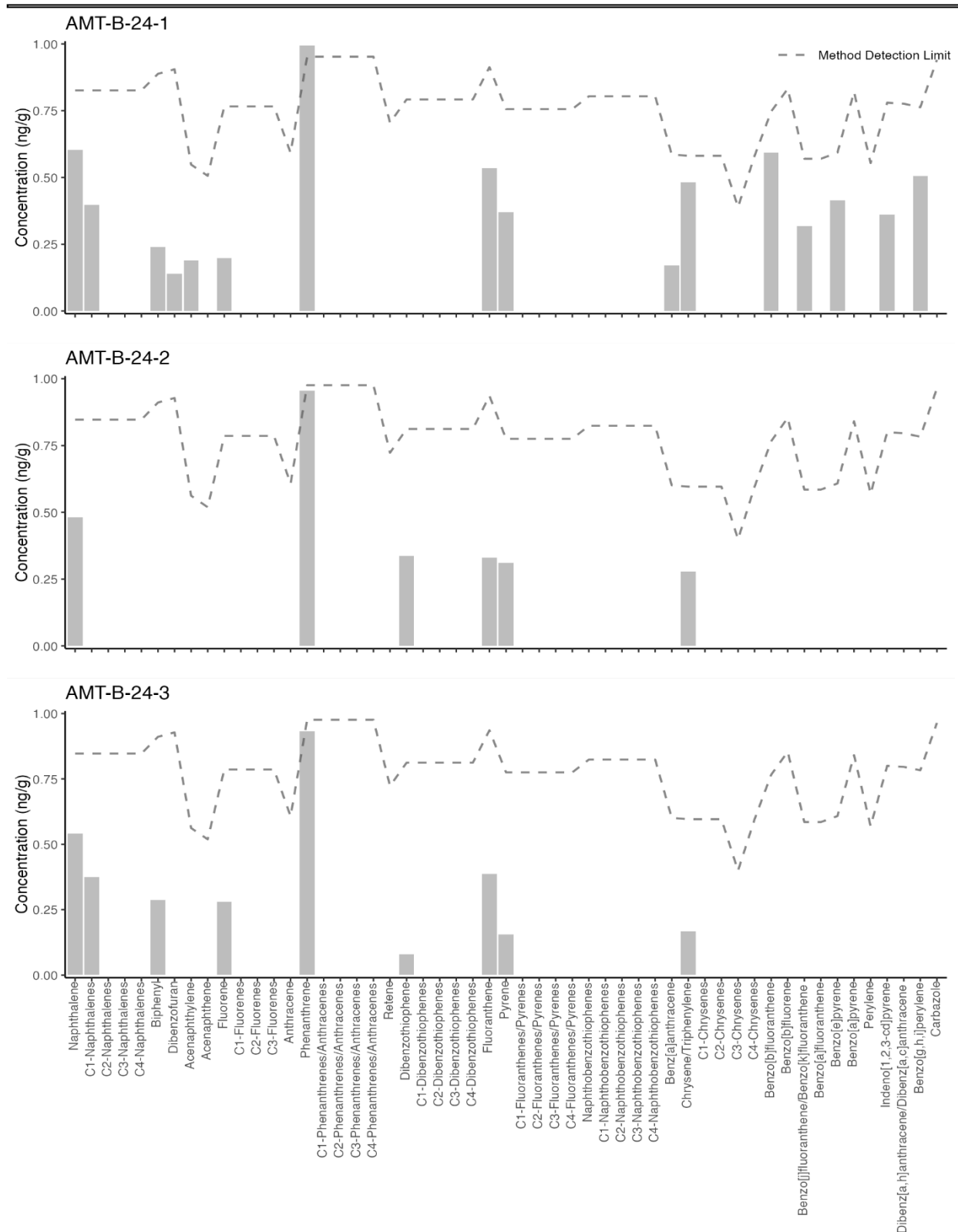
**Figure 5.** 2024 petro-geochemical biomarker profiles from individual sediment samples at the Gold Creek (GOC) reference site with the ANS potential source profile, sample duplicate, and the analyte-specific method detection limit superimposed as different lines. ANS profile lines are scaled to Hopane (T19) and represent data only where points are present.



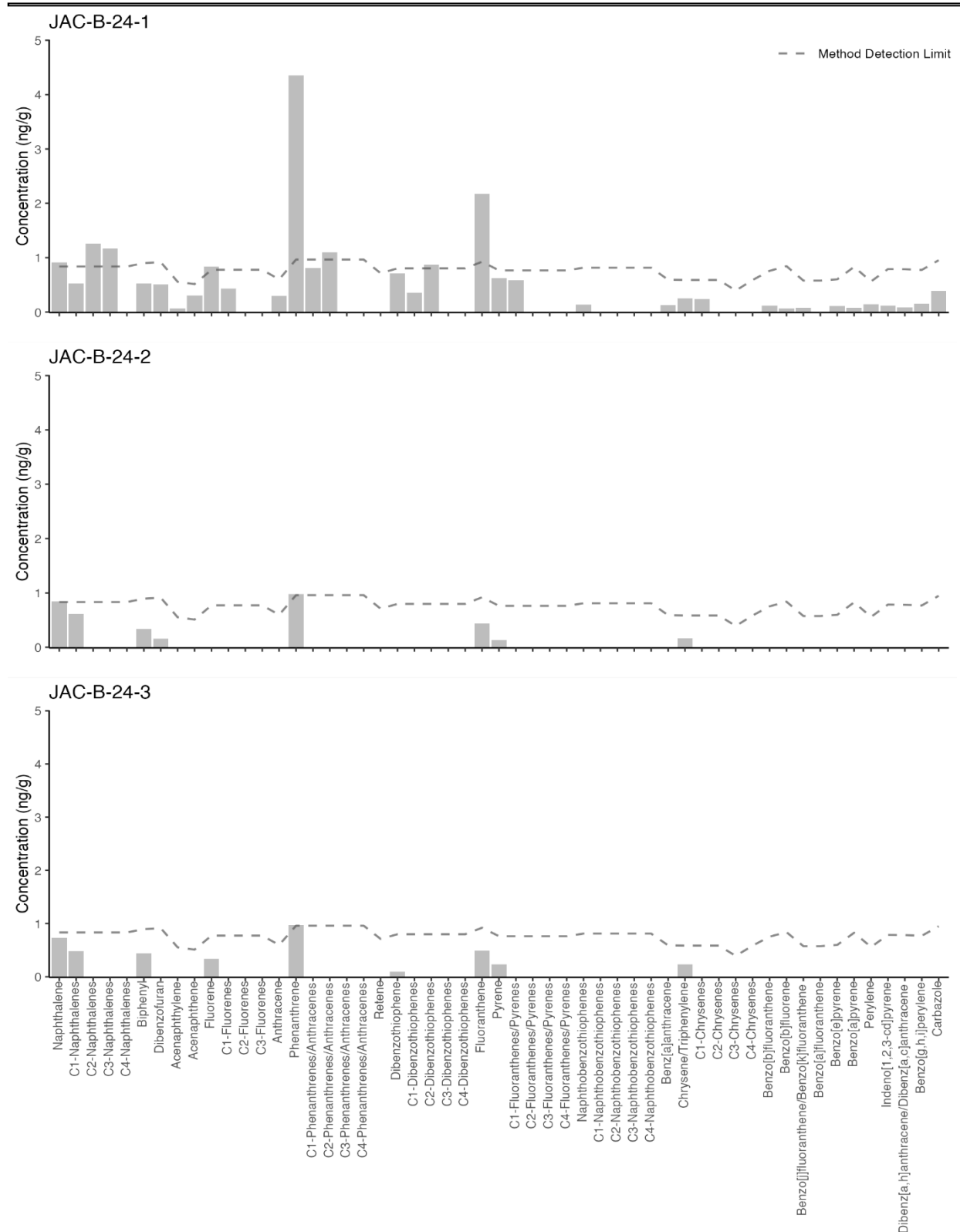
**Figure 6.** 2024 saturated hydrocarbon profiles from individual sediment samples at the Valdez Marine Terminal (AMT) with the ANS potential source profile and the analyte-specific method detection limit superimposed as different lines. ANS profile lines are scaled to n-Heptacosane (C27) and represent data only where points are present.



**Figure 7.** 2024 saturated hydrocarbon profiles from individual sediment samples at the Gold Creek (GOC) reference site with the ANS potential source profile, sample duplicate, and the analyte-specific method detection limit superimposed as different lines. ANS profile lines are scaled to n-Heptacosane (C27) and represent data only where points are present.

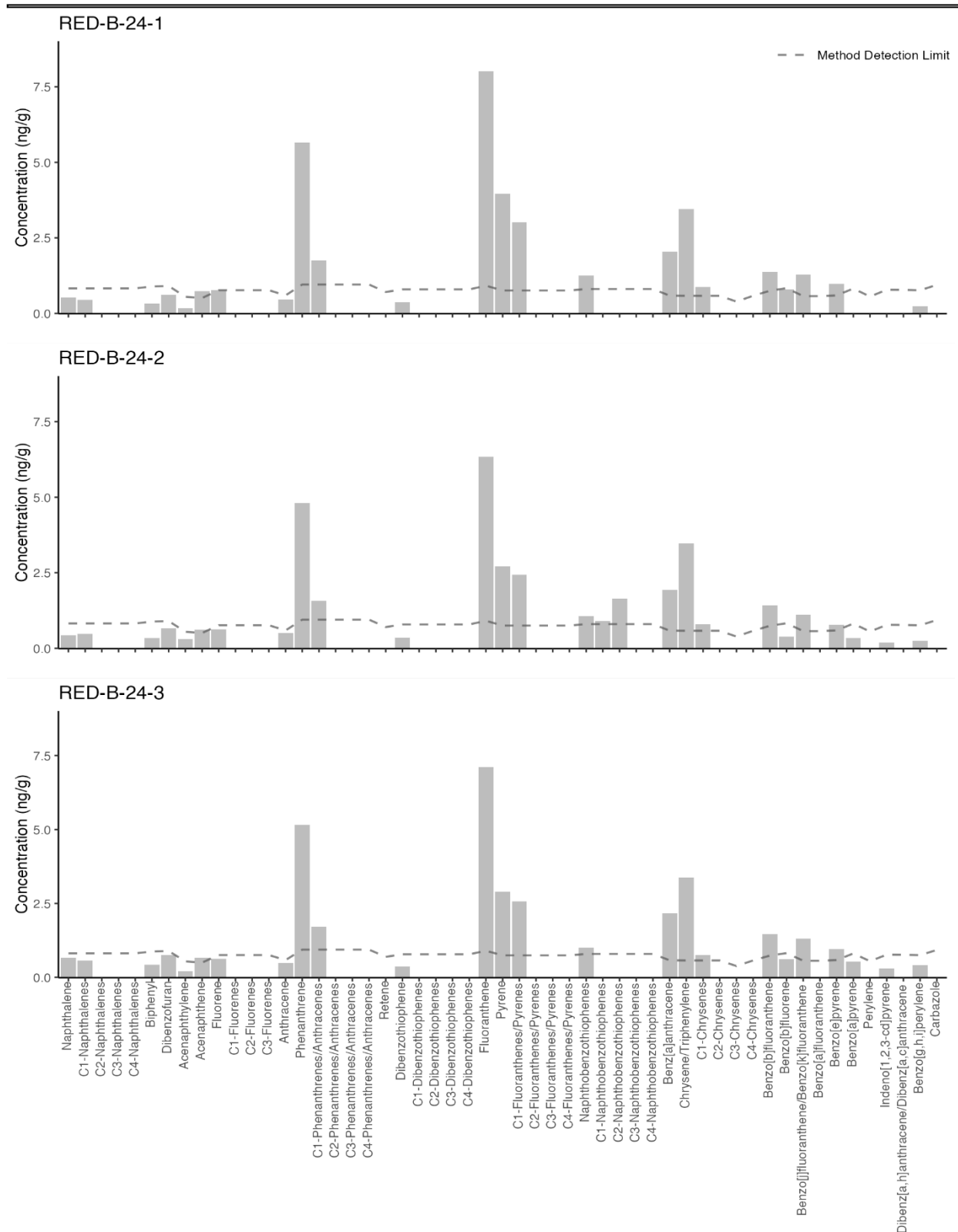


**Figure 8.** 2024 PAH profiles from individual tissue samples at the Valdez Marine Terminal (AMT) site with the analyte-specific method detection limit superimposed as a dotted line.

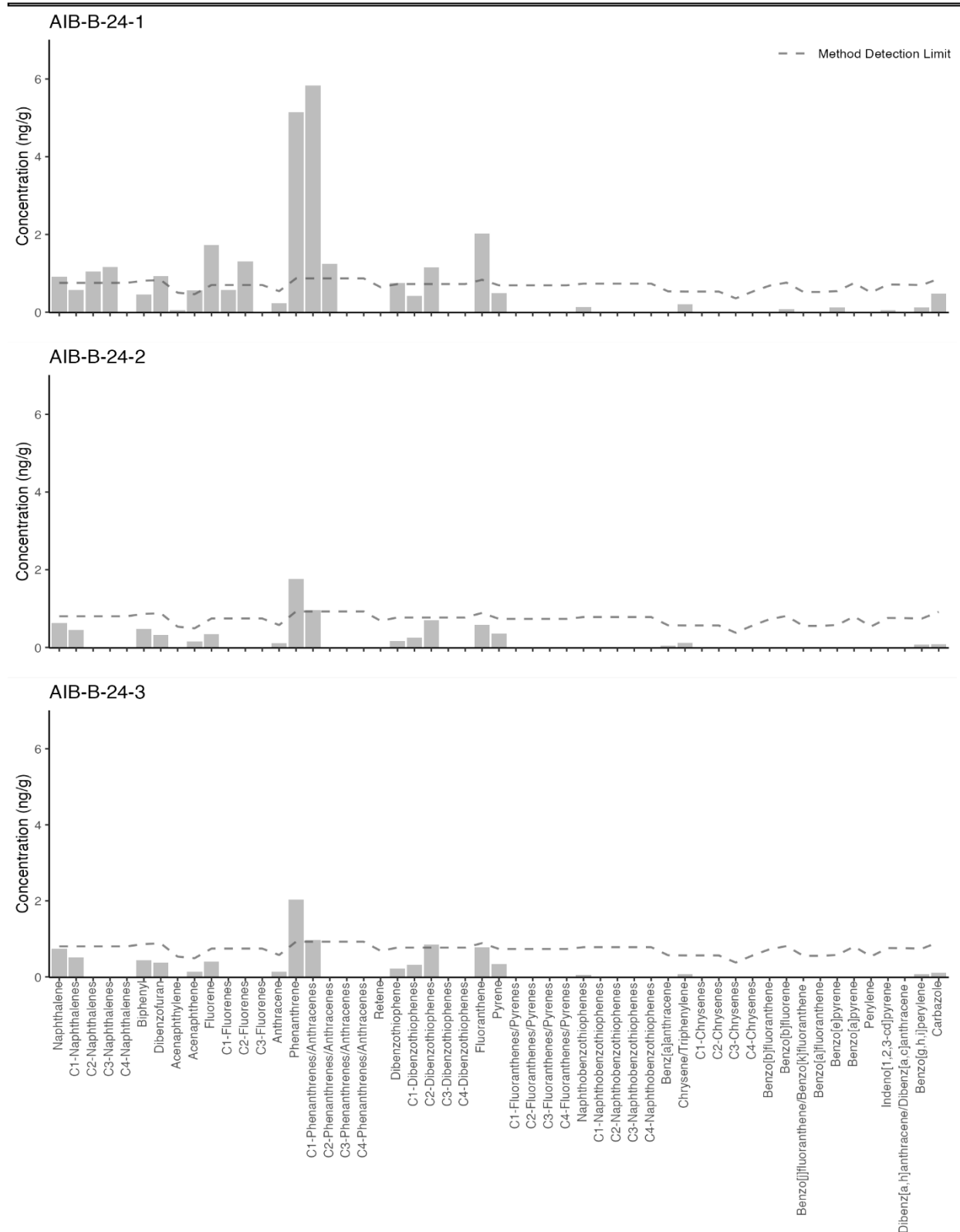


**Figure 9.** 2024 PAH profiles from individual tissue samples at the Jackson Point (JAC) site, near the Valdez Marine Terminal, with the analyte-specific method detection limit superimposed as a dotted line.

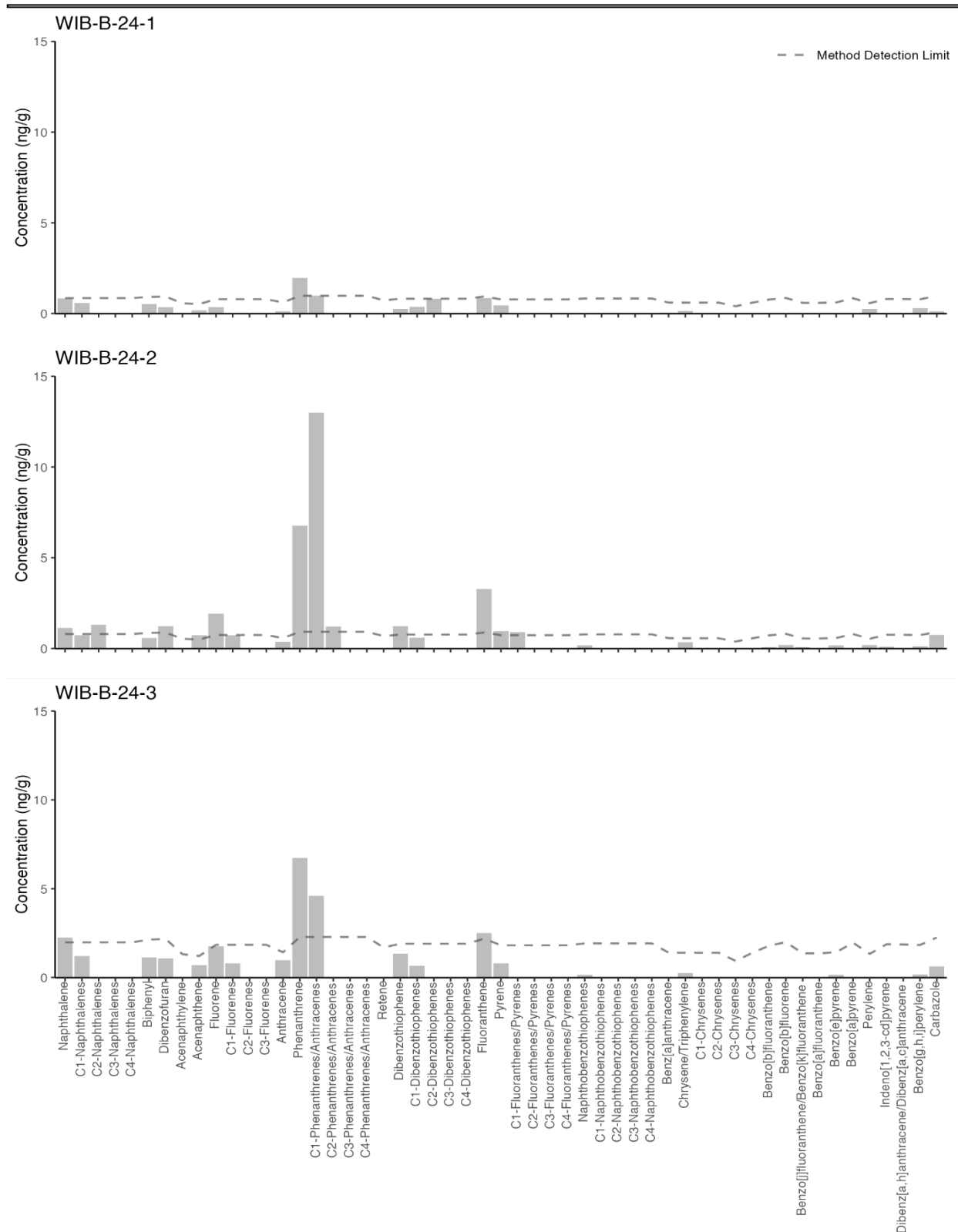
December 18, 2024



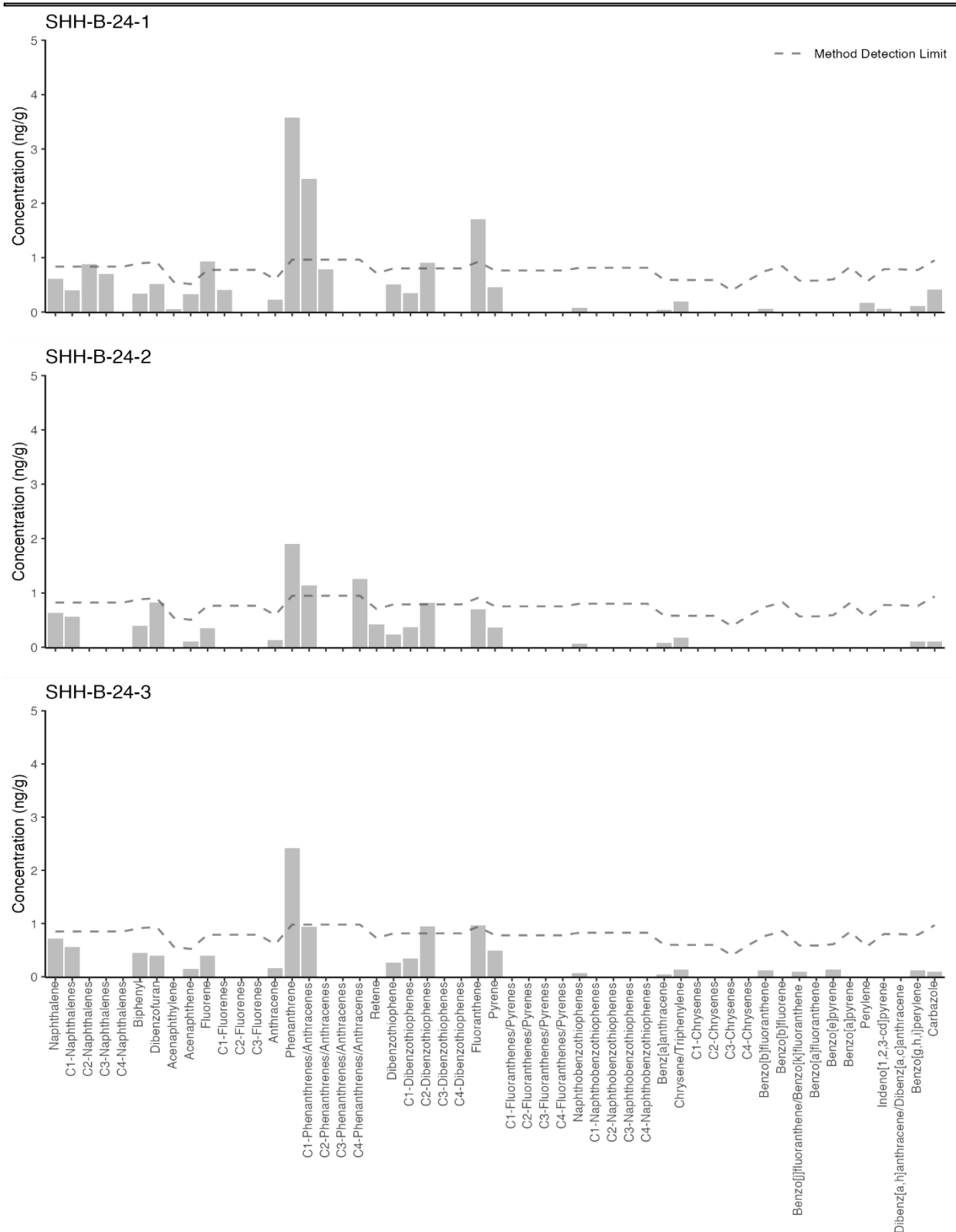
**Figure 11.** 2024 PAH profiles from individual tissue samples at the entrance of the Valdez Small boat harbor (RED) site with the analyte specific method detection limit superimposed as a dotted line.



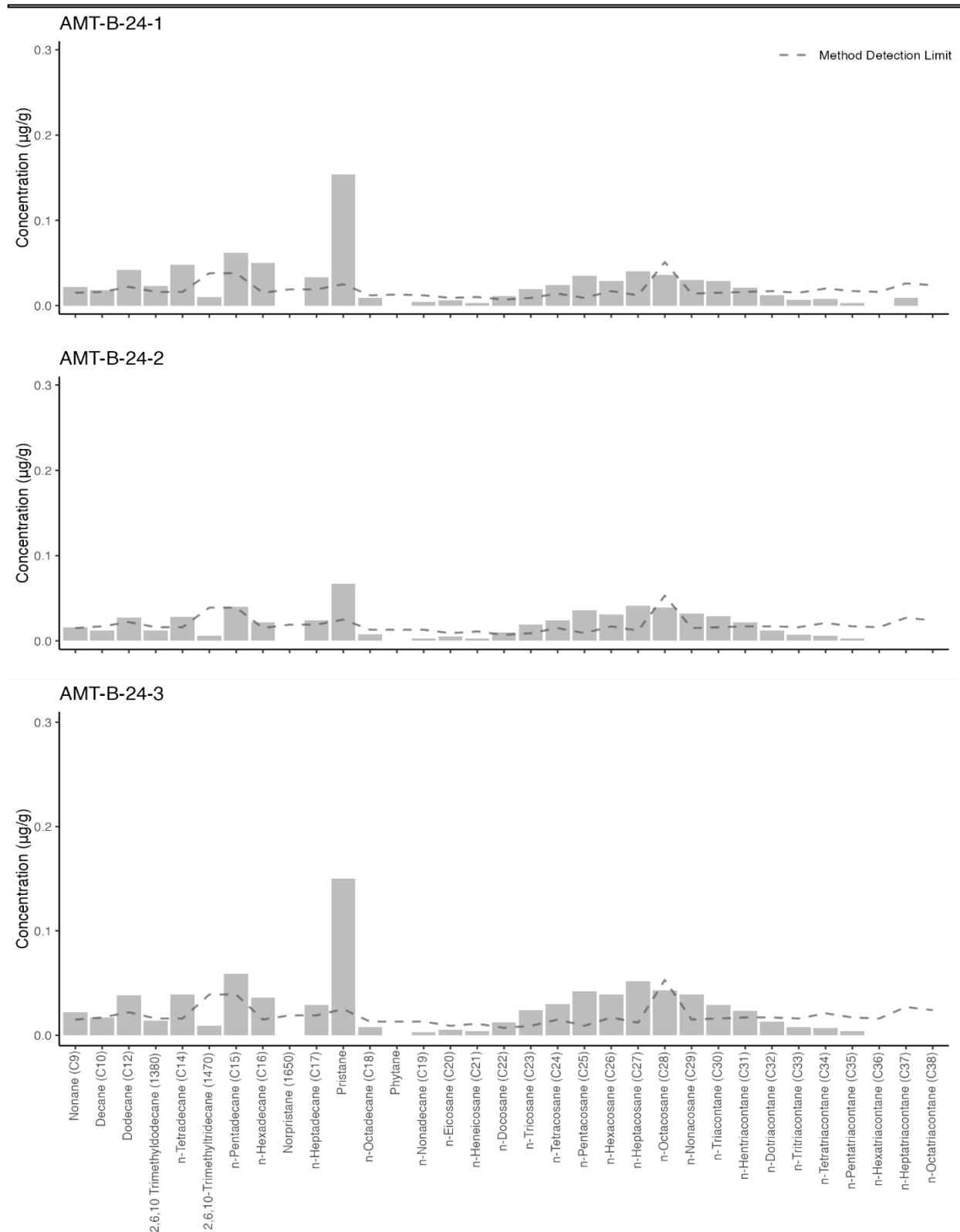
**Figure 12.** 2024 PAH profiles from individual tissue samples at the Aialik Bay (AIB) site, near the Valdez Marine Terminal, with the analyte specific method detection limit superimposed as a dotted line.



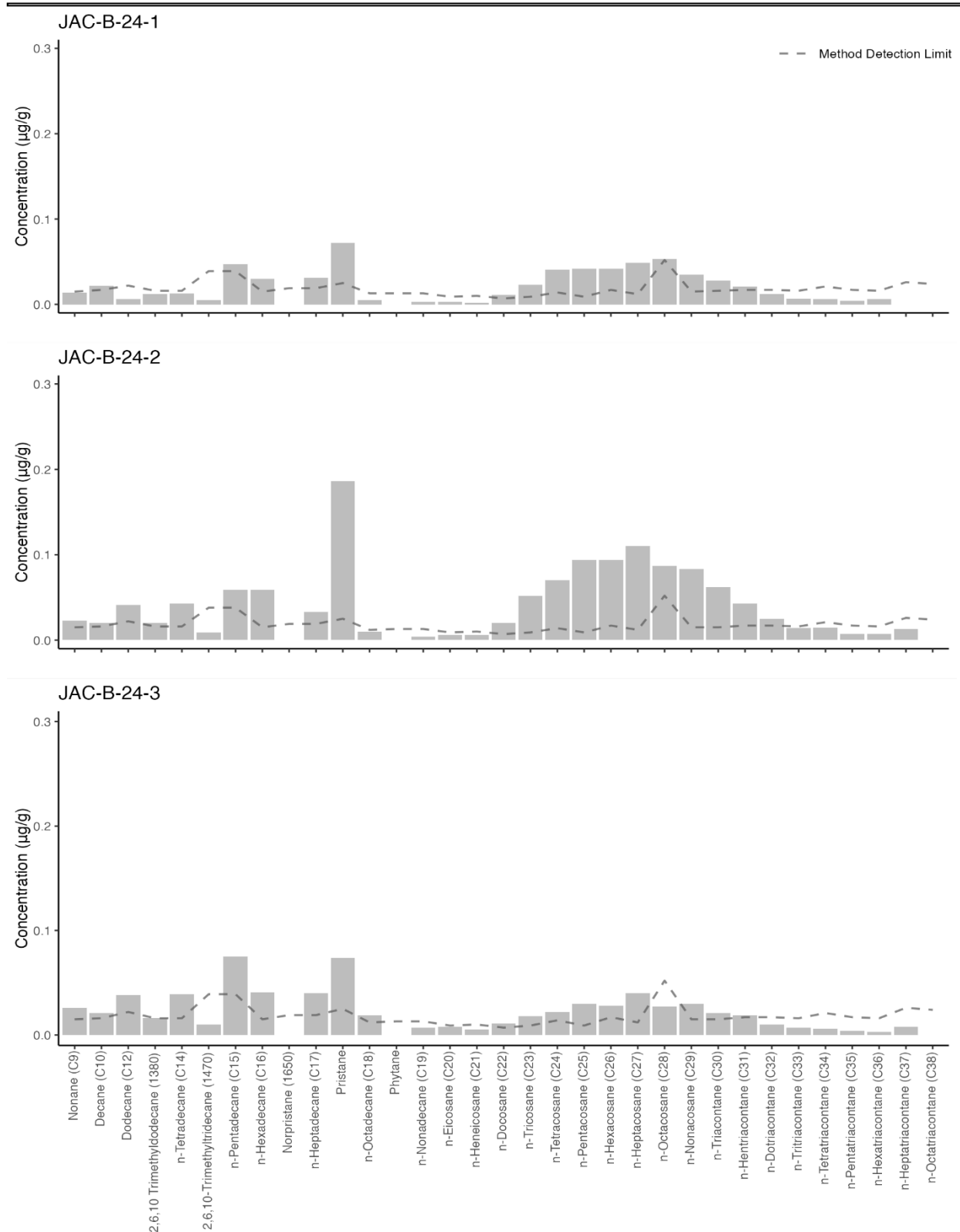
**Figure 13.** 2024 PAH profiles from individual tissue samples at the Windy Bay (WIB) site, near the Valdez Marine Terminal, with the analyte specific method detection limit superimposed as a dotted line.



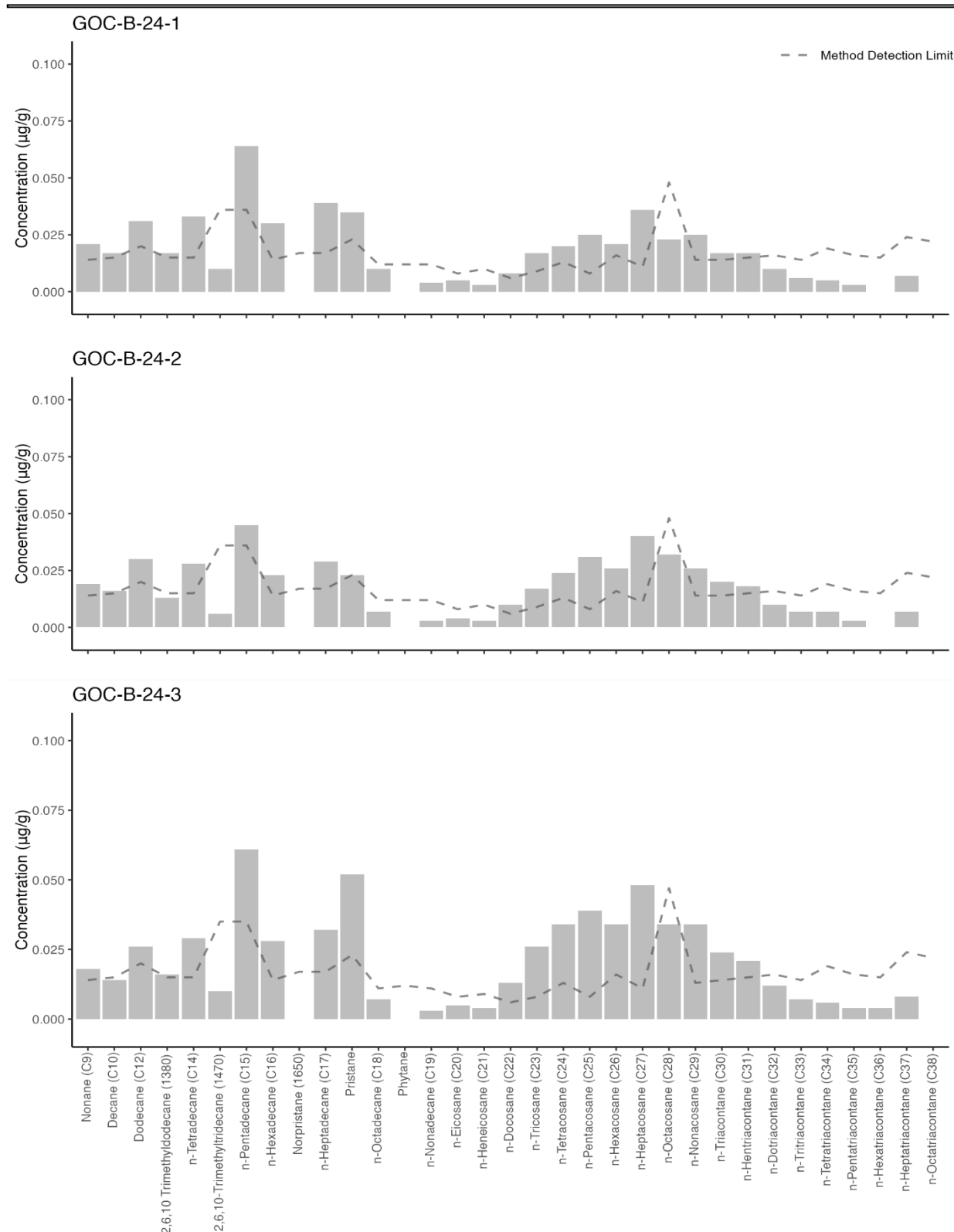
**Figure 14.** 2024 PAH profiles from individual tissue samples at the Shuyak Harbor (SHH) site, near the Valdez Marine Terminal, with the analyte specific method detection limit superimposed as a dotted line.



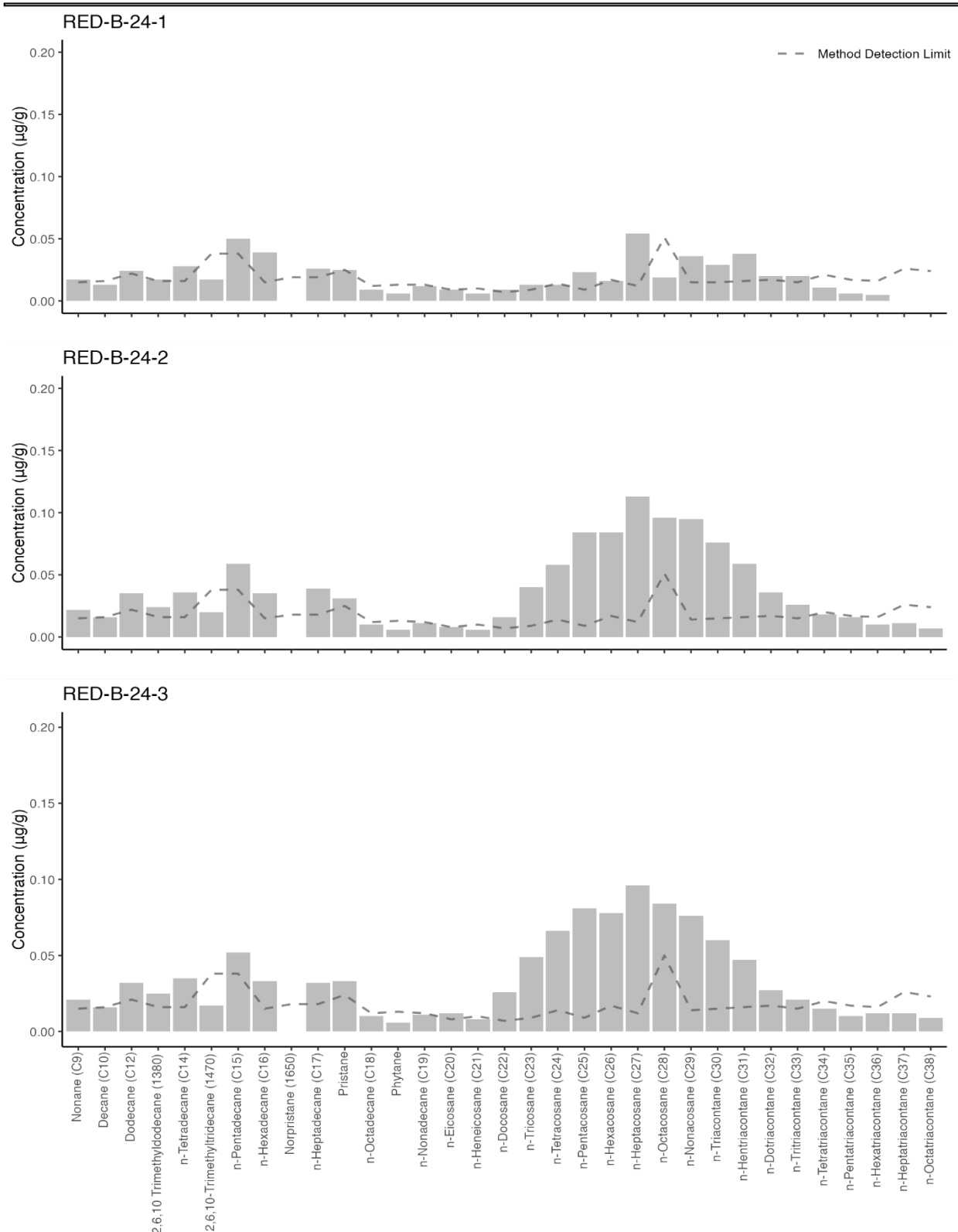
**Figure 15.** 2024 saturated hydrocarbon profiles from individual tissue samples at the Valdez Marine Terminal (AMT) site with the analyte-specific method detection limit superimposed as a dotted line.



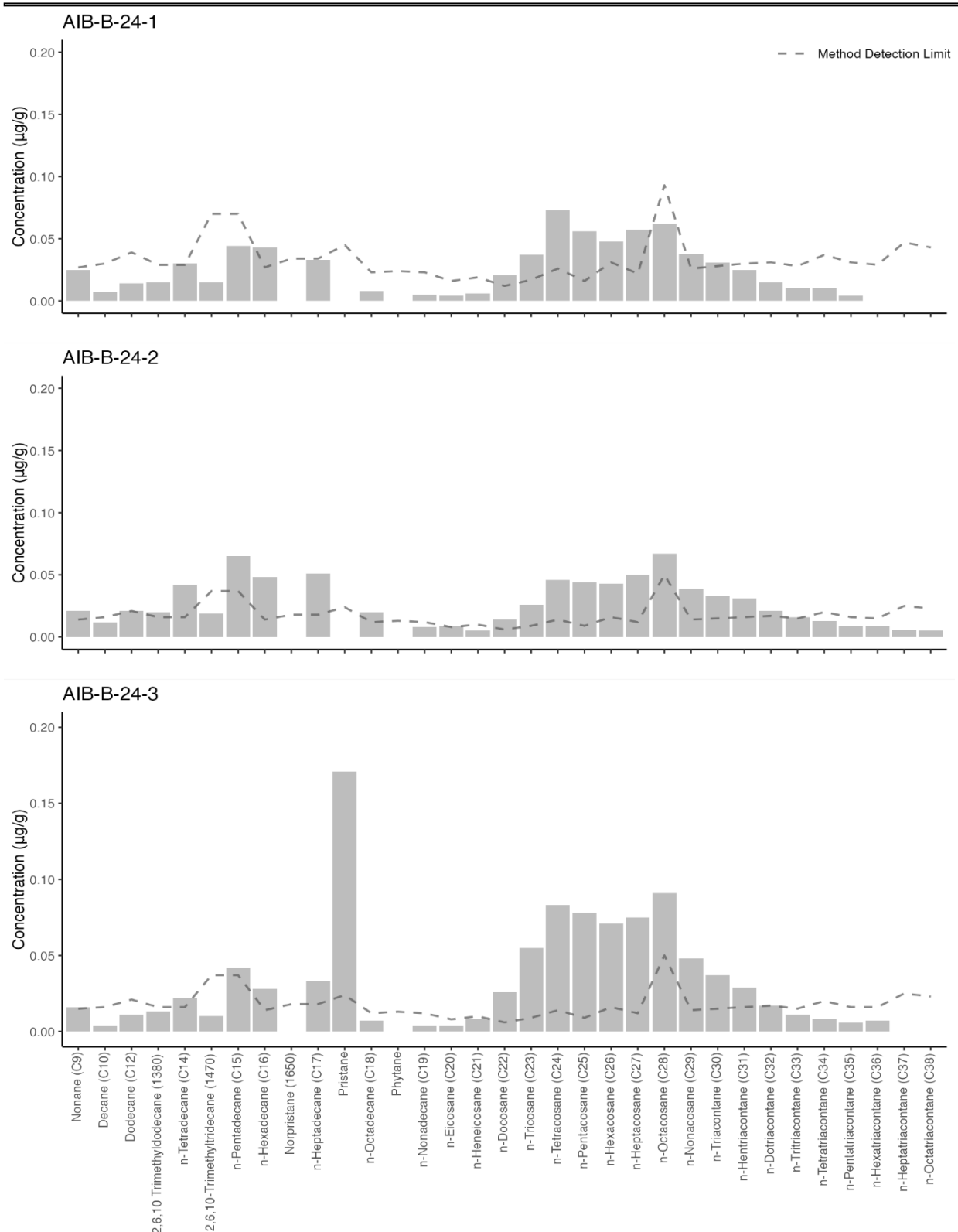
**Figure 16.** 2024 saturated hydrocarbon profiles from individual tissue samples at the Jackson Point (JAC) site with the analyte-specific method detection limit superimposed as a dotted line.



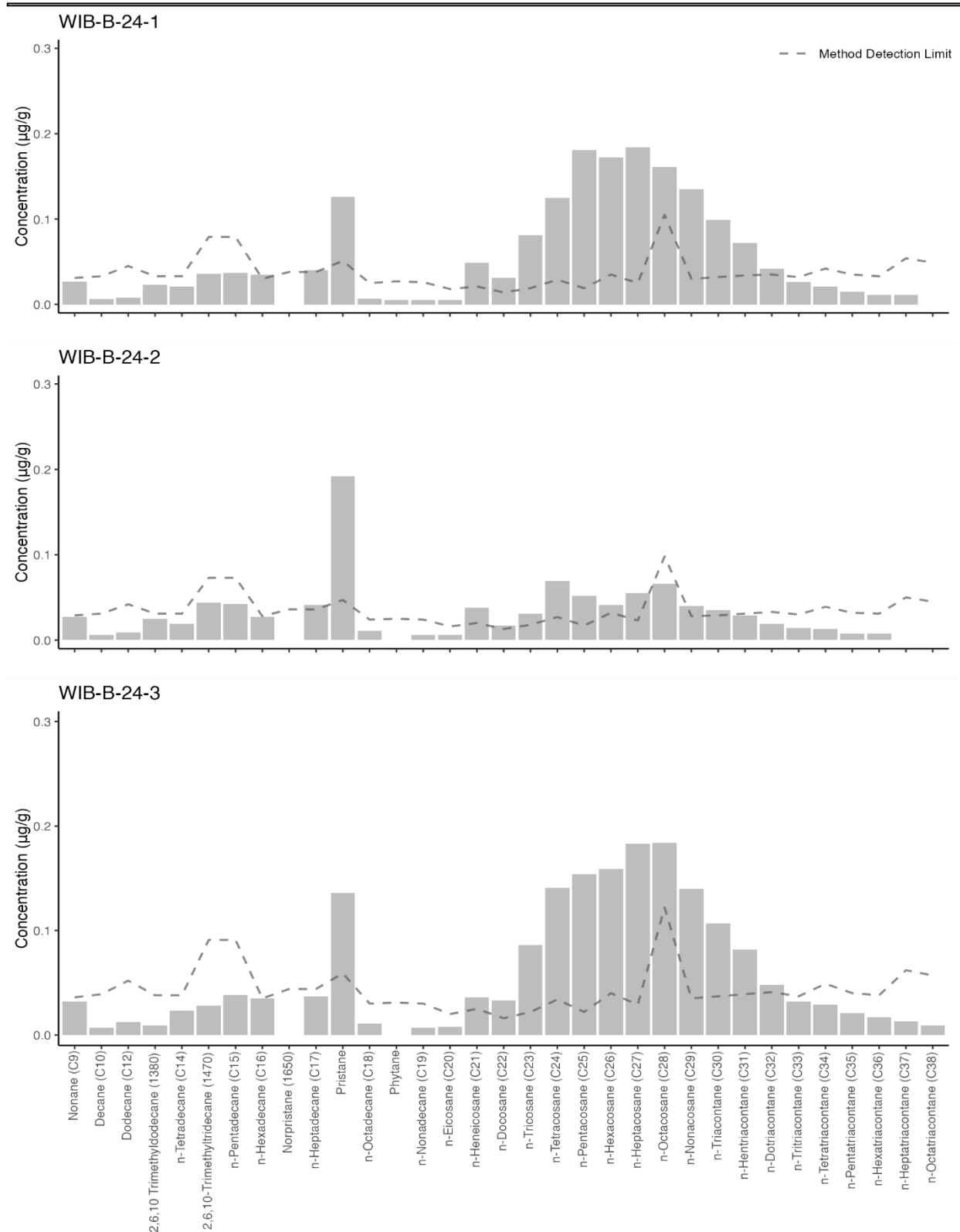
**Figure 17.** 2024 saturated hydrocarbon profiles from individual tissue samples at the Gold Creek (GOC) site with the analyte-specific method detection limit superimposed as a dotted line.



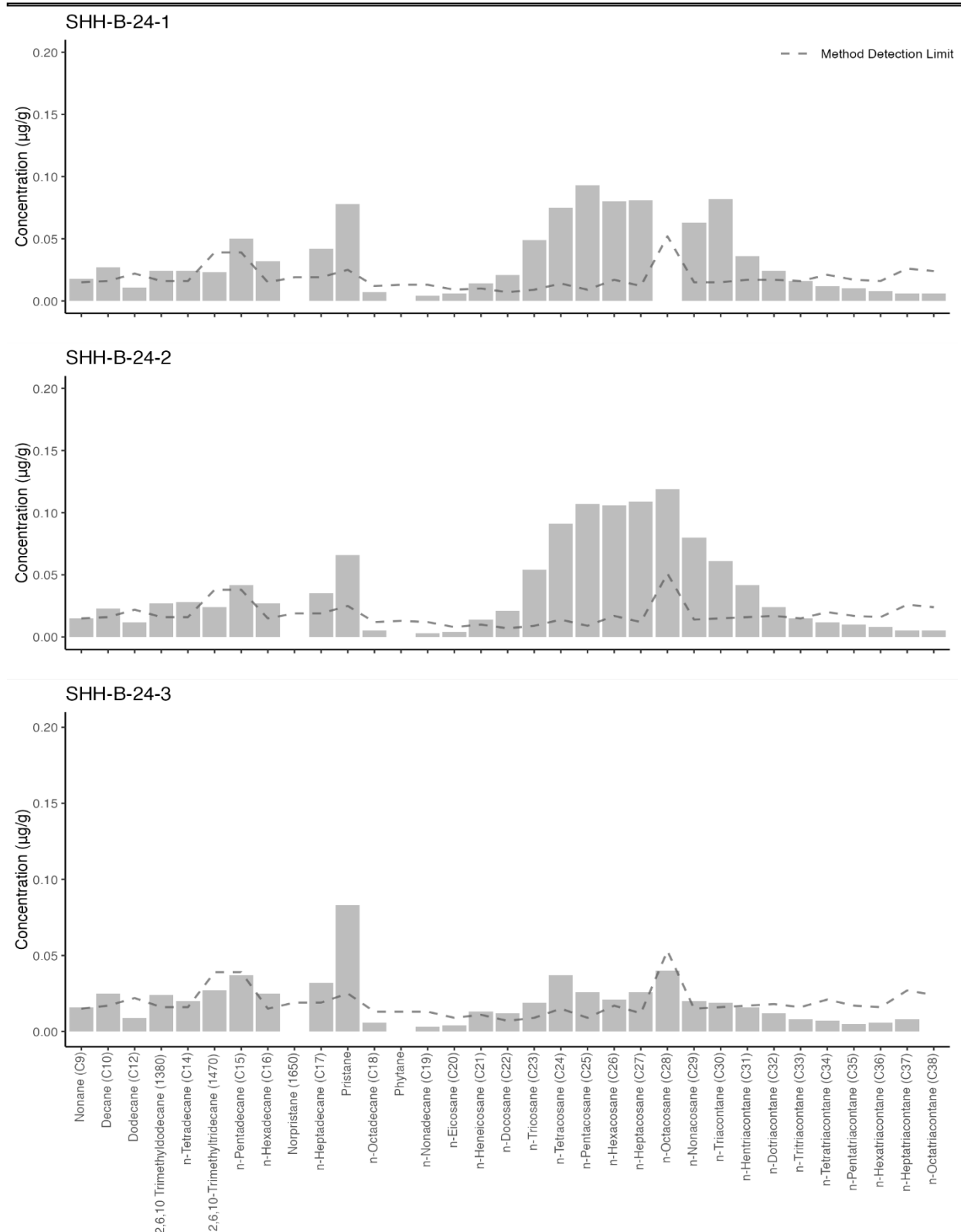
**Figure 18.** 2024 saturated hydrocarbon profiles from individual tissue samples at the entrance of the Valdez Small Boat Harbor (RED) site with the analyte-specific method detection limit superimposed as a dotted line.



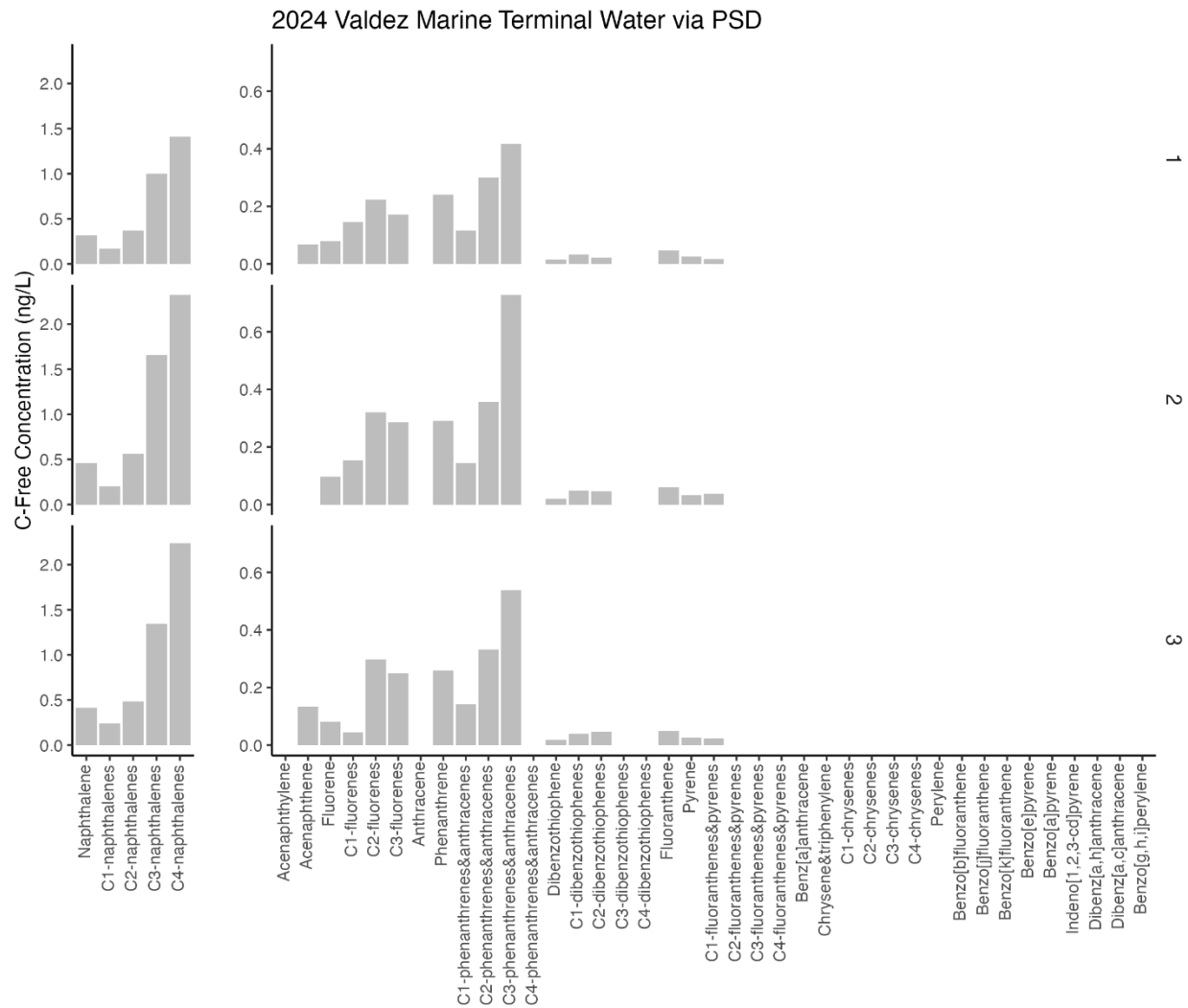
**Figure 19.** 2024 saturated hydrocarbon profiles from individual tissue samples at Aialik Bay (AIB) site with the analyte-specific method detection limit superimposed as a dotted line.



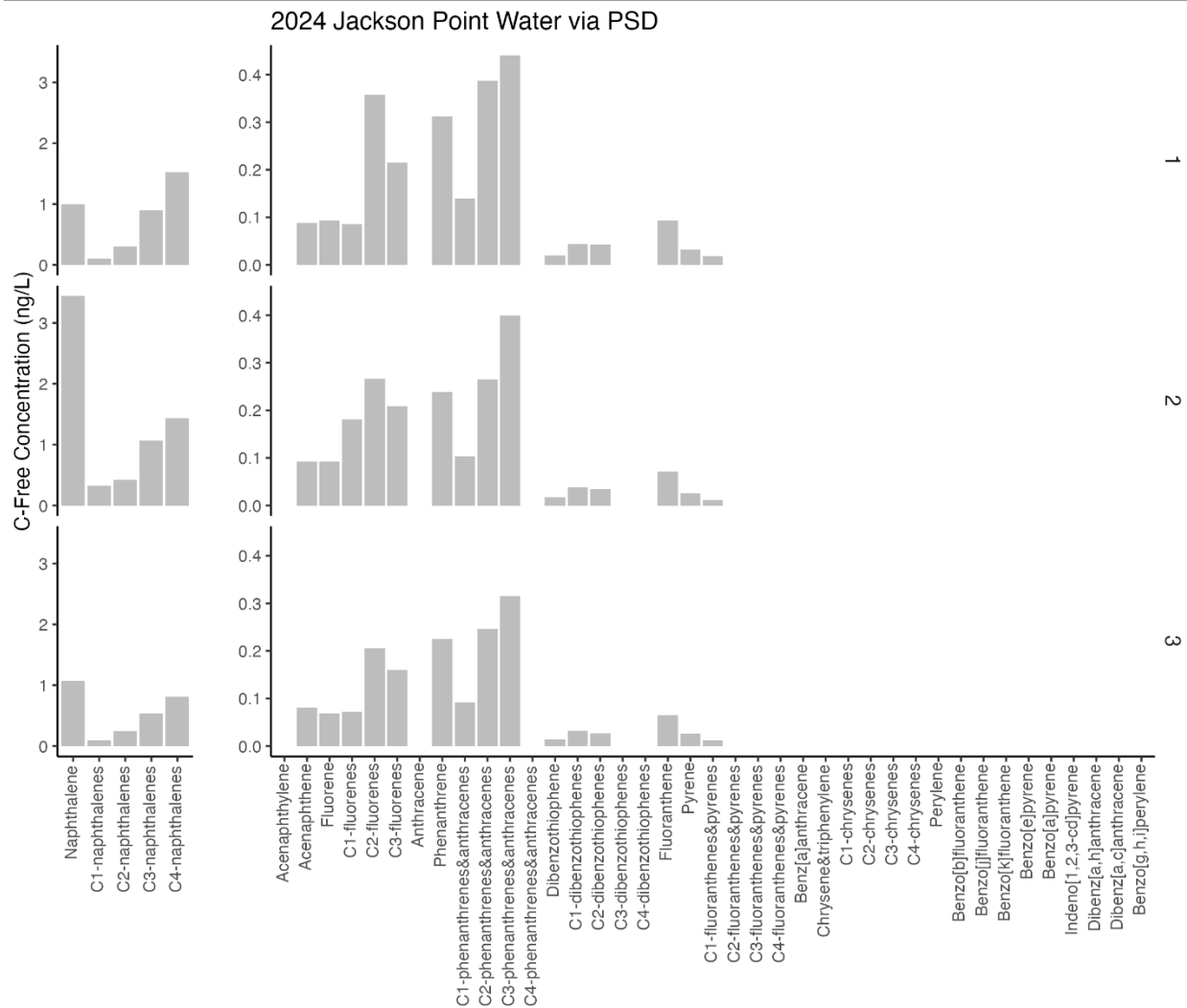
**Figure 20.** 2024 saturated hydrocarbon profiles from individual tissue samples at the Windy Bay (WIB) site with the analyte-specific method detection limit superimposed as a dotted line.



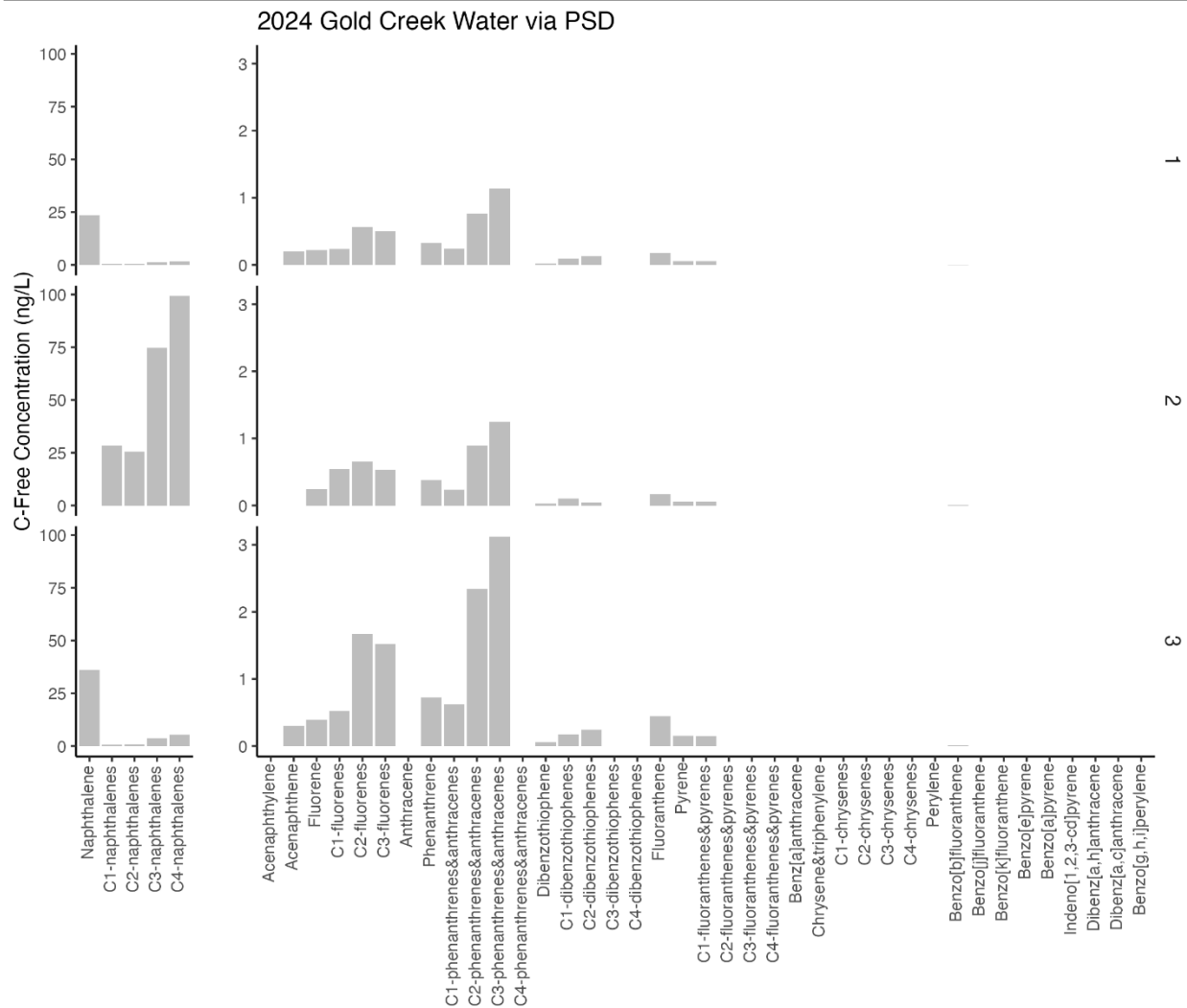
**Figure 21.** 2024 saturated hydrocarbon profiles from individual tissue samples at the Shuyak harbor (SHH) site with the analyte-specific method detection limit superimposed as a dotted line.



**Figure 22.** PAH profiles in seawater sampled via passive sampling devices placed at Valdez Marine Terminal in 2024. Values represent the reported values for the three replicates stacked vertically. Note the changes in scale between the Naphthalenes on the left and the other PAHs.



**Figure 23.** PAH profiles in seawater sampled via passive sampling devices placed at Jackson Point in 2024. Values represent the reported values for the three replicates stacked vertically. Note the changes in scale between the Naphthalenes on the left and the other PAHs.



**Figure 24.** PAH profiles in seawater sampled via passive sampling devices placed at Gold Creek in 2024. Values represent the reported values for the three replicates stacked vertically. Note the changes in scale between the Naphthalenes on the left and the other PAHs.



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January 2025

# Final

## 2024 Sediment Metals Report

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A pilot study of the Long-Term Environmental  
Monitoring Program

### PREPARED FOR

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"The opinions expressed in  
this PWSRCAC  
commissioned report are  
not necessarily those of  
PWSRCAC. PWSRCAC  
Contract #9510.25.06."

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## ACRONYMS AND ABBREVIATIONS

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ADEC.....	Alaska Department of Environmental Conservation
AMT.....	Alyeska Marine Terminal, site name for Valdez Marine Terminal
ANS .....	Alaska North Slope
APDES.....	Alaska Pollutant Discharge Elimination System
BWTF .....	Ballast Water Treatment Facility
EPA.....	U.S. Environmental Protection Agency
ERL.....	Effects Range Low
ERM.....	Effects Range Medium
EVOS .....	Exxon Valdez Oil Spill
GOC .....	Gold Creek Reference Site
LTEMP.....	Long-Term Environmental Monitoring Program
NOAA.....	National Oceanic and Atmospheric Administration
PAHs .....	Polycyclic aromatic hydrocarbons
PPB .....	Parts Per Billion (ng/g [nanograms per gram] or µg/L [microgram/ liter])
PPM.....	Parts Per Million (mg/kg [milligram per kilogram])
PWSRCAC .....	Prince William Sound Regional Citizens’ Advisory Council
SQG.....	Sediment Quality Guidelines

# 1. Abstract

Following the 1989 Exxon Valdez oil spill, concerned citizens and congressional legislation established the Prince William Sound Regional Citizens' Advisory Council (Council). The Council's mission is to promote the environmentally safe operation at the Valdez Marine Terminal and associated oil tanker activities within the spill-affected area. Since 1993, annual monitoring of marine sediments and intertidal blue mussels has been conducted, focusing on crude oil-specific hydrocarbons. However, concern over the accumulation of metals, specifically zinc, in sediments from the terminal and tanker operations spurred investigations into sediment metal concentrations.

In 2024, we analyzed 23 different metals in sediments at the Valdez Marine Terminal (terminal), close to the outfall from the Ballast Water Treatment Facility and the Port Valdez reference site at Gold Creek. Twenty-two metals were detected at each site, ranging from 40,000 mg/kg dry-weight Iron in terminal sediments to less than 0.1 mg/kg mercury at the terminal and Gold Creek. The terminal sediments had significantly higher metal concentrations overall, and for 10 specific metals, than Gold Creek. Both sites exceed NOAA's sediment quality guidelines for the protection of benthic life for eight metals. Several metals known to be in Ballast Water Treatment Facility effluent from recent Council work were also found in higher concentrations at the terminal compared to Gold Creek. Of these metals with a suggested effluent origin, four metals—aluminum, copper, iron, and vanadium—exceeded the effect range thresholds, suggesting that terminal and tanker operations may be eliciting adverse effects on benthic organisms. These findings warrant further investigation into the extent of the metal accumulation, the sensitivity of benthic organisms in the area, and the source of high metal concentrations locally.

## 2. Introduction

The Long-Term Environmental Monitoring Program (LTEMP), managed by the Prince William Sound Regional Citizens' Advisory Council (Council), is in its 31<sup>st</sup> year of monitoring hydrocarbons after the Exxon Valdez oil spill (EVOS) in 1989. Through LTEMP, we aim to determine the source of hydrocarbons and the potential adverse effects on the ecosystem from Alyeska Pipeline Service Company's Valdez Marine Terminal (terminal) and tanker activity. These data have been insightful in understanding the influence of terminal and non-terminal sources of hydrocarbons and environmental factors on hydrocarbon dynamics across Prince William Sound and the Gulf of Alaska.

The 2024 LTEMP campaign also collected sediment samples to assess the degree of metal accumulation. In Spring 2024, the Council's Scientific Advisory Committee decided to include a pilot sampling campaign on sediment metals as recent studies by the University of New Orleans detected metals in water samples collected at the Valdez Marine Terminal's Ballast Water Treatment Facility (BWTF) (Harsha & Podgorski, 2023). There is a potential ecological risk associated with the discharge of metals from the BWTF, as metals are generally stable and do not degrade; thus, there is a possibility that metals accumulate in sediment, reaching toxic levels (Long et al., 1995). While not a part of the core LTEMP campaign, this additional sampling benefitted from piggybacking on the sampling, analysis, and data visualization of LTEMP's hydrocarbon analysis. The 2024 LTEMP campaign collected sediment samples from two sites in Port Valdez (i.e., Gold Creek and the BWTF's outfall at the Valdez Marine Terminal).

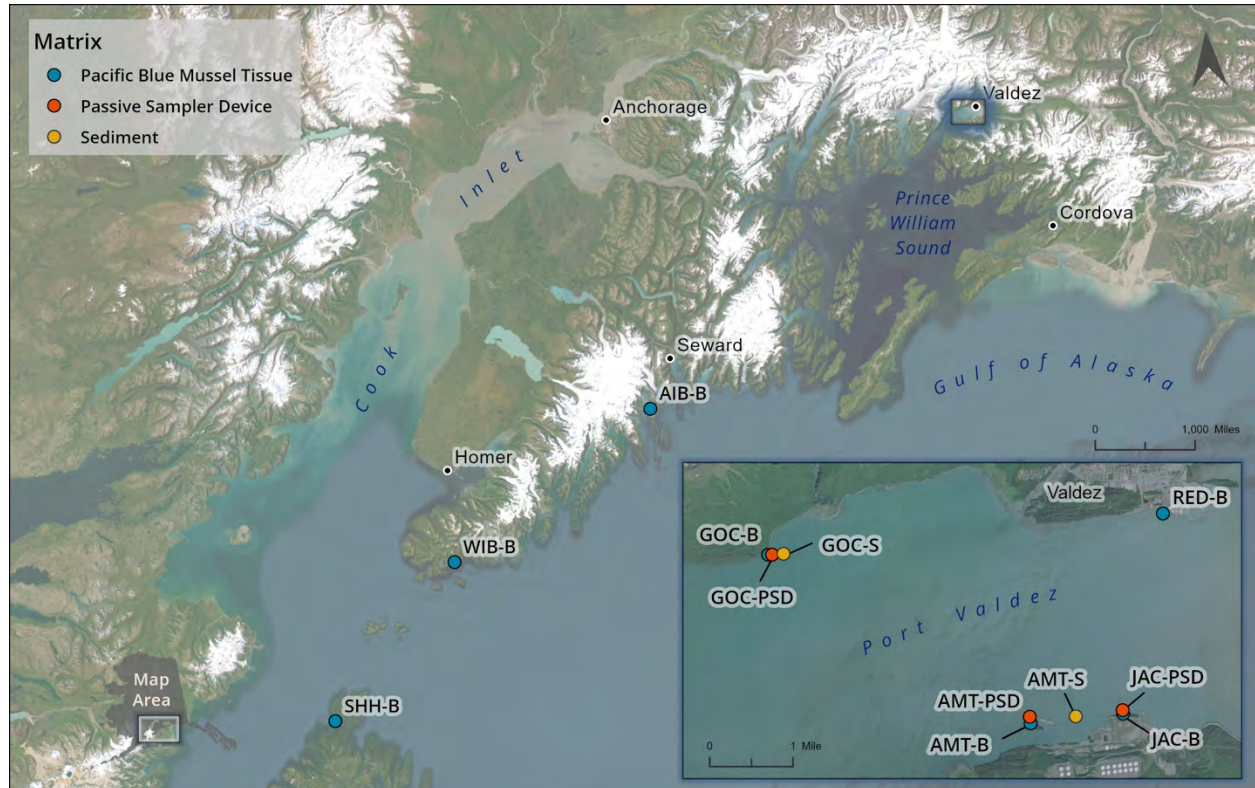
The following study presents the 2024 sediment metals results from the LTEMP pilot study and aims to determine the following:

- The sediment metal concentrations and the level of variability at the Valdez Marine Terminal and the Gold Creek reference site.
- The potential bioavailability and ecotoxicological risk posed by the measured metal concentrations using protective sediment quality guidelines.
- The influence and potential effects of metals originating from the terminal and tanker activities.
- Recommendations for future monitoring of sediment metals at the terminal and in Prince William Sound.

## 3. Methods

Sediment samples were collected in early June of 2024, at LTEMP monitoring stations in Port Valdez, Alyeska's Valdez Marine Terminal, and Gold Creek (Figure 1). Sediment sampling was performed using a modified Van Veen grab deployed from a local fishing

vessel, Equinox. The top 5 cm of undisturbed sediment was scooped using a clean metal spoon and placed in a glass sampling jar. Triplicate grab samples were collected at each site. Samples were frozen until shipped to Pace Analytical Services in Mansfield, Massachusetts.



**Figure 1. 2024 sampling sites for the Long-Term Environmental Monitoring Program in Port Valdez and the North Gulf of Alaska. The color of the points and labels represent differences in sampling matrices. Sediment metals samples were collected from the yellow-colored (S) sites only.**

Samples were analyzed for 23 metals (Table 1) and the standard suite of LTEMP analytes (i.e., PAHs, saturated hydrocarbons, and geochemical petroleum biomarkers; Fjord & Fish, 2024). Sediment physical analyses included particle size (not reported herein) and total organic carbon content. Metals except mercury were quantified using the analytical method Environmental Protection Agency (EPA) 6020B (i.e., inductively coupled plasma). Mercury was quantified using EPA method 7474 to detect low-level mercury in ppb and ppm ranges. The results were of acceptable precision and accuracy based on laboratory quality control and quality assurance data.

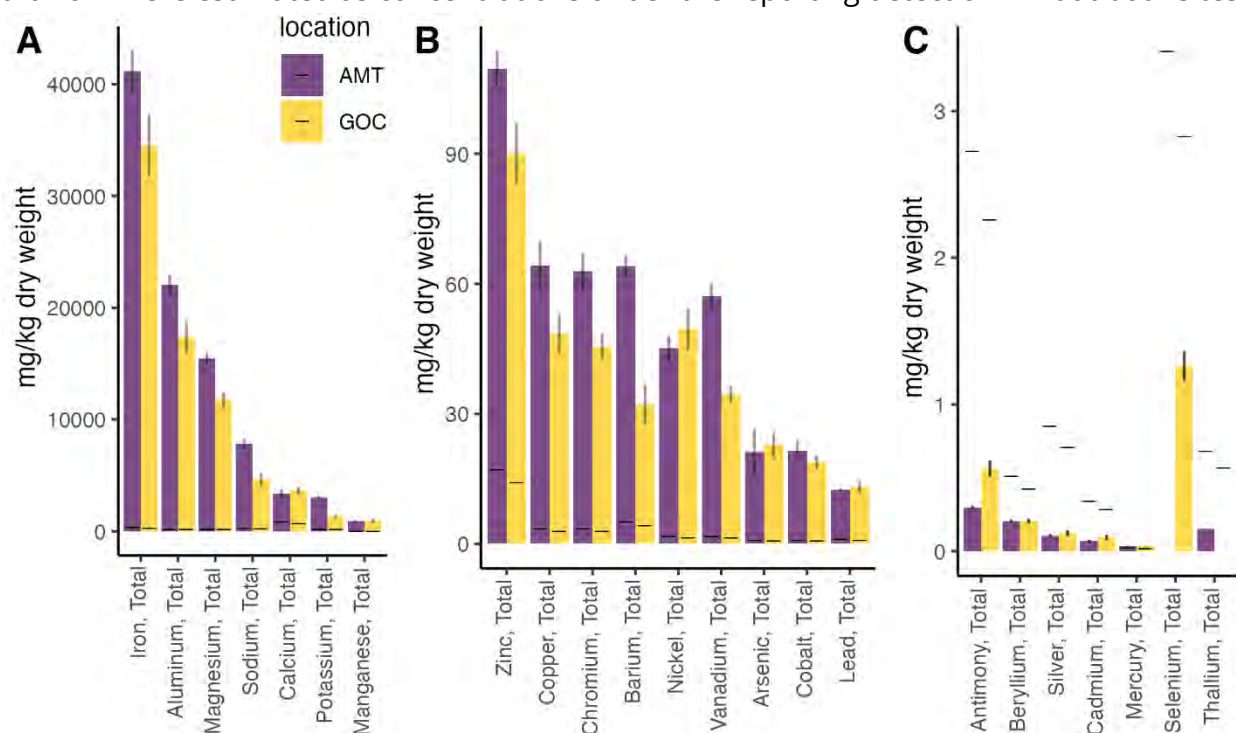
Sediment quality guidelines (SQG) are numerical chemical concentrations intended to be either protective of biological resources, predictive of adverse effects on those resources, or both (Hübner et al., 2009). Here, we use the NOAA's SQGs for metals, expressed as effect ranges. Effect Range Low (ERL) is a threshold concentration below which effects should rarely be observed (i.e., in less than 10% exposure incidences; Long et al., 1995). It can be considered an appropriate sediment quality guideline that protects benthic organisms as it is based on the consensus value from 100s of rigorous exposure experiments conducted

across multiple laboratories and benthic taxa (Long et al., 1995). Effect Range Medium (ERM) was also used, indicating that adverse effects would frequently occur above this threshold (i.e., up to 95% of exposure incidences; Long et al., 1995). These SQGs are found to perform well at predicting primarily acute effects of contaminants in sediments on benthic organisms (Hübner et al., 2009).

Using R (R Core Team, 2024), metal concentrations were plotted as bar charts with mean concentrations and standard deviation across the three replicates. Statistical analysis between sites was done using a Two-Sample t-test for samples with equal variance (i.e., variance is less than an order of magnitude different between sites) and a Welch Two-Sample T-Test when variance was unequal. Statistical significance was set at  $\alpha < 0.05$ . Statistical parameters are presented (Table 2).

## 4. Results & Discussion

Twenty-two metals were detected at each site, with 21 found at both sites (Figure 2). Concentrations ranged from 40,000 mg iron /kg dry weight in terminal sediments to less than 0.1 mg mercury /kg at the terminal and Gold Creek. Iron, aluminum, magnesium, sodium, calcium, potassium, and magnesium exceeded 1000 mg/kg in the terminal and Gold Creek sediments. Meanwhile, antimony, beryllium, silver, cadmium, selenium, and thallium were estimated as concentrations under the reporting detection limit at both sites.



**Figure 2. Sediment metal concentrations are displayed as a bar plot with mean  $\pm$  standard deviation for Valdez Marine Terminal (AMT) in purple and Gold Creek (GOC) in yellow. Dashes represent the mean metal-specific reporting limit. Note that each panel has a different scale.**

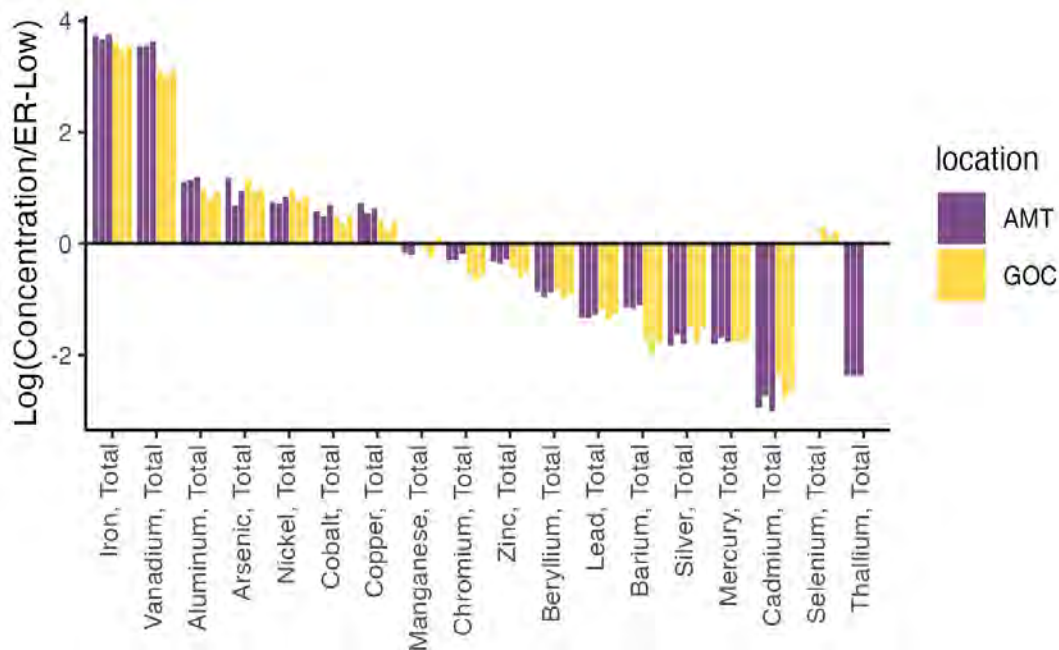
### Were there differences between sites?

The terminal sediments had higher metal concentrations than Gold Creek, with statistically significantly higher concentrations of aluminum, barium, chromium, copper, iron, magnesium, potassium, sodium, vanadium, and zinc (Tables 1 and A1). Gold Creek had significantly higher concentrations of antimony compared to the terminal. Estimated selenium concentrations were detected at Gold Creek, while thallium was estimated at the terminal. The total organic carbon percentage was similar across both sites (0.50-0.52%), indicating similar metal bioavailability (Zhang et al., 2020).

### Are these metal levels of concern for the ecosystem/biota?

Using the most protective empirically based sediment quality guidelines (e.g., Long et al. 1995), the ERL was exceeded at one or both stations for iron, vanadium, aluminum, arsenic, nickel, cobalt, copper, and selenium (Figure 3). The ERM was exceeded at in one replicate at Gold Creek for nickel (i.e. Nickel ERM set at 50 mg/kg and nickel values were 54.5, 49.1, and 45.0 mg/kg).

Zinc was one metal identified explicitly in the Harsha and Podgorski work, and Alaska Department of Environmental Conservation (ADEC) 2019 Alaska Pollutant Discharge Elimination System (APDES) permit renewal that is thought to be driving effluent toxicity. Here, we see that sediment zinc levels are, in fact, significantly higher at the terminal than at Gold Creek; however, these levels do not exceed the NOAA's protective effect thresholds for benthic life (i.e., ERM-L; Long et al., 1995). No other sediment toxicity thresholds were investigated in this pilot study.



**Figure 3. Sediment metal concentrations normalized to the Effect Range Low (ERL) value, shown on a log scale and organized by the degree of ERL threshold exceedance. Each sample replicate is displayed individually. Bar colors represent location. Metals that do not surpass the ERL threshold have negative values due to the log scale. Metals without an ERL threshold are excluded from the plot.**

**Are metals at the terminal likely related to terminal and tanker activity?**

Of the metals found at concentrations  $> 1 \mu\text{g/L}$  in the BWTF effluent by Harsha and Podgorski (2023) (i.e., barium, zinc, magnesium, nickel, aluminum, mercury, arsenic, iron, copper), only nickel, mercury, and arsenic were not significantly enriched in the terminal sediments compared to Gold Creek. While found in low concentrations (i.e.,  $< 1 \mu\text{g/L}$ ) in the BWTF effluent, vanadium and potassium were significantly higher in the terminal sediments compared to Gold Creek.

**Are metals likely contributed by terminal and tanker activity of environmental concern?**

Four metals—aluminum, copper, iron, and vanadium—exceeded the effect range thresholds and are significantly elevated in the terminal sediments compared to Gold Creek. However, all of these metals exceed the effect range threshold at Gold Creek. No metal was found to only exceed the effect threshold at the terminal. This is most clearly seen in Figure 3.

Previous work by the EPA in Port Valdez conducted before and during the construction of the Valdez Marine Terminal and the Trans-Alaska Pipeline found widespread and comparable concentrations of metals, including vanadium, nickel, iron, chromium, and cobalt (EPA, 1976). Vanadium, for example, is a common naturally occurring element in the lithosphere but is also used intensely as an additive in the steel industry, with its rust-resistant properties making it highly valuable in shipbuilding and an emerging marine pollution concern (Tambat et al 2024). Other potential sources of metals are contemporary metal-based biocides used in antifouling paints, which contain copper and zinc (Torres and De-la-Torre, 2021).

## 5. Conclusion

The 2024 LTEMP sampling for hydrocarbons was complimented by sediment sampling for trace metals. The recent 2019 ADEC report cites that the principal water quality concerns from the terminal BWTF effluent are zinc, total aromatic hydrocarbons, and whole effluent toxicity (ADEC 2019). Aqueous input of metals, such as from the BWTF effluent, does not completely explain the presence and concentrations of the metals found in the terminal sediment; rather, the physical and chemical properties of individual metals and of the sediments themselves influence sediment metal concentrations (Zang et al 2020).

Our findings show that several metals in sediments at the terminal exceed protective sediment quality guidelines, possibly causing adverse effects in benthic organisms. Port Valdez is a metal-rich system with a history of copper and gold mining and several large, glacially-fed rivers entering within miles of the sampling locations. These local sources may explain regional patterns such as high iron concentration. This may also call into question the utility of the NOAA's Sediment Quality Guidelines for benthic organisms residing in Port Valdez. More effort could be put into framing these metal concentrations in the local and

regional background levels (e.g., values published in EPA's 1976 report titled The Sediment Environment of Port Valdez, Alaska), inputs from rivers and streams, LTEMP Hydrocarbon concentrations, or other areas with human activity and oil and gas transport.

Several metals are significantly elevated at the terminal, can be tied to BWTF effluent, and exceed protective guidelines. These metals accumulated in sediments near the terminal warrant further investigation, including understanding the specific sensitivity of local benthic organisms and the origin of metals detected using source identification techniques.

**Table 1. A summary of sediment metal concentrations, analytical detection limits, sediment quality guidelines (Effect Range Low and Medium), exceedance of effect ranges, source of those effect ranges, and statistical test results of difference between stations.**

Analysis	Valdez Marine Terminal (AMT)	Gold Creek (GOC)	Reporting Limit	Effects Range Low (ERL)	Effects Range Medium (ERM)	>ERL?	>ERM?	Source	Sign diff betwn sites?*
Mean ± STD (mg/kg dry weight)									
Aluminum, Total	22033.33 ± 907.38	17366.67 ± 1464.01	141.33	7,000.00	-	yes	-	U.S. EPA, 2004	*
Antimony, Total	0.29 ± 0.02	0.56 ± 0.06	2.26	-	-	-	-		*
Arsenic, Total	21.27 ± 5.26	22.83 ± 2.75	0.71	8.2	70	yes	no	U.S. EPA, 2004	-
Barium, Total	64.1 ± 2.35	32.17 ± 4.57	4.24	200	-	no	-	Long et al., 1995	***
Beryllium, Total	0.2 ± 0.01	0.2 ± 0.02	0.42	0.5	3	no	no	Long et al., 1995	-
Cadmium, Total	0.07 ± 0.01	0.09 ± 0.02	0.28	1.2	4.2	no	no	Long et al., 1995	-
Calcium, Total	3386.67 ± 380.18	3643.33 ± 317.86	706	-	-	-	-		-
Chromium, Total	62.83 ± 4.3	45.47 ± 2.87	2.82	81	370	no	no	Long et al., 1995	**
Cobalt, Total	21.53 ± 2.38	18.8 ± 1.59	0.71	12	68	yes	no	Long et al., 1995	-
Copper, Total	64.2 ± 5.6	48.47 ± 4.41	2.82	34	197	yes	no	Long et al., 1995	*
Iron, Total	41166.67 ± 1858.31	34566.67 ± 2750.15	282.33	1,000.00	-	yes	-	U.S. EPA, 2004	*
Lead, Total	12.47 ± 0.31	13.07 ± 1.3	0.85	46	218	no	no	Long et al., 1995	-
Magnesium, Total	15466.67 ± 503.32	11733.33 ± 723.42	141.33	-	-	-	-		**
Manganese, Total	894.67 ± 110.75	947.33 ± 193.7	2.82	1,000.00	-	no	-	U.S. EPA, 2004	-
Mercury, Total	0.03 ± 0	0.04 ± 0	0.02	0.2	1	no	no	U.S. EPA, 2004	-
Nickel, Total	45.13 ± 2.99	49.53 ± 4.76	1.41	20.9	50	yes	some	Long et al., 1995	-
Potassium, Total	3043.33 ± 118.46	1360 ± 149.33	141.33	-	-	-	-		**
Selenium, Total	-	1.26 ± 0.1	2.82	1	9	yes	no	Long et al., 1995	
Silver, Total	0.1 ± 0.01	0.12 ± 0.02	0.71	0.6	7	no	no	Long et al., 1995	-
Sodium, Total	7836.67 ± 380.83	4623.33 ± 571.78	211.67	-	-	-	-		**
Thallium, Total	0.15 ± 0	-	0.57	1.6	-	no	-	U.S. EPA, 2004	
Vanadium, Total	57.07 ± 2.8	34.57 ± 1.93	1.41	1.6	-	yes	-	US EPA, 2004	***
Zinc, Total	109.67 ± 4.04	90.07 ± 6.92	14.13	150	410	no	no	Long et al 1995	*
Solids, Total (%)	56.4 ± 0.79	68.4 ± 2.69	0.1						
Total Organic Carbon (%)	0.52 ± 0.04	0.50 ± 0.03							
Total Metal Concentration	94343.52 ± 3033.14	74666.31 ± 5704.19							
Total Heavy Metals*	72446.47 ± 2522.56	57929.4 ± 4571.07							
*Total Heavy Metals (THM) by Harsha & Podgorski - Ag, Al, As, Ba, Cd, Co, Cr, Cu, Fe, Mn, Ni, Pb, Sb, V, and Zn									
**P-value conversion	"-" = Not Significant; *, α = 0.05-0.01; **, α = 0.01-0.001; ***, α < 0.001								

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**Table A1. A summary of the statistical test results for tests between sites for each metal.**

Analysis	Valdez Marine Terminal (AMT)	Gold Creek (GOC)	Statistical Test	t Value	degrees of freedom	p-value
Mean ± STD (mg/kg dry weight)						
Aluminum, Total	22033.33 ± 907.38	17366.67 ± 1464.01	Welch 2 sample t test	4.69280	3.339	0.01435
Antimony, Total	0.29 ± 0.02	0.56 ± 0.06	Welch 2 sample t test	-8.01800	2.2907	0.01009
Arsenic, Total	21.27 ± 5.26	22.83 ± 2.75	Two Sample t-test	-0.45732	4	0.6712
Barium, Total	64.1 ± 2.35	32.17 ± 4.57	Two Sample t-test	10.75400	4	0.0004239
Beryllium, Total	0.2 ± 0.01	0.2 ± 0.02	Two Sample t-test	0.03049	4	0.9771
Cadmium, Total	0.07 ± 0.01	0.09 ± 0.02	Two Sample t-test	-2.10580	4	0.103
Calcium, Total	3386.67 ± 380.18	3643.33 ± 317.86	Two Sample t-test	-0.89711	4	0.4204
Chromium, Total	62.83 ± 4.3	45.47 ± 2.87	Two Sample t-test	5.81620	4	0.00435
Cobalt, Total	21.53 ± 2.38	18.8 ± 1.59	Two Sample t-test	1.65500	4	0.1733
Copper, Total	64.2 ± 5.6	48.47 ± 4.41	Two Sample t-test	3.82180	4	0.01875
Iron, Total	41166.67 ± 1858.31	34566.67 ± 2750.15	Two Sample t-test	3.44410	4	0.02619
Lead, Total	12.47 ± 0.31	13.07 ± 1.3	Two Sample t-test	-0.77748	4	0.4803
Magnesium, Total	15466.67 ± 503.32	11733.33 ± 723.42	Two Sample t-test	7.33740	4	0.001837
Manganese, Total	894.67 ± 110.75	947.33 ± 193.7	Two Sample t-test	-0.40883	4	0.7036
Mercury, Total	0.03 ± 0	0.04 ± 0	Two Sample t-test	-0.25000	4	0.8149
Nickel, Total	45.13 ± 2.99	49.53 ± 4.76	Two Sample t-test	-1.35510	4	0.2468
Potassium, Total	3043.33 ± 118.46	1360 ± 149.33	Two Sample t-test	15.29600	4	0.0001066
Selenium, Total	-	1.26 ± 0.1				
Silver, Total	0.1 ± 0.01	0.12 ± 0.02	Two Sample t-test	-1.35590	4	0.2466
Sodium, Total	7836.67 ± 380.83	4623.33 ± 571.78	Two Sample t-test	8.10140	4	0.001262
Thallium, Total	0.15 ± 0	-				
Vanadium, Total	57.07 ± 2.8	34.57 ± 1.93	Two Sample t-test	11.45900	4	0.000331
Zinc, Total	109.67 ± 4.04	90.07 ± 6.92	Two Sample t-test	4.23830	4	0.01328
Solids, Total (%)	56.4 ± 0.79	68.4 ± 2.69				
Total Organic Carbon (%)	0.52 ± 0.04	0.50 ± 0.03				
Total Metal Concentration	94343.52 ± 3033.14	74666.31 ± 5704.19				
Total Heavy Metals*	72446.47 ± 2522.56	57929.4 ± 4571.07				
*Total Heavy Metals (THM) by Harsha & Podgorski - Ag, Al, As, Ba, Cd, Co, Cr, C						
**P-value conversion	"- " = Not Significant; *, α = 0.05-0.01; **, α = 0.01					

**Briefing for PWSRCAC Board of Directors – January 2025****ACTION ITEM**

**Sponsor:** Hans Odegard and the LRP Committee

**Project number and name or topic:** PWSRCAC Annual Long Range Plan and Report Acceptance

1. **Description of agenda item:** During the months of September through December 2024, the Long Range Planning Committee worked with PWSRCAC staff, committees, and the Board to update the Five-Year Long Range Plan for Fiscal Years 2026–2030. The updated draft will be provided for Board consideration and approval. Board, committee, and staff members will participate in a Long Range Planning workshop just prior to the January Board meeting to discuss the draft plan and develop a recommendation for Board approval. This agenda item will also seek Board consideration and approval for the “Five-Year Long Range Planning and Annual Budget Development Improvement” report, generated by Professional Growth Systems (PGS). The contract with PGS was phase two of the Five-Year Planning and Annual Budget Improvement Project, aiming to identify areas for improvement in the planning process, enhance engagement, and refine the workshop format and materials for better project prioritization and budget preparation.

2. **Why is this item important to PWSRCAC:** The Board adopted the current PWSRCAC Five-Year Long Range Plan and is committed to using the plan and the planning process to develop annual work plans and budgets, as well as continually revising and improving the Long Range Plan. The presented report provides an assessment of PWSRCAC's five-year planning process, and the key concerns, suggestions, and discussions from interviews, surveys, and workshop observations, which will help the Council improve and refine this process.

3. **Previous actions taken by the Board on this item:**

<u>Meeting</u>	<u>Date</u>	<u>Action</u>
Board	1/24/2019	Approved the projected project list for the upcoming Long Range Planning Process as presented in Attachment A to the 4-9 briefing sheet.
Board	5/2/2019	Appointed the following to the FY20 Long Range Planning Committee: Thane Miller, Rebecca Skinner, Cathy Hart, and the chairs of the five technical committees.
Board	9/19/2019	Approved the projected project list for the upcoming Long Range Planning Process as presented in Attachment A to the 4-9 briefing sheet.
Board	1/24/2020	Approved the Five-Year Long-Range Plan for Fiscal Years 2021–2025 as developed and finalized for consideration by the Board at the January 22, 2020, Long-Range Plan work session.
Board	9/17/2020	Approved the protected project list for the upcoming LRP process as presented in Attachment A to the Item 4-7 briefing sheet. Each Director is asked to take individual action over the next several months by participating in the LRP process.
Board	1/28/2021	Approval of the Five-Year Long Range Plan for Fiscal Years 2022-2026 as developed and finalized for consideration by the Board at the January 27, 2021 Long Range Plan work session.

## PWSRCAC Annual Long Range Plan and Report Acceptance 4-6

Board	9/16/2021	The Board approved the protected project list for the upcoming LRP process as presented in Attachment A to the Item 4-8 briefing sheet. Each Director is asked to take individual action over the next several months by participating in the LRP process.
Board	1/28/2022	The Board approved the Five-Year Long Range Plan for Fiscal Years 2023-2027, as developed and finalized for consideration by the Board at the January 26, 2022 Long Range Plan work session.
Board	9/23/2022	The Board approved the protected project list for the upcoming LRP process as presented in Attachment A to the Item 4-8 briefing sheet.
Board	1/26/2023	The Board approved Five-Year Long Range Plan for Fiscal Years 2024–2028, as developed and finalized for consideration by the Board at the January 25, 2023 Long Range Plan work session.
Board	9/21/2023	The Board approved the protected project list for the upcoming Long Range Planning process as presented in Attachment A to the briefing sheet under Item 4-7 in the meeting notebook.
Board	1/25/2024	The Board approved the Five-Year Long Range Plan for Fiscal Years 2025–2029, as developed and finalized for consideration by the Board at the January 24, 2024 Long Range Plan work session.
Board	9/19/2024	The Board approved the protected project list for the upcoming Long Range Planning process as presented in Attachment A to briefing sheet 4-7.

4. **Summary of policy, issues, support, or opposition:** Over the years, the project development, prioritization, and ranking processes, as well as the December workshop where proposed projects are reviewed and discussed before ranking, has received feedback by some Board and technical committee members. The feedback has included concerns that the process is confusing, overly cumbersome, and/or causes general dissatisfaction. This report aims to address these issues by assessing the current process and providing recommendations to improve the Board's Five-Year Long Range Planning Process.

5. **Committee Recommendation:** The recommendation by the LRP Committee will be given verbally during the Board meeting.

6. **Relationship to LRP and Budget:** This agenda item includes the Long Range Plan update and the "Five-Year Long Range Planning and Annual Budget Development Improvement" report, created to refine and enhance the Council's existing Five-Year Long Range Planning process for developing projects and the annual budget preparation process.

7. **Action Requested of the Board of Directors:**

A. Approve of the Five-Year Long Range Plan for Fiscal Years 2026–2030, as developed and finalized for consideration at the January 22, 2025 Long Range Plan work session, and

B. Accept of the "Five-Year Planning and Annual Budget Improvement" report, as presented during the Long Range Planning work session prior to the January 2025 Board meeting.

8. **Alternatives:** None recommended.

## PWSRCAC Annual Long Range Plan and Report Acceptance 4-6

9. **Attachments:** Draft PWSRCAC Five-Year Long Range Plan for Fiscal Years 2026–2030, and “Five-Year Planning and Annual Budget Improvement” report by Professional Growth Systems to be distributed in conjunction with the January 22 workshop materials.



# Prince William Sound Regional Citizens' Advisory Council

## Five-Year Long Range Plan

**July 2025 through June 2029**  
(Fiscal Years 2026-2030)

### **Prepared by**

The PWSRCAC Long Range Planning (LRP) Committee in collaboration  
with PWSRCAC Staff & Volunteers

Adopted by the PWSRCAC Board of Directors on \_\_\_\_\_

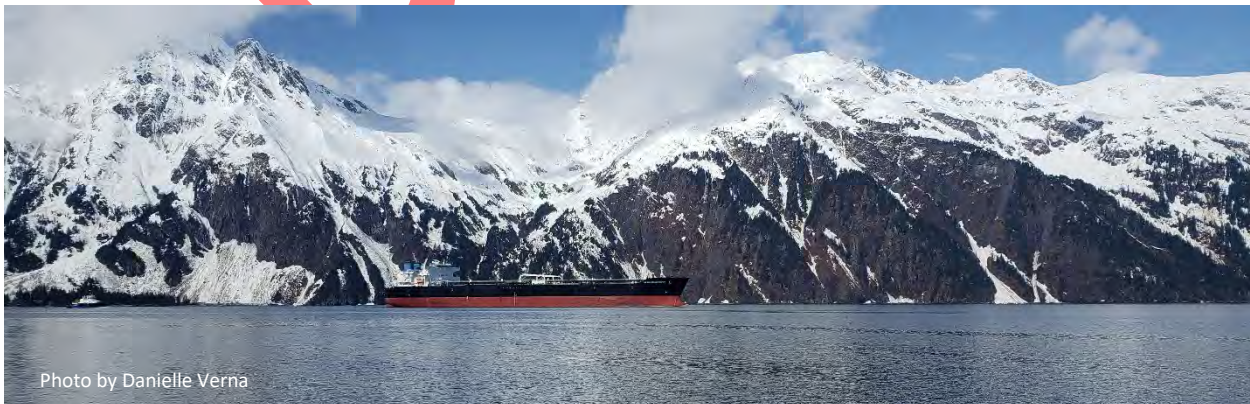


Photo by Danielle Verna

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

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# 1. Background and Acknowledgements

The Prince William Sound Regional Citizens' Advisory Council (PWSRCAC or the Council) is an independent nonprofit corporation whose mission is to promote the environmentally safe operation of the Valdez Marine Terminal and associated tankers. Our work is guided by the Oil Pollution Act of 1990 and our contract with Alyeska Pipeline Service Company. PWSRCAC's 19 member organizations represent communities affected by the 1989 Exxon Valdez oil spill, as well as commercial fishing, aquaculture, Alaska Native, recreation, tourism, and environmental groups.

Since 2001, PWSRCAC has annually reviewed and updated its Long Range Plan and planning process. This document focuses on new and continuing projects for the next five years, with emphasis on projects proposed for the upcoming fiscal year. This document is intended to serve as a guide for the organization to achieve its mission.

In January 2010, the Board developed a draft one-page strategic planning document with the assistance of the Foraker Group. It was adopted by the Board in 2012, and has been further refined over the years including a major revision in 2016. In September 2023, the PWSRCAC Board of Directors, all committee chairs, and select staff were invited to participate in a facilitated full day strategic planning workshop. The most recently approved One-Page Strategic Plan is attached to the final version of this document as Appendix A. The one-page plan is reviewed and updated with this document, and is intended to supplement the overall vision, purpose, driving forces, and values contained in the Five-Year Long Range Plan.

Projects proposed for funding in the upcoming fiscal year are prioritized and presented by each of the Council's five technical committees (see page 7) for consideration at the Long Range Planning workshop, usually held in December, after which they are ranked by the Board and staff. The rankings (Appendix D) are used as guidance in the development of the annual budget. The final budget for each upcoming fiscal year is approved at the May Board meeting. Any ongoing projects presumed to be permanent, as well as ongoing needs of the Council's operations, are not included in the annual project scoring process. These "protected projects" are reviewed separately by the Board each year, typically at the September Board meeting.

Each year, the Council's five technical committees prioritize projects related to their work and recommend projects to be protected (not ranked). All non-protected proposed projects are presented for discussion at the Volunteer Workshop, held annually in early December. Projects proposed for the upcoming fiscal year are distributed to the Board and staff for ranking, with the following criteria strongly considered during the ranking process: 1) relevance to achieving PWSRCAC's mission; 2) extent to which there is alignment with goals and objectives in the One Page Strategic Plan, as well as mandates set out in the Oil Pollution Act of 1990 (OPA 90) and requirements within the Alyeska contract; 3) benefit to member organizations; 4) probability of success; and 5) cost effectiveness.

This year, as in the past, the project prioritization process began with letters soliciting project ideas being broadly disseminated to stakeholder entities, including industry and regulatory agencies. All staff, Board, and technical committee members were invited to submit suggestions for potential new projects as well. Staff developed most of the project descriptions and budgets with help from technical committee members and stakeholders.

Members of the current Long Range Planning Committee (LRPC) are Board members Amanda Bauer, Elijah Jackson, Robert Archibald, and Aimee Williams; committee chairs Trent Dodson, Jim Herbert, Steve Lewis, Mikkel Foltmar, and Sarah Allan; and IEC member Cathy Hart (chair LRPC).

The Long Range Planning Committee thanks all those who contributed to this effort.

## **2. Introduction and Purpose**

### **Introduction**

This five-year plan is intended to provide a framework, process, and template, within which annual work plans and budgets can be developed. This plan is a tool for carrying out the Council's work and assessing our progress. The planning process included in this document establishes the timeline and responsibilities for annual review of the five-year plan. It provides the Board of Directors with a means to control expenditures, ensure resources for our most important projects and priorities, and provide guidance to staff for developing the annual budget.

This plan builds upon the Council's extensive foundations and work, accomplished throughout its decades of operation. It represents a comprehensive road map to help us design, develop, prioritize, and achieve the goals of PWSRCAC on behalf of the citizens we represent.

If you have experience with the PWSRCAC Long Range Planning Process and would like to go directly to the information developed for the upcoming fiscal year, it can be found starting on page 20 (see Figure 5 - FY2026-FY2030 Projected Cost and Completion Forecast).

### **Overall Vision**

After a 1998 PWSRCAC planning workshop, the Board adopted the following long-range (10 to 30 year) vision to provide the context by which we work toward our mission.

"PWSRCAC's performance is such that governments and industries solicit and value citizen input at all levels and stages of oil transportation decisions that potentially impact the environment."

### **Mission: The Core Purpose, Our Reason for Existing**

This simple mission statement adopted in 1990 has served our organization well. PWSRCAC's mission is:

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

### **Driving Forces**

There are certain forces important to the function and ongoing work of the organization, including:

- Alyeska contract

- Oil Pollution Act of 1990
- Constituent-based volunteer Board and technical committees
- Public concerns
- State and federal laws and regulations
- State and national political priorities
- Industry policies and practices
- Technology
- Oil spills and other environmental incidents

## **Core Values**

First adopted by the Board after the 1998 planning workshop, and since updated, the Council's Core Values are:

- Represent the interests of our stakeholders by providing an effective voice for citizens
- The foundation of PWSRCAC is volunteerism
- Promote vigilance and combat complacency
- Organizational transparency and integrity through truth and objectivity
- Foster environmental stewardship

## **Commitment**

The Council is committed to building and maintaining an organization that fosters collaborative teamwork and creative solutions, supported by a dedicated, highly skilled, and diverse work force. The Council is committed to the continuous improvement necessary to minimize real, and potential, environmental and human health impacts stemming from oil industry activities.

PWSRCAC is dedicated to representing our citizen constituents and member entities. The Council is committed to serving each member entity equally and to the fullest extent possible, to maximize protection and minimize environmental harm relating to oil industry operations.

To accomplish this, PWSRCAC will:

- Listen closely to our constituents and member entities through their Board representatives, understand their needs, and clearly explain the needs, responsibilities, and mission of the Council and its programs.
- Work in partnership with the oil industry and the associated regulatory agencies as much as possible to further the Council's mission to minimize the risk of oil spills and other adverse impacts from oil industry activities in the region affected by the Exxon Valdez Oil Spill.
- Act promptly, fairly, professionally, and courteously in all our endeavors, and hold ourselves accountable for our individual and organizational actions.

## **3. Organization and Operational Philosophy**

## Organizational Culture

PWSRCAC was created in the wake of the Exxon Valdez oil spill, an environmental disaster that affected almost every aspect of life in the communities within our region. Community leaders and local citizens rallied to support the creation of this organization and became highly engaged in our work at every level. More than three decades later, the Council continues to successfully recruit an extensive volunteer base, bringing local and technical expertise to our work.

Driven by the urgent need to act on the part of all stakeholders after the Exxon Valdez disaster, major changes have taken place since 1989. The risk of a catastrophic oil spill in Prince William Sound and the Gulf of Alaska has been significantly reduced, while the ability to respond if prevention fails has increased. PWSRCAC has developed processes and relationships that have contributed to those improvements. Recent years have brought significant concerns including aging infrastructure, reduced governmental oversight, changes in Owner/Operators, reduced budgets, and labor shortages. The challenge now is to meet the many changing needs of our constituents while preventing complacency after so many years without a major oil spill.

Our work must always focus on protecting the interests of the people in our region. Our members consist of communities and interest groups throughout the area affected by the Exxon Valdez spill, including Prince William Sound, the outer Kenai Peninsula, and Kodiak Island. Acknowledging the varying needs and perspectives of individuals and groups within the EVOS region, it can be challenging to meet all priorities. It is important to foster a culture that is open to all citizens, with appropriate respect and consideration for differing viewpoints. Addressed fully and with open minds, our differences can become our strengths and lead to more effective solutions.

OPA 90 mandates the establishment of regional citizens advisory councils for Prince William Sound and Cook Inlet as “demonstration programs.” Coastal communities around the world look to us for assistance in developing ways for their citizens to have a say in the oil transportation decisions affecting their local environment, economies, health, and well-being. Within the limits of our resources, PWSRCAC will continue to provide public information and support, sharing the lessons we have learned, our successes, and our challenges.

To ensure that PWSRCAC is successful in meeting its OPA 90 mandate, its mission, and its overarching goals, the organization must remain healthy and productive with a strong and secure structure. It is equally important to maintain the organization’s independence while building strong external relationships. PWSRCAC must balance sustainable operations with the need to effectively advise and, when necessary, provide constructive criticism to the oil industry and/or regulatory agencies. It is also important to track and assess overall organizational administrative costs to effectively review how efficiently PWSRCAC is meeting its responsibilities, accomplishing its mission, and carrying out important projects and programs within its budgetary constraints. We seek to apply organizational excellence in everything that we do.

## Resources

PWSRCAC’s resources consist primarily of:

- The people in our organization and the constituents they represent,
- Longevity, institutional knowledge, and strong documentation,

- Healthy relationships with government, industry, and other non-governmental organizations,
- Secure source of funding.

Considering the importance of our mission and the complexity of our tasks, PWSRCAC must be diligent in how we use our limited resources. We are committed to using our resources wisely, and we are accountable for all usage of our resources.

## **People, the PWSRCAC team:**

The backbone of the Council is its people. The PWSRCAC team is comprised of a volunteer Board of Directors, five technical committees (also composed of volunteers), and a professional staff. Our main strength is the diverse backgrounds, technical expertise, and passion for accomplishing PWSRCAC's mission brought by these individuals, especially when unified by our mission statement and core purpose.

### **Board of Directors:**

PWSRCAC Board members are appointed by communities in the region affected by the 1989 Exxon Valdez oil spill as well as Alaska Native, commercial fishing, aquaculture, recreation, tourism, environmental groups, and the State Chamber of Commerce. Directors serve on a volunteer basis for two-year terms.

There are four established Board committees, on which members serve one-year terms:

- Executive Committee (XCOM)  
*XCOM is a subset of the full Board of Directors, made up of the Council's elected officers. It has decision-making authority between regular Board meetings, held three times per year.*
- Legislative Affairs Committee (LAC)  
*LAC monitors developments in the Alaska State Legislature and in Washington, D.C., recommends action to be taken to the full Board, and, as directed by the Board, communicates PWSRCAC positions to lawmakers and officials in state and national government.*
- Board Governance Committee (BGC)  
*BGC focuses on the PWSRCAC Bylaws, policies, procedures, and practices as they pertain to operations of the Council Board.*
- Finance Committee  
*The Finance Committee assists the Board of Directors in overseeing the financial affairs of PWSRCAC and the annual independent audit of the Council's finances.*

The Board has also established one ongoing ad hoc committee: the Long Range Planning Committee. This committee leads the annual review and update of the Council's Long Range Plan and planning process, as well as the annual Long Range Planning workshop.

### **Technical committees:**

Each of the five PWSRCAC technical committees is focused on a specific portion of the overall PWSRCAC mission. Committee membership is open to applicants with certain experience or special skills, subject to acceptance by the committee and Board. Members of the committees often have professional backgrounds directly related to the committee purpose. Committee members serve on a volunteer basis for two-year terms.

There are five technical committees, each with a unique emphasis and mission. They are:

- Scientific Advisory Committee (SAC)  
*Mission statement: "Scientists and citizens promoting the environmentally safe operations of the terminal and tankers through independent scientific research, environmental monitoring, and review of scientific work."*
- Oil Spill Prevention and Response Committee (OSPR)  
*Mission statement: "The Oil Spill Prevention and Response (OSPR) Committee works to minimize the risk and impacts associated with oil transportation through research, advice, and recommendations for strong and effective spill prevention and response measures, contingency planning, and regulations."*
- Terminal Operations and Environmental Monitoring Committee (TOEM)  
*Mission statement: "The Terminal Operations and Environmental Monitoring (TOEM) Committee identifies actual and potential sources of episodic and chronic pollution at the Valdez Marine Terminal."*
- Port Operations and Vessel Traffic Systems Committee (POVTS)  
*Mission statement: "The Port Operations and Vessel Traffic Systems (POVTS) Committee monitors port and tanker operations in Prince William Sound."*
- Information and Education Committee (IEC)  
*Mission statement: "The Information and Education Committee (IEC) supports the Council's mission by fostering public awareness, responsibility, and participation through information and education."*

**Staff:**

The Council currently has a budget for a professional staff of 16 full-time equivalent positions. The management team is comprised of the Executive Director, Director of Administration, Director of Finance, Director of Communications, and Director of Programs. The administrative staff consists of the Executive Assistant. Program staff consists of the Outreach Coordinator, seven Project Managers, and two Project Manager Assistants.

Together these three groups (Board, technical committees, and staff) make up the Council's core structure. Figure 1 presents a tabular review of the PWSRCAC team structure and the roles and responsibilities of each group. Appendix B, Internal Structure and Relationships, presents a more detailed review of the PWSRCAC internal structure and operational relationships.

**Figure 1: The PWSRCAC Team**

<b>Board of Directors</b>	
<b>Membership</b>	<b>Responsibilities</b>
<p>20 volunteer members, appointed by and representing 19 member entities:</p> <p>Alaska State Chamber of Commerce  Chugach Alaska Corporation  City of Cordova  City of Homer  City of Kodiak  City of Seldovia  City of Seward  City of Valdez (two Board seats)  City of Whittier  Corporation Community of Chenega  Corporation Community of Tatitlek  Cordova District Fishermen United  Kenai Peninsula Borough  Kodiak Island Borough  Kodiak Village Mayors Association  Oil Spill Region Environmental Coalition  Oil Spill Region Recreational Coalition  Port Graham Corporation  Prince William Sound Aquaculture Corporation</p>	<ul style="list-style-type: none"> <li>• Bylaws, policies, and priorities</li> <li>• Strategic governance and oversight</li> <li>• Budget and contract approvals</li> <li>• Approval of reports and recommendations</li> <li>• Plan and develop objectives</li> <li>• Evaluation of Executive Director</li> <li>• Individual service on: <ul style="list-style-type: none"> <li>• Board committees</li> <li>• Technical committees</li> <li>• Working groups</li> <li>• Project teams</li> </ul> </li> </ul>

<b>Technical and Board Committees</b>	
<b>Membership</b>	<b>Responsibilities</b>
<ul style="list-style-type: none"> <li>• Five technical committees, comprised of a total of 32-40 volunteer members recruited and appointed by the Board, and at least one Board member per committee: <ul style="list-style-type: none"> <li>• Information and Education</li> <li>• Oil Spill Prevention and Response</li> <li>• Port Operations &amp; Vessel Traffic Systems</li> <li>• Scientific Advisory</li> <li>• Terminal Ops &amp; Environmental Monitoring</li> </ul> </li> <li>• Legislative Affairs Committee: 6-10 Board members</li> <li>• Executive Committee (XCOM): Board officers and elected at-large members</li> <li>• Board Governance Committee: 3-6 Board members</li> <li>• Finance Committee: minimum 4 Board members (Board Treasurer as chair)</li> <li>• Long Range Planning Committee: minimum 3 Board members, plus chairs of each technical committee</li> </ul>	<ul style="list-style-type: none"> <li>• Scoping of issues and development of proposed projects</li> <li>• Research and literature reviews</li> <li>• Review reports, policies, bylaws, financials, and position statements and make recommendations to the Board</li> <li>• Individual service on working groups and project teams</li> <li>• XCOM serves to address time sensitive issues that cannot wait for a regularly scheduled Board meeting except when an issue is deemed to be important enough to warrant a special meeting or Board teleconference</li> <li>• Finance Committee: Main contact between Board and outside independent auditor and periodic detailed review of financial statements and internal controls</li> </ul>

Staff	
Membership	Responsibilities
<p>Currently approved 16 full-time equivalents:</p> <p>(1) Executive Director  (1) Director of Administration  (1) Director of Programs  (1) Director of Communications  (1) Director of Finance  (1) Administrative Staff (Executive Assistant)  (8) Project Managers, (five major programs, one public communications/website, and one Outreach Coordinator)  (2) Project Manager Assistants (committee support)</p>	<ul style="list-style-type: none"> <li>• Administration of organization and support for Board and committees</li> <li>• Provide information about PWSRCAC and issues to Board, committees, member entities, government agencies, industry, and the public</li> <li>• Develop and maintain relationships with government agencies and oil shipping industry</li> <li>• Develop objectives, schedule, and budgets for PWSRCAC programs and projects</li> <li>• Manage and administer contracts for technical services</li> <li>• Report program and project status to management, Board, and committees</li> <li>• Coordinate review and acceptance of reports and recommendations</li> <li>• Lead staff-driven work, such as drill monitoring, contingency plan reviews, data collection, etc.</li> </ul>

## Relationships

One of the objectives of OPA 90 was to foster partnerships among the oil industry, government agencies, and local citizens. We have learned during the past three decades that partnerships among stakeholders can lead to good policies, safer transportation of oil, better spill prevention and response capabilities, and improved environmental protection. Ex officio members, industry representatives, and other organizations routinely participate in technical committee meetings, contributing expertise and other assistance with PWSRCAC projects. Many of PWSRCAC's major successes have been jointly achieved through technical and regulatory working groups, and funding partnerships among government, industry, and citizen representatives. Some notable examples include:

Project	Partners
Port Valdez Weather Buoys (2019-present)	Alyeska Pipeline Service Company (APSC), City of Valdez, Prince William Sound Science Center (PWSSC), Fairweather Science, Alaska Ocean Observing System (AOOS), JOA Surveys, National Oceanic and Atmospheric Administration (NOAA) Physical Oceanographic Real-Time System (PORTS)
Fishing Vessel Program Outreach Tour (2016-present)	APSC/SERVS, Stan Stephens Cruises, Kenai Fjords Tours, Major Marine Tours, Seward Chamber of Commerce, Copper River Watershed Project, Chugach School District, Valdez School District
Marine Transition Participant Team (2016-2019)	APSC/SERVS, Conoco Phillips/Polar Tankers, Alaska Department of Environmental Conservation (ADEC), Crowley, United States Coast Guard (USCG), Edison Chouest Offshore (ECO)
Potential Places of Refuge (2015-2017)	Alaska's Institute of Technology (AVTEC), Southwest Alaska Pilots Association (SWAPA), Safeguard Marine
Project Jukebox (2013-present)	University of Alaska Fairbanks
Youth Involvement (2010-present)	Alaska Geographic, Alaska Marine Conservation Council, Alaska Tsunami Bowl (University of Alaska Fairbanks), Alutiiq Tribe of Old Harbor, Baranof Museum, Center for Alaskan Coastal Studies (CACS), Children of the Spills (Katie Gavenus), Chugach Children's Forest, Chugach National Forest, Copper River Watershed Project, Friends of Alaska National Wildlife Refuges, Kachemak Bay National Estuarine Research Reserve, Kenai Fjords National Park, Kenai Mountains-Turnagain Arm National Heritage Area, Local school districts of our region, PWSSC, Wrangell Institute of Science & the Environment (WISE), University of Alaska Anchorage/PWS College, Valdez Museum
Marine Invasive Species (1996-present) Alaska Invasive Species Partnership (2010-present)	Alaska Department of Fish & Game (ADFG), Alaska Department of Transportation & Public Facilities, Kachemak Bay National Estuarine Research Reserve, U.S. Fish and Wildlife Service (USFWS), U.S. Geological Survey (USGS), The Nature Conservancy, National Park Service (NPS), NOAA, SeaGrant Alaska, Smithsonian Environmental Research Center (SERC), Alaska Department of Natural Resources (ADNR), Department of Interior (DOI), ADEC, U.S. Forest Service (USFS), Prince William Soundkeeper, BLM, Alaska Soil & Water Conservation Districts
Valdez Marine Terminal Contingency Plan Coordination Working Group (1997-present)	ADEC, Environmental Protection Agency (EPA), Bureau of Land Management (BLM), USCG, APSC

## Funding

Partnerships with industry, government, and non-governmental agencies have provided funding sources in the past for specific projects, including cash and in-kind donations. However, PWSRCAC's contract with Alyeska Pipeline Service Company is the primary means and most secure source of funding. Originally signed in 1990, the contract and funding agreement continues as long as oil flows through the trans-Alaska pipeline to the loading terminal at Port Valdez. The funding level is reviewed every three years, with the most recent period running from July 1, 2023 to June 30, 2026. Funding is typically adjusted to the Anchorage Consumer Price Index (CPI). Any adjustments are agreed upon by signing a triennial contract addendum. The current level of funding is \$4,277,712.

## Overarching Goals and Objectives

This long range plan encompasses four overarching goals, each of which is supported by several specific, measurable objectives. The Board of Directors endorsed the goals in 1998, to correlate with the established vision, mission, and core values of the organization. These overarching goals are:

- Total compliance with OPA 90 and Alyeska contractual requirements
- Continue to improve environmental safety of oil transportation in our region
- Develop and maintain excellent external and internal communication
- Achieve organizational excellence

Each overarching goal is supported by objectives which, when accomplished, serve and support it.

### 1. Goal: Total compliance with OPA 90 and Alyeska contractual requirements.

#### Objectives:

- Annual recertification
- Review funding
- Monitor OPA 90 for changes in PWSRCAC status
- Maintain regional balance
- Link projects and programs to OPA 90 and Alyeska contract

Figure 2 presents OPA 90 and Alyeska Contract requirements for PWSRCAC activities.

**Figure 2: OPA 90 and Alyeska Contractual Requirements**

#### **OPA 90 Contractual Requirements**

- (1) Regional Balance, broadly representative of communities and interests in the region.
- (2) Provide advice to regulators on the federal and state levels.
- (3) Provide advice and recommendations on policies, permits, and site-specific regulations relating to the operation and maintenance of terminal facilities and crude oil tankers.
- (4) Monitor the environment impacts of the operation of terminal facilities and crude oil tankers, as well as operations and maintenance that affect or may affect the environment in the vicinity of the terminal facilities.
- (5) Review the adequacy of oil spill prevention and contingency plans for the terminal facilities and crude oil tankers operating in Prince William Sound and review the plans in light of new technological developments and changed circumstances.
- (6) Provide advice and recommendations on port operations, policies, and practices.

- (7) Conduct scientific research and review scientific work undertaken by or on behalf of the terminal or oil tanker operators or government entities.
- (8) Devise and manage a comprehensive program of monitoring the environmental impacts of the operations of the terminal facility and crude oil tankers.
- (9) Monitor periodic drills and testing of oil spill contingency plans.
- (10) Study wind and water currents and other environmental factors in the vicinity of the terminal that may affect the ability to prevent, respond to, contain, and clean up an oil spill.
- (11) Identify highly sensitive areas that may require specific protective measures.
- (12) Monitor developments in oil spill prevention, containment, response, and cleanup technology.
- (13) Periodically review port organizations, operations, incidents, and the adequacy and maintenance of vessel traffic service systems designed to ensure safe transit of crude oil tankers pertinent to terminal operations.
- (14) Periodically review the standards for tankers bound for, loading at, exiting from, or otherwise using the terminal facilities.
- (15) Foster partnerships among industry, government, and local citizens.

#### **Alyeska Contractual Requirements**

- (1) Provide local and regional input, review and monitoring of Alyeska's oil spill response and prevention plans and capabilities, environmental protections capabilities, and the actual and potential environmental impacts of the terminal and tanker operations.
- (2) Increase public awareness of subjects listed above.
- (3) Provide input into monitoring and assessing the environmental, social, and economic consequences of oil related accidents and actual or potential impacts in or near Prince William Sound.
- (4) Provide local and regional input into the design of appropriated mitigation measures for potential consequences likely to occur as a result of oil or environmental related accidents or impacts of terminal and tanker operations.
- (5) Provide recommendations and participate in the continuing development of the spill prevention and response plan, annual plan review, and periodic review of operations under the plan including training and exercises.
- (6) Other concerns: comment on and participate in selection of research and development projects.
- (7) Review other important issues related to marine oil spill prevention and response concerns that were not obvious when the contract was signed.
- (8) Review other concerns agreed upon by the Council regarding actual or potential impacts of terminal or tanker operations.

## **2. Goal: Continue to improve environmental safety of oil transportation in our region.**

### **Objectives:**

- Monitor and review development of, and compliance with, environmental laws and regulations
- Pursue risk-reduction measures
- Investigate best available technologies
- Monitor operations and promote a safe and clean marine terminal
- Monitor and review the condition of the tanker fleet/maritime operations
- Monitor and promote the safe operation of all Alyeska/SERVS-related on-water assets
- Monitor and review environmental indicators

- Monitor and review development of and compliance with laws and regulations

### 3. Goal: Develop and maintain excellent external and internal communication.

#### Objectives:

- Advocate for government and industry measures to improve the environmental safety of oil transportation
- Maintain and improve relationships and work with government officials, partnerships with industry, and relationships with communities
- Support other citizens' advisory groups
- Ensure availability of PWSRCAC information
- Improve availability of information to PWSRCAC from industry sources

### 4. Goal: Achieve organizational excellence.

#### Objectives:

- Effective short- and long-term planning
- Fiscally responsible, efficient, and easily understood financial planning, tracking, and reporting procedures
- Remain committed to continuous improvement
- Recognize people as the most important asset of the organization
- Have all the necessary resources
- Recruit and develop knowledgeable and committed Board members, volunteers and staff
- Provide strong volunteer structure and support for volunteers
- Maintain clear policies and procedures

## Status Review

### *Where are we today?*

Throughout its history, PWSRCAC has built an effective organization and contributed significantly to major improvements in the operations and oil transportation safety systems at the Valdez Marine Terminal, and in Prince William Sound and the Gulf of Alaska. We are now challenged to build on the successes of the past to meet the changing needs of our constituents, aging infrastructure and changing dynamics of oil transportation issues. The Long Range Planning Committee summarized our Strengths, Weaknesses, Opportunities, and Threats as follows.

- Strengths: history, passionate participants, worthy cause, good staff, respectability, political credibility
- Weaknesses: highly opinionated individuals, internal conflict, difficulty in recruiting dedicated younger volunteers
- Opportunities: (political and educational) to influence regulators and the oil industry to create the safest operation possible, with zero potential for spills and other environmental and/or human health impacts
- Threats: reactive vs. proactive organizational culture, regulatory and political priorities, outside interests supporting personal agendas, thinking small, internal competition for resources, conflicting priorities

## 4. Process and Products

### Process

PWSRCAC promotes the environmentally safe operation of the Valdez Marine Terminal and the associated crude oil tankers on behalf of the citizens of our region. The Oil Pollution Act of 1990 and our contract with Alyeska Pipeline Service Company outline what is expected from our organization. In essence, we observe, verify, inform, and advise. Over time, our internal structure has evolved in order to meet these objectives. This structure is described in the preceding section.

Communication and coordination are key to our success – internally with our Board, staff, committees, and our constituents and externally with the oil industry and government officials. Figure 3 shows how our work is carried out internally, from the planning stage through completion by the technical committees, staff, project teams, and the Board of Directors.

**Figure 3. Planning and Implementation Process for Program Activities and Projects**

<b>Phase</b>	<b>Committees</b> <i>Plan, monitor, recommend</i>	<b>Staff</b> <i>Coordinate and complete</i>	<b>Project Teams</b> <i>Assist, review, advise</i>	<b>Board</b> <i>Review and approve</i>
<b>Long Range (Five-Year) Plan</b>	<ul style="list-style-type: none"> <li>identify future issues relating to each program</li> <li>recommend specific program components and projects to Board</li> </ul>	<ul style="list-style-type: none"> <li>support committees with information and options for study</li> <li>consolidate committee recommendations</li> <li>prepare comprehensive plan for presentation to Board</li> </ul>		<ul style="list-style-type: none"> <li>affirm and/or amend mission, vision, core values, and goals</li> <li>provide guidance and direction to committees</li> <li>annually adopt five-year plan</li> </ul>
<b>Budgeting Process</b>	<ul style="list-style-type: none"> <li>identify specific projects and program components for the coming year</li> <li>develop objectives and define final product</li> </ul>	<ul style="list-style-type: none"> <li>support committees with information and planning tools</li> <li>develop implementation plan for projects and programs</li> <li>finalize consolidated budget and work plan</li> </ul>		<ul style="list-style-type: none"> <li>review committee proposals and provide input</li> <li>approve budget</li> </ul>
<b>Implementation</b>	<ul style="list-style-type: none"> <li>monitor progress</li> <li>provide input / guidance to project team and project manager</li> <li>Develop requested Board actions</li> </ul>	<ul style="list-style-type: none"> <li>lead project teams</li> <li>administer contracts</li> <li>status reports to committees, Board, and public information staff</li> </ul>	<ul style="list-style-type: none"> <li>review documents and input from committees</li> <li>advise staff and assist with development of recommendations for advice to industry and agencies</li> </ul>	<ul style="list-style-type: none"> <li>approve contracts</li> <li>monitor progress and provide input to project team</li> <li>approve interim recommendations and advice</li> </ul>
<b>Closure</b>	<ul style="list-style-type: none"> <li>determine that final product meets objectives</li> <li>recommend acceptance by Board</li> </ul>	<ul style="list-style-type: none"> <li>close contracts</li> <li>finalize proposed recommendations and advice</li> <li>presentation to committee</li> <li>prepare briefings and presentations for Board</li> </ul>	<ul style="list-style-type: none"> <li>assist staff with presentation to Board</li> <li>recommendations to committees for future related work</li> </ul>	<ul style="list-style-type: none"> <li>accept and approve work products, recommendations, and advice</li> <li>take action or adopt policy based on findings of project</li> </ul>

NOTE: The shading indicates where the primary responsibility is for each phase of a program or project, beginning with the technical committees, working through with staff and project teams, and finally Board approval of the product and final recommendations. Technical committees generally meet every 1-2 months; project teams meet as needed to abide by project schedules; and the Board meets three times a year to approve work plans and budgets, and accept final products.

## Products

We may not think of our work as being “products” but as an entity we are what we produce. The following are the goods and services that are created by the PWSRCAC which, when provided, generate continued support for our work:

- A voice and forum for the interests and concerns of citizens and communities.
- Comments on, and recommendations for, oil industry and regulatory agency proposals and action.
- Committee oversight and scientific review of the impacts of terminal and tanker operations on communities and the environment.
- Information and education about the environmental implications of oil transportation and terminal operations.
- Recommendations and information on legislation and regulations.
- Advice to the public, industry, and regulators on ways to reduce the environmental risks associated with terminal and tanker operations.

The ultimate success of our work is measured by the outcome; a clearly visible and demonstrated improvement in the system that results from our recommendations and advice. A few of our milestones and significant accomplishments include:

- Extensive partnerships with industry and regulators on key projects.
- Installation of two metocean weather buoys in Port Valdez (one at the Valdez Marine Terminal and the other at the Valdez Duck Flats) that provide real-time weather observations to improve navigation safety and oil spill response in Port Valdez.
- Cleaner air in Port Valdez after installation of the tanker vapor control system at the Valdez Marine Terminal.
- Enhanced tractor tugs designed and built to escort oil tankers in Prince William Sound.
- Development of Geographic Response Strategies (GRS) to protect environmentally sensitive areas in response to an oil spill.
- Involvement of younger generations in PWSRCAC programs and projects and fostering of environmental stewardship, through the Youth Involvement and Alaska Oil Spill Lesson Bank projects.
- Upgraded fire suppression systems on the crude oil storage tanks and at the East Metering facilities at the Valdez Marine Terminal.
- Significantly reduced emissions of hazardous air pollutants from ballast water treatment processes with installation of vapor control on the 90s tanks at the Valdez Marine Terminal.
- Removal of a nationwide exemption for emissions from crude oil transportation under a federal rule-making, and resulting modifications to the ballast water treatment plant, further reducing hazardous air pollutants from the Valdez Marine Terminal.
- Federal legislation securing two escort tugs for all laden tankers in Prince William Sound.
- Increased community awareness of the state-of-the-art fishing vessel training program.
- Improved crude oil piping inspections, through piping system modifications allowing for comprehensive, internal inspections at the Valdez Marine Terminal.
- A citizen-based monitoring system for early detection of invasive species.
- Installation of a steel “drip ring” around the perimeter of VMT ballast water storage Tank 94 by Alyeska, on Council recommendation.

Equally important, but less tangible, is our responsibility to monitor compliance with state and federal regulations and review contingency plans and permit applications. We provide comments, suggestions, and recommendations that strengthen environmental protection measures and ensure that plans are adequate to respond effectively if prevention measures fail. To develop these products, a multi-tiered work structure has evolved, to include programs and projects.

## **Programs**

The operations of PWSRCAC are organized by program, each closely related to specific OPA 90 and contractual requirements and aligned with the technical committees.

A program includes all ongoing activities, including projects and initiatives, related to PWSRCAC-specific areas of interest. The ongoing tasks are generally planned and carried out by staff and volunteers with limited reliance on outside contracts. PWSRCAC's operation includes the following major programs:

### ***Communications and Technical Programs***

- Public Information, Communication, and Community Outreach
- Digital Collections
- Terminal Operations & Environmental Monitoring
- Maritime Operations
- Oil Spill Response Planning and Preparedness
- Scientific Research & Assessment

## **Projects**

Projects are developed annually by the committees and staff. They are designed to meet specific objectives related to issues associated with the Council's mission as driven by concerns raised by citizens, committees, Council members, and the technical programs. Projects normally have starting and ending dates, as well as clearly defined products and outcomes, and often require outside expertise and/or services.

However, some projects—such as the Observer and the Annual Report—do not have clear starting and ending dates, but instead are presumed to be permanent, ongoing parts of the Council's operations. Any such projects determined to be permanent and ongoing, or mandatory obligations based on OPA 90 or our contract with Alyeska, are to be classified as protected projects. The Board will annually review and approve any recommendations for protected projects. Protected projects are not subject to the project ranking process as outlined later in this plan.

## **5. Five-Year Plan**

### **The Model Five-Year Planning Cycle**

The annual planning cycle needed to develop the Budget and associated documents must include an evaluation of current projects and a projection of future efforts. This process cannot be achieved without cohesive efforts carried throughout the entire year.

Figure 4, Annual Process for Five-Year Planning and Budgeting, is a presentation of the annual planning cycle as applied to the PWSRCAC operation. The tasks involved in the planning cycle, the individuals and groups responsible for each task, and the timeline for their completion are delineated.

**Figure 4**  
**ANNUAL PROCESS FOR LONG RANGE PLANNING AND BUDGETING**

<b>TASK</b>	<b>PERSONNEL</b>	<b>TIMELINE</b>
Appoint members to the Long Range Planning Committee (LRPC)	Board, Committees, and Staff	May
Incorporate Board guidance via review of Long Range Plan, starting with next fiscal year	Management team and LRPC	May - August
Conduct and participate in discussions to evaluate current projects and develop ideas for new work. Prepare draft budget sheets for new and ongoing projects	LRPC, Board, Committees, and Staff	September - November
Volunteer workshop, where technical committees present proposed projects for the upcoming fiscal year; Board and staff rank proposed projects	LRPC, Board, Committees, and Staff	Early December
Prepare draft five-year plan from survey data and review of existing plan	LRPC	December
Workshop to review and amend draft five-year plan	Board, Committees, and Staff	Prior to January meeting
Five-year plan adopted	Board	January meeting
Draft budget and project preparation for upcoming fiscal year	Committees, working groups, and staff	February - March
Draft budget sheets revised, as needed	Project Staff	March - April
Draft budget sheets reviewed by executive staff to compile balanced budget; Finance Committee then reviews draft budget and recommends to full Board	Executive Director, Director of Finance, finance committee	April
Budget Workshop	Board, Committees, and Staff	Prior to May meeting
Adopt final budget	Board	May meeting

## **Evaluation of Current and Proposed Projects**

A review of the fiscal status of all current projects (FY2025) was conducted, and projected FY2026-FY2030 project costs were developed along with anticipated completion dates if known. This data is presented in Figure 5, FY2026-FY2030 Projected Cost and Completion Forecast. The Board adopted a net asset stabilization policy wherein net assets are targeted to be no less than \$400,000 and would be used only in extraordinary circumstances. The Board-approved amount is currently \$400,000. These funds are separate from the current and future operating budgets.

## **Project and Initiative Timeline**

The LRPC and PWSRCAC management staff have prepared the projected new project and initiatives timelines based on the assumptions of fund availability as discussed earlier, and management projections of staff availability. Some efforts are projected as continuing each year, some recur at intervals, and some are one-year projects. These timelines are presented in Figure 5: FY2026-FY2030 Projected Cost and Completion Forecast.

## **New Projects and Initiatives**

Each year since 2004, PWSRCAC staff and volunteers are given a chance to suggest new projects and initiatives. In addition, solicitation letters are sent to ex officio members and various stakeholders inviting suggestions for new projects that support the mission of the organization. Some of the proposed new projects are merged into existing programs. Some of the proposed projects may be identified as outside the Council's mission, or unrealistic based on current resources. Proposed projects that appear viable are moved forward in the annual planning process; staff and committee members then prepare briefing sheets and cost projections for the proposed projects. The project proposals are discussed and evaluated by the LRPC and the various technical committees.

**Figure 5**  
**FY2026-FY2030 Projected Cost and Completion Forecast**

<b>Programs and Projects</b>	<b>Current Approved Budget FY2025</b>	<b>Proposed FY2026</b>	<b>Proposed FY2027</b>	<b>Proposed FY2028</b>	<b>Proposed FY2029</b>	<b>Proposed FY2030</b>
<b>INFORMATION &amp; EDUCATION</b>						
3200--Observer Newsletter	\$7,500	\$7,400	\$7,600	\$7,800	\$8,000	\$8,200
3300--Annual Report	\$8,000	\$8,400	\$8,800	\$9,200	\$9,600	\$10,000
3410--Fishing Vessel Program Community Outreach	\$19,000	\$19,000	\$19,570	\$20,157	\$20,762	\$21,385
3530--Youth Involvement	\$90,750	\$50,750	\$50,750	\$50,750	\$50,750	\$50,750
3610--Website Presence BAT	\$7,140	\$6,240	\$6,740	\$7,240	\$7,740	\$8,240
3903--Internship	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000
3XXX--Communities in Focus		\$5,000				
3562--Then & Now				\$5,000	\$4,000	
3XXX--EVOS 40th Anniversary Commemoration Planning				\$15,000		
<b>Subtotal</b>	<b>\$136,390</b>	<b>\$100,790</b>	<b>\$97,460</b>	<b>\$119,147</b>	<b>\$104,852</b>	<b>\$102,575</b>
<b>TERMINAL OPERATIONS &amp; ENVIRONMENTAL MONITORING</b>						
5051--Review of Water Quality Data & Toxicity Testing of Effluent from the VMT	\$30,000					
5053--Addressing Risks & Safety Culture at the VMT	\$30,000	\$25,000				
5057--Title V Air Quality Permit Review	\$25,000	\$30,000	\$30,000			
5081--Storage Tank Maintenance Review	\$30,000	\$20,000				
5591--Crude Oil Prevention & Response Planning Program	\$51,744					
5595--Review of VMT Cathodic Protection System Testing Protocols	\$34,000					
6512--Maintaining the Secondary Containment Systems at the VMT	\$38,000	\$30,000	\$30,000			

**Figure 5 (continued)**  
**FY2026-FY2030 Projected Cost and Completion Forecast**

<b>Programs and Projects</b>	<b>Current Approved Budget FY2025</b>	<b>Proposed FY2026</b>	<b>Proposed FY2027</b>	<b>Proposed FY2028</b>	<b>Proposed FY2029</b>	<b>Proposed FY2030</b>
5XXX--Review of Tank Bottom Processing Best Practices		\$35,000				
5XXX--Minimizing the Environmental Impacts of PFAS at the VMT		\$40,000				
5XXX--Shore Power for Tankers at the VMT			\$40,000			
5XXX--Decommissioning the VMT - DR&R Governance Updates and a Definition of Restoration						\$25,000
<b>Subtotal</b>	\$238,744	\$180,000	\$100,000	\$0	\$0	\$25,000
<b>OIL SPILL PREVENTION &amp; RESPONSE</b>						
5640--ANS Crude Oil Properties	\$30,500					
6510--State Contingency Plan Reviews	\$80,000	\$80,000	\$88,000	\$96,800	\$99,704	\$102,695
6511--History of Contingency Planning			\$10,000	\$50,000		
6530--Weather Data/Sea Currents	\$18,500	\$19,050	\$19,050	\$19,050	\$19,050	\$19,050
6531--Port Valdez Weather Buoys	\$63,200	\$46,200	\$46,200	\$46,200	\$46,200	\$46,200
6536--Analysis of Weather Buoy Data	\$22,806	\$18,000	\$18,540	\$19,096	\$19,669	\$20,259
6540--Copper River Delta/Flats GRS Workgroup	\$25,000					
6575--Comparison of Windy App & Seal Rocks Buoy	\$35,000					
65XX--Improving Oil Spill Trajectory Modeling in PWS		\$40,000				
7035--Meeting with SERVS Vessel of Opportunity Program Representatives		\$16,750				
7060--Vessel Decon Best Practices			\$20,000			
<b>Subtotal</b>	\$275,006	\$220,000	\$201,790	\$231,146	\$184,623	\$188,204

**Figure 5 (continued)**  
**FY2026-FY2030 Projected Cost and Completion Forecast**

<b>Programs and Projects</b>	<b>Current Approved Budget FY2025</b>	<b>Proposed FY2026</b>	<b>Proposed FY2027</b>	<b>Proposed FY2028</b>	<b>Proposed FY2029</b>	<b>Proposed FY2030</b>
<b>PORT OPERATIONS &amp; VESSEL TRAFFIC SYSTEMS</b>						
8250--Assessing Non-Indigenous Species Biofouling on Vessel Arrivals	\$5,750					
8300--Sustainable Shipping			\$35,000		\$35,000	
8520--Miscommunication in Maritime Contexts	\$60,000		\$50,000	\$55,000		
8XXX--Tanker-Mounted Thermal Imaging Camera to Reduce Vessel-Whale Strikes		\$85,000				
8XXX--MASS Technology Review		\$40,000				
8XXX--PWS Tanker Reference Guide		\$20,500				
8XXX--Alternative Fuels/Hybrid Tugs			\$85,000			
<b>Subtotal</b>	<b>\$65,750</b>	<b>\$145,500</b>	<b>\$170,000</b>	<b>\$55,000</b>	<b>\$35,000</b>	<b>\$0</b>
<b>SCIENTIFIC ADVISORY</b>						
6560--Peer Listener Training	\$35,000	\$25,000				
9110--PWS Marine Bird & Mammal Winter Survey	\$95,598	\$80,060	\$81,224	\$100,535		
9510--Long Term Environmental Monitoring Program	\$150,460	\$125,860	\$129,860	\$133,860	\$137,876	\$142,012
9520--Decadal Assessment of Non-Indigenous Marine Species in Southcentral Alaska: Kachemak Bay and Lower Cook Inlet	\$55,000	\$151,344	\$56,000			
9521--Marine Invasive Species Internships	\$6,500	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000
9550--Dispersants		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
9XXX--Assessment of Contaminant Exposure Using Transcriptomics of Mussels		\$132,922				
9700--Social Science Workshop	\$30,000					
9XXX--Analysis of Ballast Water Treatment Efficacy in Commercial Vessels		\$85,883				
<b>Subtotal</b>	<b>\$372,558</b>	<b>\$623,069</b>	<b>\$289,084</b>	<b>\$256,395</b>	<b>\$159,876</b>	<b>\$164,012</b>

**Figure 5 (continued)**  
**FY2026-FY2030 Projected Cost and Completion Forecast**

<b>Programs and Projects</b>	<b>Current Approved Budget FY2025</b>	<b>Proposed FY2026</b>	<b>Proposed FY2027</b>	<b>Proposed FY2028</b>	<b>Proposed FY2029</b>	<b>Proposed FY2030</b>
<b>Committee Subtotals</b>	\$1,088,448	\$1,269,359	\$858,334	\$661,688	\$484,351	\$479,791
<b>PROGRAMS</b>						
3100--Public Information	\$7,897	\$7,397	\$7,619	\$7,847	\$8,083	\$8,325
3500--Community Outreach	\$60,060	\$61,862	\$63,718	\$65,629	\$67,598	\$69,626
3600--Public Communications Program	\$4,599	\$4,737	\$4,879	\$5,025	\$5,176	\$5,332
4000--Program and Project Support	\$1,868,210	\$1,924,256	\$1,981,984	\$2,041,444	\$2,102,687	\$2,165,767
4010--Digital Collections Program	\$2,500	\$2,575	\$2,652	\$2,732	\$2,814	\$2,898
5000--Terminal Operations Program	\$29,000	\$30,000	\$30,900	\$30,001	\$30,901	\$30,002
6000--Spill Response Program	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000
7000--Oil Spill Response Operations Program	\$4,250	\$4,700	\$4,900	\$5,150	\$5,305	\$5,464
7520--Preparedness Monitoring	\$42,300	\$44,400	\$48,400	\$50,400	\$51,912	\$53,469
8000--Maritime Operations Program	\$17,000	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000
9000--Environmental Monitoring Program	\$18,700	\$17,600	\$18,100	\$18,100	\$18,100	\$18,100
<b>Subtotal</b>	\$2,058,516	\$2,123,527	\$2,189,152	\$2,252,328	\$2,318,575	\$2,384,983
<b>LEGISLATIVE AFFAIRS</b>						
4400--Federal Government Affairs	\$109,100	\$112,373	\$115,744	\$119,217	\$122,793	\$126,477
4410--State Government Affairs	\$41,800	\$43,054	\$44,346	\$45,676	\$47,046	\$48,458
<b>Subtotal</b>	\$150,900	\$155,427	\$160,090	\$164,893	\$169,839	\$174,934
<b>BOARD OF DIRECTORS</b>						
1350--Information Technology	\$500	\$500	\$515	\$530	\$546	\$563
2100--Board Administration	\$180,600	\$186,018	\$191,599	\$197,346	\$203,267	\$209,365
2150--Board Meetings	\$139,653	\$143,843	\$148,158	\$152,603	\$157,181	\$161,896
2200--Executive Committee	\$3,000	\$3,090	\$3,183	\$3,278	\$3,377	\$3,478

**Figure 5 (continued)**  
**FY2026-FY2030 Projected Cost and Completion Forecast**

<b>Programs and Projects</b>	<b>Current Approved Budget FY2025</b>	<b>Proposed FY2026</b>	<b>Proposed FY2027</b>	<b>Proposed FY2028</b>	<b>Proposed FY2029</b>	<b>Proposed FY2030</b>
2220--Governance Committee	\$0	\$0	\$0	\$0	\$0	\$0
2222--Finance Committee	\$3,500	\$3,605	\$3,713	\$3,825	\$3,939	\$4,057
2700--Legislative Affairs Committee	\$18,675	\$19,235	\$19,812	\$20,407	\$21,019	\$21,649
<b>Subtotal</b>	\$345,928	\$356,291	\$366,980	\$377,989	\$389,329	\$401,008
<b>COMMITTEES &amp; COMMITTEE SUPPORT</b>						
2250--Committee Support	\$214,867	\$221,313	\$227,952	\$234,791	\$241,835	\$249,090
2300--Oil Spill Prevention & Response	\$15,000	\$11,000	\$11,330	\$11,670	\$12,020	\$12,381
2400--Port Operations & Vessel Traffic System	\$8,000	\$7,000	\$7,500	\$8,000	\$8,500	\$9,000
2500--Scientific Advisory Committee	\$15,000	\$15,450	\$15,914	\$16,391	\$16,883	\$17,389
2600--Terminal Operations & Environmental Monitoring	\$11,500	\$11,000	\$7,500	\$8,000	\$8,500	\$9,000
2800--Information and Education Committee	\$11,000	\$11,330	\$11,670	\$12,020	\$12,381	\$12,752
<b>Subtotal</b>	\$275,367	\$277,093	\$281,866	\$290,872	\$300,118	\$309,611
<b>GENERAL &amp; ADMINISTRATIVE</b>						
1000--General and Administrative	\$494,003	\$508,823	\$524,088	\$539,810	\$556,005	\$572,685
1050--General and Administrative--Anchorage	\$219,806	\$226,400	\$233,192	\$240,188	\$247,394	\$254,815
1100--General and Administrative--Valdez	\$182,768	\$188,251	\$193,899	\$199,716	\$205,707	\$211,878
1300--Information Technology	\$134,220	\$138,247	\$142,394	\$146,666	\$151,066	\$155,598
<b>Subtotal</b>	\$1,030,797	\$1,061,721	\$1,093,573	\$1,126,380	\$1,160,171	\$1,194,976
<b>Subtotals</b>	\$4,949,956	\$5,243,418	\$4,949,994	\$4,874,150	\$4,822,383	\$4,945,305
<b>Contingency (Current Year Budget)</b>	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
<b>Total Expenses</b>	\$5,024,956	\$5,318,418	\$5,024,994	\$4,949,150	\$4,897,383	\$5,020,305

## Project Scoring

All proposed projects and initiatives are evaluated for relevance to the PWSRCAC mission, value to PWSRCAC and benefit to our member entities, probability of success, and cost effectiveness.

The five technical committees are asked to prioritize the proposed projects that fall within their purview (Figure 6).

**Figure 6**  
**Committee Prioritization**

Each Committee was asked to prioritize their proposed projects and initiatives for the Long Range Planning Process. Following is each committee's prioritization with the highest priority project listed as number one.

### Port Operations & Vessel Traffic Systems (POVTS) Committee – FY2026 Budget and Prioritization

POVTS Prioritization	Project #	Project Name	Budget
1	8XXX	Tanker-Mounted Thermal Camera to Reduce Vessel Whale Strikes	\$80,000
2	8XXX	MASS Technology Review Whitepaper	\$40,000
3	8XXX	PWS Tanker Reference Guide	\$20,500

### Oil Spill Prevention & Response (OSPR) Committee – FY2026 Budget and Prioritization

OSPR Prioritization	Project #	Project Name	Budget
Protected	6510	State Contingency Plan Reviews	\$80,000
Protected	6530	Weather Data & Sea Currents	\$19,050
Protected	6531	Port Valdez Weather Buoys	\$46,200
1	65XX	Improving Oil Spill Trajectory Modeling in Prince William Sound	\$40,000
2	6536	Port Valdez Wx Buoy Data Analysis 2024 & 2025	\$18,000
3	7035	Hybrid FV Representatives Meeting	\$19,000

### Terminal Operations & Environmental Monitoring (TOEM) Committee – FY2026 Budget and Prioritization

TOEM Prioritization	Project #	Project Name	Budget
1	6512	Maintaining the Secondary Containment Liner at the VMT	\$30,000
2	5XXX	Review of Tank Bottom Processing Best Practices	\$35,000
3	5053	Addressing Risks & Safety Culture at the VMT	\$25,000
4	5057	Air Quality Review of VMT	\$30,000
5	5081	Timeline of VMT Tank Repairs and Inspection Intervals	\$20,000
6	5XXX	Minimizing the Environmental Impacts of PFAS at the VMT	\$40,000

**Information & Education Committee (IEC) – FY2026 Budget and Prioritization**

<b>IEC Prioritization</b>	<b>Project #</b>	<b>Project Name</b>	<b>Budget</b>
Protected	3200	Observer Newsletter	\$7,400
Protected	3300	Annual Report	\$8,000
Protected	3610	Web BAT	\$6,240
1	3530	Youth Involvement	\$50,750
2	3XXX	Communities in Focus	\$5,000
3	3410	Fishing Vessel Pgm Community Outreach	\$19,000
4	3903	Internship	\$4,000

**Scientific Advisory Committee (SAC) – FY2026 Budget and Prioritization**

<b>SAC Prioritization</b>	<b>Project #</b>	<b>Project Name</b>	<b>Budget</b>
Protected	9510	LTEMP	\$125,860
1	9521	Marine Invasive Species - Internships	\$12,000
2	6560	Peer Listener Manual Video	\$25,000
3	9110	PWS Marine Bird & Mammal Fall & Early Winter Survey	\$80,060
4	9550	Dispersants	\$10,000
5	9XXX	Assessment of Contaminant Exposure Using Transcriptomics of Mussels	\$132,922
6	9XXX	Analysis of Ballast Water Treatment Efficacy in Commercial Vessels	\$85,883
6	9520	Decadal Assessment of Non-Indigenous Marine Species in Southcentral Alaska: Kachemak Bay and Cook Inlet	\$151,344

All projects to be ranked are presented at the Volunteer Workshop in early December, and forwarded to staff and all Board members, along with the committee prioritization information. For FY2026, all sixteen staff members and nineteen of twenty Board members, responded with their project scores using the approved project ranking sheet. The rated project scorings are presented in Figure 7, Project Scoring Matrix.

**Figure 7 - Project Scoring Matrix**

Sort Index	Staff	Lead Comm	Lead Comm Rank		FY2026 Projects	Projected FY2026 Budget	Assigned by Staff Points	Assigned by Board Points	Assigned By All Points
1	SB	TOEM	1	6512	<a href="#">Maintaining the Secondary Containment Liner</a>	\$30,000	72	86	158
2	SB	TOEM	3	5053	<a href="#">Addressing Risks &amp; Safety Culture at the VMT</a>	\$25,000	69	77	146
3	MDR	IEC	1	3530	<a href="#">Youth Involvement</a>	\$50,750	75	67	142
4	DV	SAC	1	9521	<a href="#">Marine Invasive Species - Internships</a>	\$12,000	70	67	137
5	MDR	IEC	3	3410	<a href="#">Fishing Vessel Pgm Community Outreach</a>	\$19,000	73	62	135
6	JG	OSPR	2	6536	<a href="#">Port Valdez Wx Buoy Data Analysis 2024 &amp; 2025</a>	\$18,000	63	72	135
7	SB	TOEM	2	5XXX	<a href="#">Review of Tank Bottom Processing Best Practices</a>	\$35,000	61	73	134
8	JG	OSPR	1	65XX	<a href="#">Improving Oil Spill Trajectory Modeling in Prince William Sound</a>	\$40,000	68	65	133
9	SB	TOEM	4	5057	<a href="#">Air Quality Review of VMT</a>	\$30,000	52	70	122
10	DV	SAC	4	9550	<a href="#">Dispersants</a>	\$10,000	43	78	121
11	JG	POVTS	1	8XXX	<a href="#">Tanker-Mounted Thermal Camera to Reduce Vessel Whale Strikes</a>	\$80,000	51	62	113
12	JG	POVTS	3	8XXX	<a href="#">PWS Tanker Reference Guide</a>	\$20,500	55	56	111
13	DV	SAC	3	9110	<a href="#">PWS Marine Bird &amp; Mammal Fall &amp; Early Winter Survey</a>	\$80,060	56	54	110
14	DV	SAC	6a	9XXX	<a href="#">Analysis of Ballast Water Treatment Efficacy in Commercial Vessels</a>	\$85,883	46	57	103
15	AJ/ MDR	IEC	2	3XXX	<a href="#">Communities in Focus</a>	\$5,000	48	52	100
16	DV	SAC	5	9XXX	<a href="#">Assessment of Contaminant Exposure Using Transcriptomics of Mussels</a>	\$132,922	43	56	99
17	JR	OSPR	3	7035	<a href="#">Meeting with SERVS FV Program Representatives</a>	\$19,000	43	55	98
18	MDR	IEC	4	3903	<a href="#">Internship</a>	\$4,000	37	57	94
19	SB	TOEM	5	5081	<a href="#">Timeline of VMT Tank Repairs and Inspection Intervals</a>	\$20,000	38	56	94
20	DV	SAC	2	6560	<a href="#">Peer Listener Manual Video</a>	\$25,000	44	44	88
21	JG	POVTS	2	8XXX	<a href="#">MASS Technology Review Whitepaper</a>	\$40,000	33	45	78
22	SB	TOEM	6	5XXX	<a href="#">Minimizing the Environmental Impacts of PFAS at the VMT</a>	\$40,000	26	50	76
23	DV	SAC	6b	9520	<a href="#">Decadal Assessment of Non-Indigenous Marine Species in Southcentral Alaska: Kachemak Bay and Cook Inlet</a>	\$133,895	28	40	68

### Protected Projects – Not Ranked

Staff	Lead Cte	Lead Cte Rank		FY26 Projects	Budget
AJ	IEC	Protected	3200	<a href="#">Observer Newsletter</a>	\$7,400
BT	IEC	Protected	3300	<a href="#">Annual Report</a>	\$8,000
AJ	IEC	Protected	3610	<a href="#">Web BAT</a>	\$6,240
LS	OSPR	Protected	6510	<a href="#">State Contingency Plan Reviews</a>	\$80,000
JG	OSPR	Protected	6530	<a href="#">Weather Data &amp; Sea Currents</a>	\$19,050
JG	OSPR	Protected	6531	<a href="#">Port Valdez Weather Buoys</a>	\$46,200
DV	SAC	Protected	9510	<a href="#">LTEMP</a>	\$125,860

## 6. Annual Evaluation and Update

### The Planning Cycle

The LRPC was originally created with two objectives: to produce an annual five-year planning process and, within that framework, develop the first annual iteration of the PWSRCAC five-year plan. The planning process detailed in Figure 4, Annual Process for Long Range Planning and Budgeting, is the LRPC's current recommendation for annual planning. The evaluation of current programs, new projects and initiatives, and the timeline described in the previous section of this plan are the first three phases of the FY2026 five-year plan. The actual budget development and operational implementation by Board and staff will complete the first-year planning cycle. Annual continuation of the planning process is essential.

### Planning Tools

This plan was developed through several steps involving the gathering, sorting, rating, and displaying of input data. Appendices C and D contain samples of the tools used in the preparation of this plan. It is recommended that they be utilized in the annual planning process.

### Projects Outside of the Planning Cycle

The Council evaluates unsolicited project proposals and requests for project support under the same standards as any other proposal to expend Council funds. Whenever possible, projects and concepts should be submitted as part of this process. However, unsolicited project proposals may be suggested or brought to the Council outside of the normal Long Range Planning process and timeline as identified in Figure 4. These proposals will be evaluated through the Unsolicited Proposal Procedure found in Appendix E.

The long-range planning process is cyclical and intended to repeat on an annual basis. The LRP Committee thanks all Board members, volunteers, and staff for their participation in this important process.

# APPENDICES

- Appendix A: One-Page Strategic Plan
- Appendix B: Internal Structures & Relationships
- Appendix C: New Project/Initiative Briefing Template
- Appendix D: FY2026 Proposed Projects Ranking Template
- Appendix E: Unsolicited Proposal Procedure
- Appendix F: The Big Picture FY2026 Proposed Project Org Chart

## APPENDIX A.

### Prince William Sound Regional Citizens' Advisory Council One-Page Strategic Plan

**Mission Statement:** Citizens promoting the environmentally safe operation of the Alyeska terminal and associated tankers

[Link to full FY2023-FY2027 Long Range Plan](#)

**Core Purpose:** Citizen oversight to prevent oil spills, minimize environmental impacts, and promote response readiness

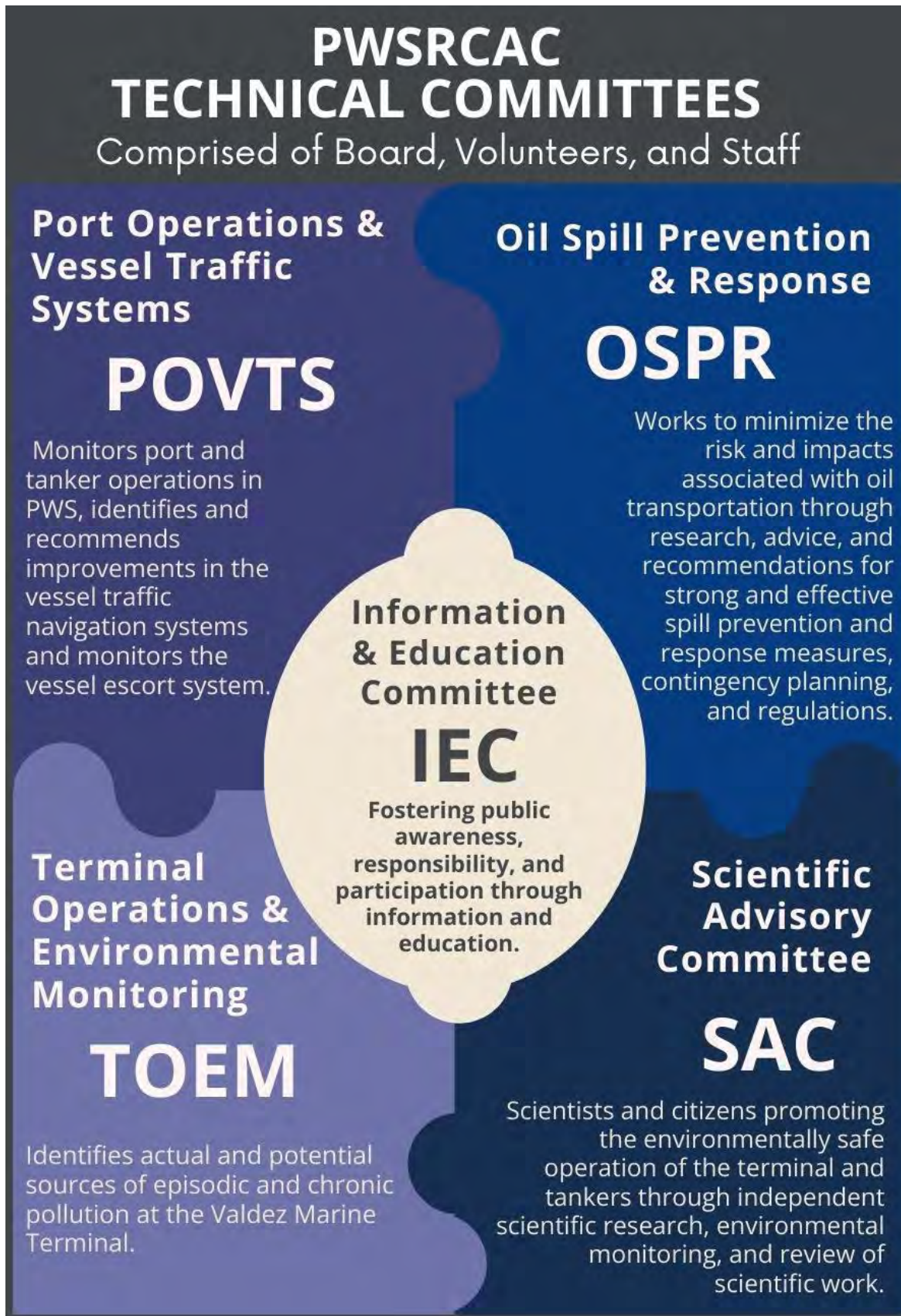
#### Core Values

- Represent the interests of our stakeholders by providing an effective voice for citizens
- The foundation of PWSRCAC is volunteerism
- Promote vigilance and combat complacency
- Organizational transparency and integrity through truth and objectivity
- Foster environmental stewardship

#### Overarching Goals and Objectives (see pages 14-16 for a more complete list of objectives)

- Compliance with OPA90 and Alyeska contractual requirements.
  - ☐ (1) Annual re-certification and funding
  - ☐ (2) Maintain regional balance
  - ☐ (3) Link projects and programs to OPA90 and Alyeska contract
- Continue to improve environmental safety of oil transportation in our region.
  - ☐ (4) Monitor and review development of, and compliance with, laws and regulations
  - ☐ (5) Pursue risk-reduction measures and promote best available technologies and best practices
  - ☐ (6) Monitor operations and promote a safe and clean marine terminal
  - ☐ (7) Monitor and review the condition of the tanker fleet/maritime operations
  - ☐ (8) Monitor and promote the safe operation of all Alyeska/SERVS-related on-water assets
  - ☐ (9) Monitor and review environmental indicators
  - ☐ (10) Promote and facilitate effective research for scientific, operational and technical excellence
- Develop and maintain excellent external and internal communication.
  - ☐ (11) Advocate for government and industry measures to improve the environmental safety of oil transportation
  - ☐ (12) Maintain and improve relationships with government, industry and communities
  - ☐ (13) Be the model for citizen oversight and provide support for other citizens' advisory groups
  - ☐ (14) Ensure availability of PWSRCAC information
  - ☐ (15) Work to improve availability of information to PWSRCAC from industry sources
- Achieve organizational excellence.
  - ☐ (16) Effective short and long term planning, with clear and measurable goals for projects
  - ☐ (17) Fiscally responsible, efficient, and easily understood financial procedures and reporting
  - ☐ (18) Committed to continuous improvement
  - ☐ (19) Recognize people as the most important asset of the organization
  - ☐ (20) Recruit and develop knowledgeable and committed Board members, volunteers, and staff
  - ☐ (21) Strong volunteer structure and support for volunteers

**Appendix B**  
Internal Structure and Relationships



## Appendix C

### **PWSRCAC Long Range Planning PROJECT BRIEFING TEMPLATE**

Submitted by: \_\_\_\_\_

1. What is the name of the new project?
  
2. Give a brief description of the new project.
  
3. Why is this new project important to our organization, mission and/or our constituents?
  
4. What would be accomplished as a result of successfully completing the new project?
  
5. What is the probability of successfully completing the project?
  
6. What is the estimated cost to complete this new project?

# APPENDIX D

## FY2026 Proposed Projects Ranking Sheet

Name: \_\_\_\_\_

- You have a total of **75 points**. You must use all 75 points.
- No more than 5 points** should be given to an individual project.
- Ranking is confined to projects proposed for FY26.

**Please consider the following criteria when ranking projects:**

- 1) relevance to PWSRCAC's mission
- 2) value to PWSRCAC
- 3) benefit to member organizations
- 4) probability of success
- 5) cost effectiveness



Staff	Lead Comm	Lead Comm		FY2026 Projects	Projected FY2026	Assigned Points
MDR	IEC	1	3530	<a href="#">Youth Involvement</a>	\$50,750	
AJ/ MDR	IEC	2	3XXX	<a href="#">Communities in Focus</a>	\$5,000	
MDR	IEC	3	3410	<a href="#">Fishing Vessel Pgm Community Outreach</a>	\$19,000	
MDR	IEC	4	3903	<a href="#">Internship</a>	\$4,000	
JG	POVTS	1	8XXX	<a href="#">Tanker-Mounted Thermal Camera to Reduce Vessel Whale Strikes</a>	\$80,000	
JG	POVTS	2	8XXX	<a href="#">MASS Technology Review Whitepaper</a>	\$40,000	
JG	POVTS	3	8XXX	<a href="#">PWS Tanker Reference Guide</a>	\$20,500	
DV	SAC	1	9521	<a href="#">Marine Invasive Species - Internships</a>	\$12,000	
DV	SAC	2	6560	<a href="#">Peer Listener Manual Video</a>	\$25,000	
DV	SAC	3	9110	<a href="#">PWS Marine Bird &amp; Mammal Fall &amp; Early Winter Survey</a>	\$80,060	
DV	SAC	4	9550	<a href="#">Dispersants</a>	\$10,000	
DV	SAC	5	9XXX	<a href="#">Assessment of Contaminant Exposure Using Transcriptomics of Mussels</a>	\$132,922	
DV	SAC	6a	9XXX	<a href="#">Analysis of Ballast Water Treatment Efficacy in Commercial Vessels</a>	\$85,883	
DV	SAC	6b	9520	<a href="#">Decadal Assessment of Non-Indigenous Marine Species in Southcentral Alaska: Kachemak Bay and Cook Inlet</a>	\$133,895	
SB	TOEM	1	6512	<a href="#">Maintaining the Secondary Containment Liner</a>	\$30,000	
SB	TOEM	2	5XXX	<a href="#">Review of Tank Bottom Processing Best Practices</a>	\$35,000	
SB	TOEM	3	5053	<a href="#">Addressing Risks &amp; Safety Culture at the VMT</a>	\$25,000	
SB	TOEM	4	5057	<a href="#">Air Quality Review of VMT</a>	\$30,000	
SB	TOEM	5	5081	<a href="#">Timeline of VMT Tank Repairs and Inspection Intervals</a>	\$20,000	
SB	TOEM	6	5XXX	<a href="#">Minimizing the Environmental Impacts of PFAS at the VMT</a>	\$40,000	
JG	OSPR	1	65XX	<a href="#">Improving Oil Spill Trajectory Modeling in P</a>	\$40,000	
JG	OSPR	2	6536	<a href="#">Port Valdez Wx Buoy Data Analysis 2024 &amp; 2025</a>	\$18,000	
JR	OSPR	3	7035	<a href="#">Meeting with SERVS FV Program Representatives</a>	\$19,000	
					\$956,010	

# APPENDIX D

## Protected Projects

Staff	Lead Cte	Lead Cte Rank		FY26 Projects	Budget
AJ	IEC	Protected	3200	<a href="#">Observer Newsletter</a>	\$7,400
BT	IEC	Protected	3300	<a href="#">Annual Report</a>	\$8,000
AJ	IEC	Protected	3610	<a href="#">Web BAT</a>	\$6,240
LS	OSPR	Protected	6510	<a href="#">State Contingency Plan Reviews</a>	\$80,000
AS	OSPR	Protected	6530	<a href="#">Weather Data &amp; Sea Currents</a>	\$19,050
AS	OSPR	Protected	6531	<a href="#">Port Valdez Weather Buoys</a>	\$46,200
AL	SAC	Protected	9510	<a href="#">LTEMP</a>	\$125,860

## **Appendix E**

### **Prince William Sound Regional Citizens' Advisory Council Administrative Procedure**

#### **Unsolicited Project Proposals and Requests for Project Support**

Adopted by the PWSRCAC Board on January 17, 2013

The Prince William Sound Regional Citizens' Advisory Council has a well-developed annual proposal and project evaluation and development process. Submissions into this long-range planning and work plan development process usually occur in September. Whenever possible, projects and concepts should be submitted as part of this process.

#### **Handling of unsolicited project proposals and requests for project support**

The Council evaluates unsolicited project proposals and requests for project support under the same standards as any other proposal to expend council funds.

Chief among those standards are whether the project furthers the council mission consistent with the requirements of the Oil Pollution Act of 1990 and the Council's funding contract with Alyeska Pipeline Service Co.; whether it merits a higher priority ranking than projects on the deferred list in the Council's Long-Range Plan; and whether a suitable entity can be found to bring the project to a successful conclusion.

In order to assure fair and equal evaluation of project proposals, all proposals must include the following parts:

- Title of the project.
- Name, affiliation, and contact information of Principal and Associate Investigators/Contractors.
- A clear statement of how the proposed project relates to the Council's mission under its legislative and contractual mandates.
- A clear statement of why the proposed project is time critical and must be considered before the next formal planning process.

Like all of the Council's projects, the body of the proposal must answer the following questions:

- What will the project accomplish, including its relationship to the Council's mission and other on-going projects?
- How will the project be accomplished?
- Where will the work be done; including facility use agreements where necessary?
- By whom?
- How will the Council's share of the project costs be spent? Include a budget.

Note that, if the Council does adopt a project idea submitted as part of an unsolicited project proposal or as part of a request for project support, the Council may,

- in the case of a request for project support, elect to undertake the project on its own rather than providing financial support to another organization desiring to do so, or,
- in the case of an unsolicited project proposal, undertake the project, but put it out for competitive procurement rather than awarding it on a sole-source basis to the entity submitting the proposal.

## **Appendix E**

This Administrative Procedure is intended to guide the council staff and volunteers in evaluating and developing unsolicited project proposals and requests for project support received by the Council in light of the standards stated above.

### **Routing of unsolicited project proposals and requests for project support**

An unsolicited project proposal or request for financial support reaching the Council should be referred to the appropriate technical committee through the project manager, who will manage the proposal or request's evaluation and development through the committee process in the same way any other project idea would be managed at the Council.

### **Evaluating and developing unsolicited project proposals and requests for project support**

#### **A. Committee Process**

A committee reviewing an unsolicited project proposal or request for support must take the following steps:

##### **Step 1**

Determine whether the proposed project furthers the council mission consistent with the requirements of the Oil Pollution Act of 1990 and the Council's funding contract with Alyeska. If not, it should not receive further consideration by the committee.

If the committee determines the proposed project does further the council mission, a finding to that effect should be recorded in the committee minutes and the committee should proceed to Step 2.

##### **Step 2**

Determine whether the proposed project can be deferred for consideration in the normal ranking process during the next round of the Council's long-range planning process. If so, it should be handled through that process and not receive further consideration under this Administrative Procedure.

If the committee determines the proposed project requires immediate consideration, a finding to that effect should be recorded in the committee minutes and the committee should proceed to Step 3.

##### **Step 3**

Determine whether, in the committee's opinion, the proposed project merits a higher ranking than all projects appearing on the council budget's deferred projects list because of insufficient funds. If not, the proposed project should not receive further consideration under this Administrative Procedure. (Projects appearing on the deferred project list for timing or technical reasons are not required to be factored into this determination.)

If the proposed project is deemed by the committee to outrank all projects on the deferred projects list, a finding to that effect should be recorded in the committee minutes and the committee should proceed to Step 4.

## Appendix E

### Step 4

Determine whether the Council, to best further its mission, should handle the matter as proposed or requested by the submitter, or should instead,

- in the case of a request for project support, undertake the project on its own rather than provide financial support to the submitter, or,
- in the case of an unsolicited project proposal, undertake the project, but put it out for competitive procurement rather than award it on a sole-source basis to the submitter.

The committee's findings and recommendations on this point should be recorded in the committee minutes and be included in the project proposal forwarded for approval and funding.

### Step 5

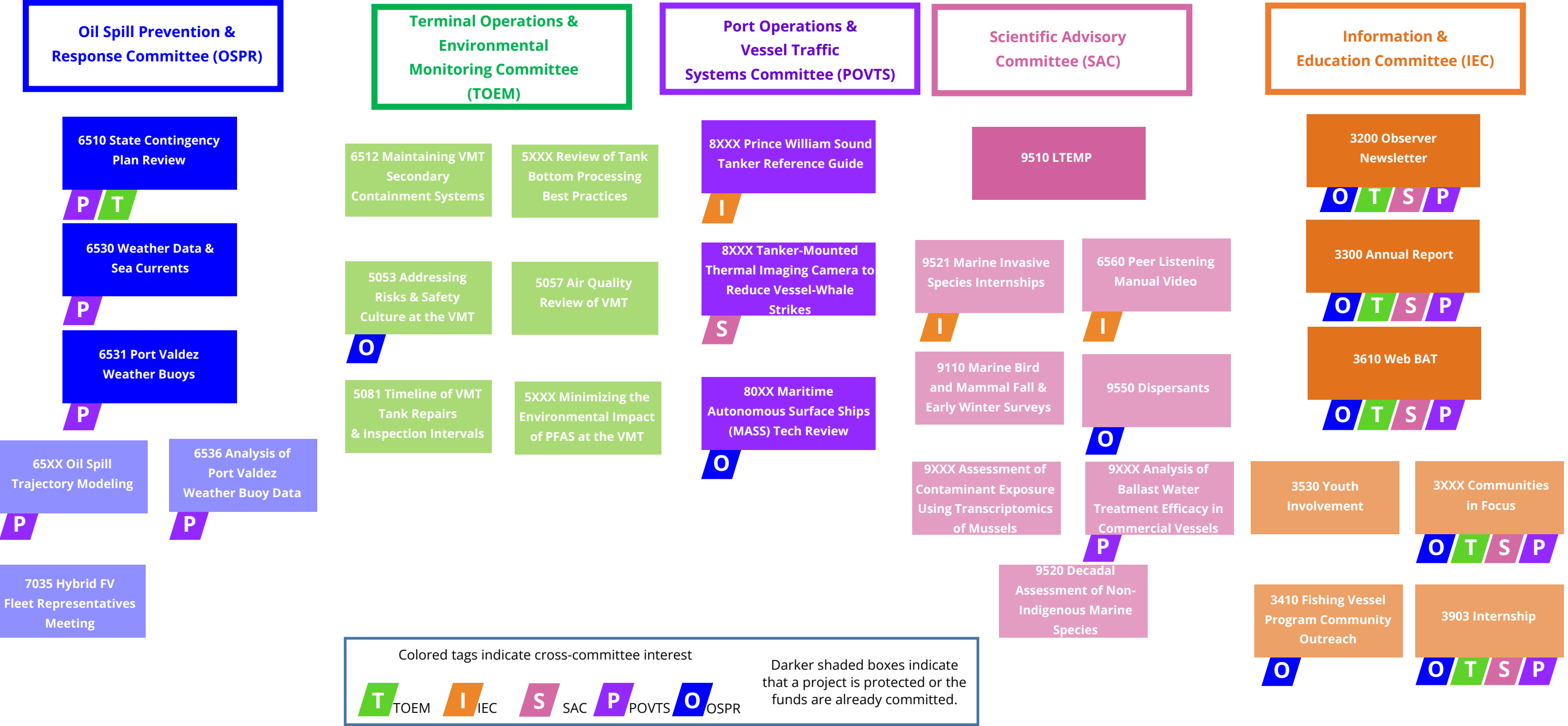
The project manager who works with the committee recommending the project shall prepare the necessary documentation, including a proposed budget modification if needed, after which the project proposal should be presented to the executive director, executive committee, or board for consideration as would happen with any other proposed new project or expenditure falling outside the normal long-range planning process.

### B. Final Fiscal Review and Action

The executive director will, following consultation with the director of programs, the director of administration, and the financial manager, determine whether the project can go forward following the committee's recommendation without jeopardizing higher-priority projects on the deferred projects list, or other scheduled PWSRCAC obligations. If he or she determines that it can, the executive director shall handle the project proposal from this point forward in accordance with standard council bylaws, policies, and practices regarding project approval, budgeting, and funding.

XXX

# Proposed Projects FY 2026



## RFP #4005.25.01

Prince William Sound Regional Citizens' Advisory  
Council

Five-Year Long Range Planning and Annual Budget  
Development Improvement, 2024

Final Report: January 10, 2025

Report Generated by: Erin Bellotte, Senior Consultant  
Professional Growth Systems



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The opinions expressed in this  
PWSRCAC-commissioned report are not necessarily  
those of PWSRCAC.

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## *Project Executive Summary*

### **Introduction:**

Prince William Sound Regional Citizens Advisory Council opened RFP 4005.25.01 for a Five-Year Long Range Planning and Annual Budget Development Improvement project. Professional Growth Systems (PGS), led by Senior Consultant, Erin Bellotte, completed a background review of assigned documentation, developed and analyzed a customized Discovery Survey and conducted follow up phone interviews to assess the current state of the long-range planning and annual budget review process. PGS also completed a benchmarking activity for best practices across similar organizations and reviewed statistical modeling methods for ranking project selection.

This executive summary contains an overall assessment of the Five-Year Long Range Planning and Annual Budget Development Process as well as the final recommendations from PGS. The remainder of the report contains background information on the project as outlined in the table of contents. This background information includes: key inputs from the survey and interview process, recommendations for the December Workshop and Project Ranking and the December 2024 Workshop Analysis. All survey results, interview responses, time-stamp analysis of the 2023 and 2024 December Workshops can be found as addendums to the report.

**Overall Assessment:** PWSRCAC has a proven systematic approach to the annual budget process and provides the structure for equitable project selection. The consistent nature, supporting documentation and committee input of project development and presentation creates a solid foundation for continued organizational success.

The members of the organization that participated in this process were transparent, positive and provided reality based inputs for the survey and interview process. Most of the participants were satisfied with the process as-is, and large-scale changes would not benefit the organization at this time.

As highlighted by many throughout this process and as evident in survey participation, the largest challenge facing the PWSRCAC is increasing engagement among volunteer board members. From participant responses and background review, it appears that as the organization works to engage younger generations - those who do not have direct memories or experiences with the aftermath of the the Exxon Valdez Oil Spill - different strategies and expectations may be needed to better involve these volunteers.

Finally, while the overall organizational mission, goals and objectives are clearly defined, there is an underlying theme in responses from the survey and interview responses for the board to clarify short term strategic-initiatives with an ideal planning time frame of 3 years. This should be an area of focus for the PWSRCAC Board to adopt a systematic approach to provide more guidance and direction to committee members in the LRP Process.

**Final Recommendations:**

The final recommendations are listed below for each of the following categories: Long-Range Planning, December 2025 Workshop, Board Engagement

**Long-Range Planning Process:**

1. Conduct a half-day strategic planning session during a mandatory board meeting, focusing on an Environmental Scan. This assessment will examine key areas, including: culture and demographics, economic and political factors, and technology and best practices. Based on these insights, develop strategic initiatives to guide a three-year plan, enabling committees to identify and prioritize relevant projects.
  - a. It is highly recommended to engage an external facilitator with strategic planning expertise for the initial three-year planning session to ensure effective outcomes and adherence to the timeline. For future planning sessions, this process could be managed internally.
  - a. Limit strategic initiatives to 3 - 5, ensuring they are clear, focused and broad enough to provide committees with flexibility in generating projects.
  - b. Task the LRP Committee with reviewing the results of the strategic initiatives after the next planning cycle to evaluate the value of continuing with subsequent three-year strategic planning sessions.
2. Update PWSRCAC One-Page Strategic Plan to include next three-year board driven strategic - initiatives.
3. Revise document organization of Five-Year Long-Range Plan to highlight the strategic initiatives as well as identified project areas earlier in the document.
  - a. Suggested Document Order:
    - i. Background and Acknowledgements – no changes
    - ii. Introduction and Purpose
      1. Add Overarching goals and objectives as the last subsection to this section.
    - iii. Five-Year Plan
      1. Add Section for Strategic Initiatives
      2. Add Committee Five-Year Plan Project Roadmap (Addendum 6)
        - a. Note: This provides an easier visual representation of committee projects outlined in Figure 5: FY2025-FY2029 Projected Cost and Completion Forecast in the LRP Document and is recommended to also be used as a committee introduction slide in the December Workshop.
      3. Organization and Operational Philosophy
      4. Remove Overarching Goals and Objectives (moved to Introduction and Purpose)
    - iv. Process and Products – no changes
    - v. Annual Evaluation and Update – no changes
    - vi. Appendices – no changes

**December 2025 Workshop:** These recommendations build upon the initial recommendations provided in November 2024 and the assessment of their implementation during the December 2024 workshop. The initial recommendations for December 2024 remain detailed further in the report.

1. Retain the December 2024 Agenda structure, allocating time per project rather than by committee, with breaks scheduled between committee presentations.
2. Incorporate time for each committee to introduce themselves and review their Committee Five-Year Plan Roadmap, which includes the committee mission, ongoing projects, and forecasted projects.
3. Continue to provide the Workshop Engagement Template, including reflection questions and the Impact / Effort Diagram.
4. Extend the time allocated for the Table Brainstorm session to celebrate the year's highlights. Instead of running the PowerPoint of combined ideas during lunch, kick-off the afternoon session with a review of the brainstormed ideas to boost post-lunch energy.
5. Maintain and evaluate the effectiveness of the 30-minute Project Q&A session with committee members and project managers at the end of the workshop.
6. Gather attendee feedback through open-ended responses on post-its or index cards, asking participants to share one aspect of the workshop they enjoyed and recommend continuing, as well as one suggestion for improvement.
7. Review and consider implementation of suggestions for minor adjustments to workshop seating and room setup based on insights from the December 2024 Workshop Assessment section of the report.
8. Include a mechanism for attendees to be aware of the time remaining in the presentation so they may modify their questions and comments during the presentation time period. This could include ideas such as: moving the timekeeper to the front of the room for visibility by all, having a time clock embedded in the presentation slides, or utilizing a small bell to alert the room 5 or 1 minute remain in the presentation.

**Board Member Engagement:** This has been highlighted throughout the project as an area of concern with expressed understanding that board members are volunteers, geographically diversified and have commitments that prevent them from increasing their engagement.

The current level of notifications, documentation availability, ease of returning project scores, and online workshop availability is adequate to support board members unable to travel to the workshop.

The following recommendations are encouraged to increase board member engagement:

1. Clearly communicate the findings of this report to the full board, with emphasis on how their involvement in the workshop directly impacts budget decisions and organizational priorities.
2. Offer availability of the December workshop recording immediately within 24 hours of the start of the event, so those members who may not be able to attend in-person or online, may watch the recording over the weekend if needed to assist them with completing the scoring.
3. Recognize the shifting culture of board member engagement. The motivators of previous board engagement may differ from the motivators of newer board members. Identify and accept the engagement level of each board member to find personalized approaches to increasing individual engagement.

4. Have the board establish engagement expectations and participation. While attending board meetings is mandatory, create guidelines for non-mandatory participation. Consider making the December Workshop a mandatory board member meeting. Onboard new and potential board members to these expectations.
5. Develop long-term strategies to cultivate a pipeline of actively engaged potential board members within the communities connected to the PWSRCAC. This could include but is not limited to strategies for:
  - a. Increasing exposure of community engagement events
  - b. Develop a volunteer-to-board pathway by creating a structured pathway for active volunteers to transition to board roles by offering mentorship, leadership opportunities and committee involvement.
  - c. Expand youth outreach and develop corresponding leadership opportunities across communities to prepare them for future board service.
  - d. Increase recognition of community leaders and volunteers outside of PWSRCAC, share success stories and celebrate their work across a broader platform.
  - e. Develop mentorship and shadowing opportunities to pair interested individuals with current board members for mentorship or shadowing experiences to build familiarity with board responsibilities.
  - f. Utilize targeted recruitment campaigns through use of social media, newsletters and local media outlets to promote board opportunities and highlight the impact of serving on the board.

## *Background Review*

### **Background Review:**

Table 1 outlines all the materials provided by PWSRCAC and reviewed by PGS at the start of the project. These materials were very helpful in the initial understanding of the organization, its history, mission and contractual obligations. Additionally, the ability to review recent information on the process assisted in formulating the questions for the Discovery Survey.

### **Strengths identified from the background review:**

1. Clear organizational mission and vision, with strong policy guidelines.
2. Continuity of information provided to members for project input, presentation and ranking. This consistent approach in information and guidance is not only effective and efficient, but it removes uncertainty from participants - particularly volunteers.

### **Areas for additional consideration identified from the background review:**

1. Documented attendance sheet of all invited and present attendees at meetings. The role call completed at the beginning of the 2023 December workshop is helpful, but a secondary document that lists all invited attendees and those that were absent is beneficial to determine actual numbers of engagement over time.
2. Work completed with Agnew::Beck affirmed the current mission and status of the organization - clear prioritization of strategies for next 3-5 years, with visuals of board support was to be determined in next steps.

FY23	<ol style="list-style-type: none"> <li>1. Board and Staff Ranking Sheet - FY23</li> <li>2. Board and Staff Ranking Sheet - FY23 - Fillable</li> <li>3. Briefing Sheet Packet - Full-1</li> <li>4. Budget Briefing Sheet - How-To -1</li> <li>5. Cover Guidance Memo 2021 - with Attachments</li> <li>6. December 2021 Vol- Wkshp Agenda</li> <li>7. FY23 - LRP - Stakeholder Letter with Attachments</li> <li>8. Org Chart FY2023 - Big Picture</li> </ol>
FY24	<ol style="list-style-type: none"> <li>1. Briefing Sheet Packet - Full</li> <li>2. Budget Briefing Sheet - How-To</li> <li>3. Budget Template - FY2024</li> <li>4. Cover Guidance Memo - 2022 with Attachments</li> <li>5. December 2022 - Vol-Wkshp Agenda</li> <li>6. FY24 - LRP Stakeholder Letter</li> <li>7. FY2023 Projects Ranked and Sorted with equal weight</li> <li>8. One Page Strategic Plan - Current with checkboxes</li> <li>9. Org Chart FY 2024 - Big Picture</li> </ol>
FY25	<ol style="list-style-type: none"> <li>1. Board and Staff Ranking Sheet - FY25 - Fillable</li> <li>2. Briefing Sheet Packet - Full</li> <li>3. Budget Briefing Sheet - How-To</li> <li>4. Cover Guidance Memo - FY25 with Attachments</li> <li>5. December 2023 Vol-Wkshp Agenda</li> <li>6. Final - Updated Strategic Plan - 20230502</li> <li>7. LRP - FY 2025 - 2029</li> <li>8. Phase 1 - Final Report PWSRCAC Strategic Plan Update - Agnew-Beck</li> <li>9. Video - LRP Workshop 12-01-2023 A</li> <li>10. Video - LRP Workshop 12-01-2023 B</li> </ol>
Additional Documentation	<ol style="list-style-type: none"> <li>1. Alyeska Contract with Council - Highlighted</li> <li>2. Board and Staff Ranking Sheet -FY24 0 Fillable</li> <li>3. Brief LRP History</li> <li>4. LRP Summary</li> <li>5. OPA 90 Sec 5002</li> <li>6. 190130 SKL-JTL_LRP Notes</li> <li>7. 190912 SKL-RE_LRP vs AWP Notes</li> </ol>

## *Benchmarking*

**Benchmarking Organizations:** PGS reached out to the following board-driven organizations for review and benchmarking of their strategic planning and annual budget review processes, below is a brief summary of its' findings:

**Cook Inlet Regional Citizens Advisory Council (CIRCAC)** - The CIRCAC is the non-profit organization that most closely aligns with PWSRCAC, as it was also founded in response to the Exxon Valdez oil spill and created through the Oil Pollution Act of 1990 (OPA 90). Highlighted below are the similarities and notable differences between PWSRCAC and CIRCAC in their approach to annual budget development and project selection to reach their strategic plan goals.

### **Similarities:**

- Both organizations utilize Five-Year Long Range Planning that is reviewed annually by their board of directors. In the Long Range Plan documentation, each organization connects how their strategic goals align with OPA 90 requirements.
- To develop annual work plans and projects PWSRCAC and CIRCAC utilize committees of board members, staff, and subject matter experts to develop project ideas that meet the strategic goals for the organization.
- Additionally, both organizations have designated work projects that are protected in their annual budget process to ensure compliance with OPA 90.

### **Notable Differences:**

- CIRCAC's Executive Director after review and input from staff drafts the annual budget, based on proposed committee projects and administration plans. During the December Budget Meeting, the board will review and approve the overall budget.
- The CIRCAC committees review projects presented to them by staff, and the committee will either modify, approve or reject project ideas at a committee level. Once projects have been thoroughly vetted, they are brought to the board for approval. The CIRCAC board and staff do not rank project proposals.

**Oil Spill Recovery Institute (OSRI)** - OSRI is another organization that came from the Exxon Valdez oil spill and authorized by OPA 90. Like PWSRCAC and CIRCAC the composition of the advisory board for OSRI was specified by OPA 90, and currently consists of 14 voting and 2 non-voting

members. The benchmark assessment is based on public information provided on their website <https://osri.us>

**Similarities:**

- Annual work plans are developed based on the mission of the organization. A Research Program Manager prepares the work plans in consultation with committees, composed of members from the Advisory Board and may include members from the Scientific and Technical Committee. The work plans for the next fiscal year are voted on in the fall by the Advisory Board.
- A Research Plan, comparable to the PWSRCAC LRP, is available with potential projects for consideration during the next 5 years including potential budgetary impact for such projects.

**Notable Differences:**

- The OSRI Research Plan for 2021 - 2025 categorizes each of its four goals that support its mission. Each of these goals is broken into descriptive focal areas, and each focal area has a paragraph for each potential project with project length and budget. Adding the paragraph for each project under the goal increases the clarity of the potential project scope

**North Peninsula Recreation Service Area (NPRSA)** - NPRSA is a board-driven government organization for the Kenai Peninsula, whereas the board is made of volunteer, elected service area residents that form an Advisory Council that holds authority to budget review and approval. The majority of funding for the service area is generated through oil and gas industry activity on the Peninsula with an approximate \$2M yearly revenue.

**Similarities:**

- Annual budget review is presented to the board for final review and approval. During the annual budget review, the board also reviews ongoing projects, or phased projects as consideration for future funding and completion.
- Document highlighting 10 year strategic initiatives is presented during annual budget review session, but has limited discussion or reaffirmation during the meeting.

**Notable Differences:**

- The 10 year strategic plan conducted by an outside consulting firm, incorporated community feedback through surveys to provide guidance of identified projects for future

budget consideration. Additionally the plan detailed project scope and initial budget expectations for each larger project identified as a long-term initiative for the organization.

## *Discovery Survey - Executive Summary*

### **Introduction:**

During the first few weeks of October 2024, PGS administered a survey to the PWSRCAC members including: 20 board members, 15 staff members and 24 committee members. We appreciate the 11 board members, 15 staff members and 14 committee members who participated in the survey, this response rate of 67% provides a strong voice for the organization.

The goal of this survey was to better understand the current value and structure of the December Workshop, project development and ranking as well as how this fits into the Long Range Planning for PWSRCAC. The majority of questions required a forced, yes or no, answer from respondents, to mitigate any “middle-of-the-road” answers. Additionally, there were several open-ended questions that encouraged respondents to share what they liked about the current process and what they would offer as improvements to the process. Below are key takeaways from the survey, with areas of interest indicated. The full results can be found in the appendix of this report.

### **Key Takeaways - Pre-Workshop:**

// There is strong alignment between all respondents that the current process to submit projects prior to the December Workshop is effective, and those submitting projects have the support that they need during this process.

// The following are a few notable comments from the open-ended response question “Tell us what you like about the current process to submit projects”

- » If you do your homework the process works and is an effective means to rank projects. Projects can be developed through a committee and synthesized with the help of a project manager (board)
- » I think the process is methodical; discuss ideas and develop projects at committee level, formally type up budget sheets, explain ideas at DEC LRP workshop, rank ideas. Run with what's best ranked (staff)
- » The budget sheets, clear and concise instructions on how to submit projects. Lining up with goals and objectives of the organization. (committee)



// The following are a few notable comments from the open-ended response question “Tell us how you would improve the process to submit projects.”

- » I think an improvement might be having more thought about data gaps and data needs prior to project solicitation. Sometimes the projects submitted appear to cover a wide array of topics within a committee. Maybe if the committees could spend more time on data needs and big picture it might help focus on the needs at hand. (board)
- » I think it would be valuable to have a running history of all prior projects so that we don't repeat work efforts. We could also do a better job capturing any recommendations for follow-up from prior projects that could turn into future projects (staff)
- » Priority information needs should be identified by the Council (board and committees) and then projects to respond to those needs should be broadly solicited. (committee)

- » It just seems cumbersome and lengthy. We spend a lot of time in our committee discussing ongoing "protected projects" vs. "new projects". And the process also seems to get into the weeds more than it should for board-level conversations--the board and committees should discuss and identify large goals/priorities, and then let the experts (i.e. paid staff recruited b/c they have specific skill sets) can determine the best way (the projects) to achieve the desired goals/priorities. (committee)
- » Leave the committees out once the projects are submitted so they aren't wasting time on what is then a budgeting issue. (committee)



// The following are a few notable comments from the open-ended response question "Tell us how you would improve the support for project development."

- » Provide board venue to more formally present projects. (board)
- » Perhaps better education to member entities on what type of projects they could submit. (board)
- » It is so incredibly difficult to get commitments from Alyeska on when they will provide requested information. Oftentimes, projects languish for months on end before progress is made because the requested information is not provided, even when a timeline for receipt is provided. (staff)
- » Focusing more on how the information or results from the project will be used to promote our mission, and how it fits into the Board's strategic plan, would be an improvement. (staff)
- » My committee and the board, tend to see projects as a yearly cycle. I'd like more long term vision and prioritized focus areas (strategic plan) i.e. I want the Board to say VMT maintenance in a general sense is our top priority. That would lead me to develop projects related to secondary containment, power generation best practices, etc. In a roundabout way...we see the board priorities given our current ranking system. But know broad topics the Board want to address would help me better define long term planning and projects. (staff)
- » A clear information need should be identified first and then the technical committee, or project team, should develop a general project description with support from staff and outside experts as needed. (committee)



// The vast majority of respondents due their due diligence of packet review prior to the December Workshop. The breakout of hours spent reviewing the packet is below:

- » 45% of respondents spend between 1-3 hours reviewing the packet
- » 30% of respondents spend between 4-6 hours reviewing the packet
- » 15% of respondents spend over 7 hours reviewing the packet
- » 10% of respondents stated they did not review the packet

### **Key Takeaways - Workshop and Flow:**

// While 100% respondents were clear on the Long Range Planning process and goals while reviewing the projects, only 90% of respondents stated they were clear on the Strategic Plan goals while reviewing the projects.

// Online facilitation of the December Workshop was viewed as engaging and the technology utilized for the workshop being easy to participate virtually. One respondent provided feedback that the

online experience may be improved with better viewing of the overall room and people speaking from the floor.



// The following are a few notable comments from the open-ended response question “Tell us what you like about the workshop.”

- » It is straightforward, however if data needs or data gaps were identified ahead of time, project scoring could be weighted towards those proposals that address a data need or data gap. (board)
- » I like the board and volunteers meet in person. I like the time of year. I like the variety of presenters. (board)
- » I like having the project managers give a high level presentation on their committees proposed projects and to handle Q&A. I am in favor of the project managers giving presentations, rather than the committee members. (staff)
- » I think the Workshop is a great opportunity for the Committee members and project managers to present their projects. They can discuss the Committee prioritization of projects at the Workshop that helps the Board and staff members that have the responsibility of scoring and ranking the projects (staff)
- » The opportunity to share the committee's projects with the board and staff and answer questions. Important to explain to the Board why projects were ranked the way they are. (committee)
- » Well organized and presentations are smooth and inviting of response. (committee)

// The following are a few notable comments from the open-ended response question “Tell us what you would improve about the workshop agenda and flow.”

- » Each committee getting a prescribed amount of time and then they pick how to use it. (board)
- » Better attendance especially by Board members. Emphasize current fiscal year vs long range.. (board)
- » I would like to have more and/or longer breaks during the workshop to be able to talk individually to the staff and volunteers about the proposed projects. (staff)
- » I'm not advocating for an open schedule with no time limits, but allotted time can sometimes feel a bit short to really explain projects. Or seems we sometimes get cut short when there is good Q&A going. (staff)
- » Focus on setting priorities and then let the staff figure out how to allocate resources to achieve those priorities. Less micro-managing of project details. (committee)
- » I would like to see committee chairs and members to present more and have staff as backup. (committee)

// 27% of respondents, with a mix of board, staff and committee respondents, felt that presenting projects at the December Workshop was too negatively competitive in nature. Below are a sample of responses in how respondents felt this process could be more equitable:

- » Sometimes. I don't like it when one committee is told that it is presenting too many projects. To make it more equitable, I suggest limiting the amount of points a rater can give to projects if they are members of the committee bringing them forward. (board)
- » At times different committees use different methods. Committee member input is good but may not be as slick as a powerpoint by a staff member (board)

- » My real answer is sometimes. Certain volunteers will resort to negative framing. Continued emphasis on positive framing of projects and the way they are ranked, with the idea that all projects have merit, but there are budget limitations. Donna and others have done well reiterating this multiple times throughout the workshops and LRP process. (staff)
- » If staff presented, rather than volunteers, the competitive nature would likely be greatly reduced. (staff)
- » Here again, have Board set overall priorities would set the tone. IE; we want to see VMT infrastructure projects first and foremost (staff)
- » I'm hedging here based on 25 years of involvement. There has been improvement in this area but there is still confusion as to how staff management actually uses this process to develop budget and how the presentations affect this (committee)
- » I don't think there should be voting on projects as much as ranking of priorities for the organizations to pursue, with staff having more ownership in pursuing projects that then help address the priorities identified by the Board (committee)

// 85% of respondents believed that there is an acceptable level of discussion of how the December workshop fits into the Long Range Plan and 89% of respondents believe that there is an acceptable level of discussion of how the December Workshop fits into the overall Annual Budget Process. For those that did not believe there was an acceptable level, open comments for improvement included:

- » Most folks do not tune into this. An inexpensive project often gets evaluated at the same level as a costly one. (board)
- » I think we can always improve our processes, and maybe adding some additional information related to how the December Workshop fits into the Long-Range Planning process and annual budget process on the front end would be beneficial and potentially result in better participation/attendance at the Workshop. (staff)
- » Budgeting and project development are somewhat disconnected. Budgeting needs to be included up front even for protected projects. Budget should be included explicitly in the ranking process rather than implicitly. (committee)

### **Key Takeaways - Workshop Ranking and Project Selection:**

// Notable statistics from questions regarding the ranking process are as follows:

- » 92% of respondents stated the ranking process is easy to complete.
- » 79% of respondents stated that committee project prioritization plays a significant role in how they rank a project.
- » 78% of respondents stated that the current ranking process is equitable across the committees.
  - a. Board: 8 / 10 responded Yes
  - b. Staff: 12 / 14 responded Yes
  - c. Committee 2 / 4 responded Yes
- » 67% of respondents stated they believed the correlation coefficient showing the difference between the board and staff scores is important.
  - a. Board: 10 / 11 responded Yes

- b. Staff: 6 / 14 responded Yes
- c. Committee 9 / 12 responded Yes
- » 96% of respondents stated that a score a project gets is significant to them, e.g. they feel a high ranked project should have a high probability of being selected in the budget process.
- » 35% of respondents stated that a board's ranking should be weighted higher than the staff ranking.
  - a. Board: 3 / 10 responded Yes
  - b. Staff: 4 / 14 responded Yes
  - c. Committee: 3 / 4 responded Yes

// The following are a few notable comments from the open-ended response question "Tell us what you like about the current ranking process."

- » After many years I feel this system works if one puts in the time. There is no way to make this process easy if a person does not engage. (board)
- » Glad there is input but would be nice to know why folks rank projects as they do. Was it a slick presentation or committee preference or project manager emphasis? (board)
- » I think the current ranking process is clearly defined with instructions and criteria to base point assignments to the projects being ranked. The project criteria are listed at the top of the scoring sheet as well as how many total points are available to be assigned, the maximum number of points that can be assigned to each project, etc. (staff)
- » Staff and board correlation. I think this is a healthy discussion and in my opinion, things don't have to be perfectly in alignment, but the discussion is good. Good to also discuss protected projects and re-evaluate them from time to time. (staff)
- » Good opportunity to review and evaluate and finally provide input. Final system analysis is provided by staff and the board.. (committee)



// The following are a few notable comments from the open-ended response question "Tell us how you would improve the current ranking process."

- » On paper the Board is the final decider but in essence the Staff does the heavy lifting [along with contractors]. Board needs to know they can alter the final budget if they do not agree with the priorities. Need better take into account dollar cost of projects. Possibly need to balance the budget among committees. Need to get oral or written input from more Board members at meetings. Need to be sure there is transparency. (board)
- » It is tricky because people score things differently, so some people give everything a 5 or a 0, whereas other people give out more evenly distributed scores (I think also the number of projects each year varies, making the 75 points trickier to hand out some years over others). Possibly some sort of rubric of what each number represents would be helpful? (staff)
- » The current approach asks board and staff members to rate projects with scores from 1-5, it does not RANK the projects. Only committees are actually asked to rank projects in a preferred order that are then presented at the workshop. Individuals use different approaches to score projects from 1-5, e.g., some use only fives, some give all projects at least 1, and others pay close attention to committee prioritization. This variability isn't necessarily bad, but it's an important distinction from individuals ranking all the projects. The collective scores are used to rank projects. (staff)
- » Eliminate the limit on points assigned. A simple yes or no for funding approval is all that is needed. (committee)

// 97% of respondents believed that the December Workshop is a worthwhile effort for the board.

// The following are a few notable comments from the open-ended response question “How can this process be more engaging to encourage participation from all members”

» It is already tied to science night and the holiday party - it is pretty engaging now.

(perhaps make it mandatory if you want to travel) (board)

» I think making it more interactive would be nice, then you aren't listening to multiple speakers for hours on end, it can get a little exhausting. Also, maybe assigned seating that encourages Board members to sit with staff members rather than staff and Board grouping separately. (staff)

» I'm not sure if it happens at other meetings, but it'd be good to take time to celebrate the successes and highlight the big recent wins that demonstrate how RCAC has helped achieve recent priorities before diving deep into setting the next priorities. Celebrating success can help "warm up the crowd" and make the setting more inclusive and positive as discussions get into future priorities/trade-offs, etc. (committee)

## *Interviews - Executive Summary*

### **Introduction:**

Those that participated in the survey were asked if they were interested in providing additional feedback through an interview. Of the survey respondents, 3 board members, 6 staff members and 6 committee members volunteered to participate in the interview. Interview questions were developed after the survey to gain further clarity and feedback on three core concepts: Strategic Planning, Workshop Flow and Project Scoring and Ranking.

### **Strategic Planning Response Overview:**

The interviews indicated a split in respondents between those that believed there needed to be more direction from the board for strategic planning. Interestingly, the majority of respondents in favor of having increased board direction came from committee members, where almost all thought this was critical. Staff and board members were less vocal that increased direction was necessary in the process. When questioned about losing the ability to submit project ideas outside of potential board driven plans, almost all respondents felt this was easily remedied due to the committee structure, and other organizational goals and requirements necessary.

If additional board direction was to be given, most all agreed that this should be done on average every 3 years. While the plan should be reviewed annually, projects may be longer in duration with multiple phases and one year planning would be too reactionary, while a five year plan would not allow for enough ability to react as needed.

### **Recommendation:**

Based on the strong organizational mission and OPA 90 requirements, a multi-day strategic planning workshop with the board to review and reaffirm the mission, vision and current goals / objectives is not an effective use of time.

However, a half-day workshop, with the board to complete an strategic environmental analysis to develop their priority of strategic initiatives for the next 3 years would provide more guidance to the

committees on where they should focus their efforts with project planning. An outside facilitator would be recommended for the first workshop to ensure this process flows smoothly, and the desired outcomes are achieved.

#### **Workshop Overview:**

The survey highlighted inequities in the current workshop design between groups with many projects and groups with limited projects. When asked in the interview if moving the presentations to a time per project allocation instead of a time per group allocation most respondents were in favor of the idea. One response did indicate that groups with larger projects did manage their presentation time with the understanding that some projects would receive less discussion while others would have more time spent in discussion. Overall, the facilitator should be aware and allow further discussion if it is so warranted for the project.

The other common theme that was brought up in the interviews, was that of who presented the projects. This is not uniform in the current workshop design and is decided at the committee level. It was noted that there are presenters that are more comfortable in front of the room than others that could potentially “sell” the project better. One suggestion was to have the Project Manager and Committee member present together. Given the inherent personal preferences on presenting, the impact to those members who wish to present feeling more engaged in the process, it may be a loss to set parameters on this without further discussion with all committee members.

Integrating additional breaks or breakout sessions for further discussion on projects was reviewed with a mixed audience. Many were uncertain about the engagement and participation this would generate and were unsure that it would add value to the day. Several indicated that they did not want to see the agenda extended to accommodate these types of opportunities and were fine with the current process.

#### **Scoring and Ranking Overview:**

The majority of feedback indicated that the current scoring and ranking process is fine as is, and when probed if further effort to revamp this would be beneficial, the majority responded with “no.” Some of the “no” response is due to lack of respondents being able to identify a better model that is easy to understand and utilize.

The Correlation Coefficient, received mixed feedback in the interview. While many mentioned they liked the visual, the end discussion and time spent reviewing the data did not produce as much value towards the final outcome of project selection. Additionally several mentioned concerns with the validity of the data due to the way the projects are scored, due to different strategies utilized in scoring. What stands out as the benefit of the correlation coefficient is having a secondary, visually charted, method of evaluating projects between the staff and board members.

#### **Recommendation:**

Recommendations for the workshop and scoring and ranking are outlined below in the December Workshop Recommendations Section.

## *December 2024 Workshop Recommendations*

Based upon survey and interview responses, as well as assessment from the provided background documentation, the following recommendations are advised for implementation at the December 6, 2024 workshop.

### **Workshop Agenda:**

1. **Refresh the opening statements, allowing for participation from the group.** Allowing space in the beginning for participants to collaborate and speak amongst themselves and as a group creates an atmosphere of more engagement. The following is suggested:
  - a. Create a participant driven “Make Their Day” activity where each table has 10 minutes at the start of the morning to brainstorm and select their Top 3 PWSRCAC highlights from the year. A representative from each table will be asked to take notes and then present the Top 3 to the room. The facilitator will capture these ideas on a whiteboard or flip chart at the front of the room.
2. **Establish a timeline based on the number of projects submitted.** Currently there is a timeline based upon the number of committees, and they are required to fit their presentations into the allotted time. By moving this to a project-based timeline, each project will have equal representation.
  - i. Time is for guidelines only, there will be projects that take less time, so if discussion is going strong the facilitator should allow it to continue.
  - ii. For this workshop the recommended time limit for 23 projects is 10 minutes, with roughly 4 minutes for the presentation and 6 minutes for the Q&A.
  - iii. 2023’s workshop averaged 7 minutes per presentation.
3. **Include additional engagement activities through use of a supplemental feedback packet.** The current scoring process does not provide insight to how each participant scores the projects. By adding a supplemental feedback packet, it will encourage more thought into the scoring process, while serving as a valuable discussion tool in assessing the scores during the budgeting process.
  - a. Reflection Responses
    - i. During and in-between presentations, have the participants write responses to two reflection questions in the supplemental feedback packet provided to each participant.
      1. Question 1: How does this project add value to PWSRCAC and its members?
      2. What do you anticipate will be the greatest challenge for the project team to achieve success?
  - b. Impact / Effort Diagrams
    - i. After answering the reflection questions, the participants will place an “X” on the grid to the right of the questions, based on their perceived impact and effort this project has to PWSRCAC.
    - ii. This diagram is to be utilized for initial project responses, and provide a secondary visual to where staff and board members align on project scoring. It is recommended that all responses be collated and graphed with assigned colors for board, staff and committee members so that correlation between groups can be identified.

4. **Provide a 30 minute “Ask the Experts: Project Insights Q&A”** where committee chairs and project managers can answer any additional follow up questions participants may have on their projects. Suggested project boards, with slides or executive summaries be displayed so participants can visually reference projects they would like to further discuss.
5. **Close-Out**
  - a. Prior to leaving all participants must write at least one response to what they liked about the workshop and one item to consider for change about the workshop experience as a whole and place it on a Workshop board by the door. This is a chance to provide feedback on the overall workshop flow to be incorporated for the next event.

### ***Scoring and Ranking:***

1. ***Maintain the current scoring system:*** Almost all agreed from the survey and interviews that the current scoring system is easy to use, familiar, and the only difficulty is in how participants utilize their points. Furthermore, there was agreement that this is an initial step for budget funding and items may be moved by the board or staff in the final budget meeting.
2. ***Replace the Correlation Coefficient discussion with Impact / Effort:*** Feedback on the correlation coefficient was mixed. While some participants appreciated its inclusion, many felt it didn’t add significant value relative to the time spent preparing and discussing it. Moving forward, a project-based, color-coded Impact / Effort diagram could be a more effective and efficient tool. This approach doesn’t require additional software or modeling, and it would clearly highlight correlations between staff, board and committee members. Additionally, it would reveal discrepancies across scoring criteria in a visual format, making it easier to identify alignment and misalignment at a glance.

### ***Suggested Agenda:***

#### **9:00 AM - Welcome and Roll Call**

**9:05 AM - Table Brainstorm:** What are the top 3 highlights for PWSRCAC from 2024. Allow for 10 minutes of brainstorming, and 10 minutes of around the room sharing. Provide a “virtual breakout room” for those joining online. Have the facilitator write highlights on a chart in the room.

**9:25 AM - Brief Overview of Process:** Highlight changes to time allocation per project, but time will not be limited if discussion is strong, as there will be other projects that conclude sooner. Breaks can be adjusted as needed to assist with timing.

1. After each project, every participant is to complete the supplemental feedback packet.
2. After every 5 projects there will be a break, and participants can finalize their reflection responses as needed.
3. Scoring will be done as usual.

4. At the end of the day, project managers / staff will be available to answer any remaining questions on presented projects.
5. Submit workshop feedback at the end of the day prior to leaving.

#### **9:30 AM - 1st Block of Projects Begins**

9:30 - 9:40	Project 1
9:40 - 9:50	Project 2
9:50 - 10:00	Project 3
10:00 - 10:10	Project 4
10:10 - 10:20	Project 5

#### **10:25 AM - 1st Break (5 minute buffer period added)**

#### **10:40 AM - 2nd Block of Projects Begins**

10:40 - 10:50	Project 6
10:50 - 11:00	Project 7
11:00 - 11:10	Project 8
11:10 - 11:20	Project 9
11:20 - 11:30	Project 10

#### **11:30 AM - 2nd Break**

#### **11:45 AM - Lunch**

#### **12:30 PM - 3rd Block of Projects Begins**

12:30 - 12:40	Project 11
12:40 - 12:50	Project 12
12:50 - 1:00	Project 13
1:00 - 1:10	Project 14
1:10 - 1:20	Project 15

**1:25 PM - 3rd Break (5 minute buffer period added)****1:40 PM - 4th Block of Projects Begins**

1:40 - 1:50	Project 16
1:50 - 2:00	Project 17
2:00 - 2:10	Project 18
2:10 - 2:20	Project 19
2:20 - 2:30	Project 20

**2:35 PM - 4th Break (5 minute buffer period added)****2:50 PM - 4th Block of Projects Begins**

2:50 - 3:00	Project 21
3:00 - 3:10	Project 22
3:10 - 3:20	Project 23

**3:20 PM - 5th Break**

**3:30 PM - Close Out:** Thank all for engaging and participating, remind participants to complete their scoring sheet, supplemental feedback packet, and submit workshop feedback on the way out the door. Encourage participants to stay for the Ask the Experts: Project Insights Q&A.

**3:45 - 4:15 PM - Ask the Experts: Project Insights Q&A** - Open time to review projects, and ask any final questions prior to leaving.

***Post - Workshop Recommendations:***

1. Collect and document all participant information through use of pictures and / or entering information into a word document, powerpoint, etc.
2. Collate and assess Impact / Effort Diagrams compared to scores. Theoretically the high scoring projects should align with the high impact projects, and low scoring projects should align with low impact / high effort diagrams. Identify outliers, or areas of greater anti-correlation amongst the group.
  - a. There should be one master Impact / Effort Diagram per project, with color-coded stickers for board, staff and committee members.
  - b. Reflection Responses should also be grouped by board, staff and committee feedback for each project.

3. Send reports with scores out to participants for review prior to the budget meeting.

### *December 2024 Workshop Assessment*

The following is an assessment of the set-up, project timing and group feedback from the December Workshop:

#### **Room Setup:**

The banquet hall at the Embassy provided a comfortable, private and professional space for the organization to gather. With out of town guests, multiple events occurring over two days, (Science Night, Workshop, Holiday Party), this is an ideal venue for these events.

The room was segmented into three main areas. The front of the room included the projector, podium, and IT table. There were also six speaker chairs at the front of the room.

- a. Observation - some committees had multiple members join the front of the room and the seats were utilized, while others did not.

The middle section of the room had 5 rows of rectangular tables. Each row accommodated 8 individuals with an aisle in the middle. A total of 40 individuals could sit in these five rows.

- a. Observation - only two individuals sat in the front row, and one of those was the facilitator. Open seats were also available in other rows as well.

The back section of the room had at least 5 round tables that could seat 8 individuals.

- a. Observation - four individuals selected to sit at two different round tables directly behind the rows of rectangular tables.
- b. Observation - the round tables were utilized by some for lunch and the Project Q&A following the presentations.

There were 31 individuals present in the room.

Below are a few suggestions for the room setup for the workshop that may increase engagement and dialogue during the event.

1. **Reduce the number of table rows** - Bring individuals to the front row and pull people into the conversation by targeting the number of rows needed to those present. For example this year there were 31 individuals present, one full row in the back could have been eliminated, unconsciously moving individuals closer to the presenters. This will also assist those managing the microphones, but reducing their coverage area.
2. **Increase space between the rows and the round tables in the back** - The tables in the back were beneficial for lunch and the Q&A, it is recommended that they remain in the room. By removing one row and slightly shifting the other round tables towards the back of the room, you encourage people to join the group at the rows, creating more engagement. If it is not feasible to move the round tables, other options to encourage individuals to sit in front are:
  - a. Signs on the round tables stating "Reserved for Project Q&A - please choose a seat at a rectangular table"

- b. Staff standing in front of the round tables and welcoming individuals to find a seat at a rectangular table.
3. **Needed materials placed on rectangular tables prior to individuals entering the room -** Place the copies of the large packets at the end of the tables with other table supplies such as note cards or extra pens. Have a supplemental packet at each seat ready for individuals as they sit down. This also serves as an indicator of where to sit when entering the room. (Agendas, pens, small fidget item, etc.)

### ***Project Timing and Engagement***

A detailed breakout of the timing for the workshop can be found in the Appendix as file *December 2024 Agenda Review*.

Comparing the 2023 December Workshop to the 2024 December Workshop, there was an increase in engagement from the audience through questions during the presentations. The chart below shows the number of questions and comments observed during the 2023 video analysis as well as the in-person analysis of the 2024 workshop. Overall there were 25 more questions in 2024 than 2023, and the average number of questions per project increased by 1.5.

	<b>Total Number of Questions Asked to Each Committee</b>		<b>Average Number of Questions asked Per Project</b>	
<b>Committee</b>	<b>2023</b>	<b>2024</b>	<b>2023</b>	<b>2024</b>
<b>Information and Education Committee</b>	9	18	2	4.5
<b>Port Operations &amp; Vessel Traffic Systems</b>	8	11	2.6	3.6
<b>Scientific Advisory Committee</b>	16	31	2	4.4
<b>Terminal Operations &amp; Environmental Monitoring Committee</b>	15	14	2	2.3
<b>Oil Spill Prevention and Response Committee</b>	8	7	1	2.3
<b>Total Questions Asked</b>	56	81		
<b>Average Questions Asked per Project</b>			1.92	3.42

The increase in participation could be due to any number of reasons, however it is worth noting a few facilitation tactics that were implemented in 2024 that may have made an impact in group participation.

1. The addition of a table ice breaker to encourage group participation prior to the morning presentations. Additionally, the number of average questions dropped after

the lunch break in 2024 indicating additional opportunities to re-engage the participants prior to starting post-lunch presentations.

2. Providing the Engagement Worksheet Templates that asked reflection questions as well as the Impact / Effort Diagram. It was noted that several people actively took notes and completed the worksheets, additional several comments were made about their aide in recording their responses to the presentations.

It will be recommended that the 2025 December Workshop builds off of the implementation of changes seen in the 2024 workshop.

***Group feedback from the workshop:***

All attendees were asked to provide at least one item they liked about the day (Pro) and at least one thing they would change for the day (Con), prior to leaving the room. Twenty-four separate notecards were submitted with feedback - the responses are below:

**Pros:**

1. Staying on time
2. I liked the impact diagramming form. I feel the meeting went off well. The staff did a great job!
3. Extra sheets, and regular breaks were nice. Smooth.
4. Frequent breaks, nice venue, great discussions, enjoyed the laughter
5. The handout to write information was very helpful
6. Meeting was smooth, well organized
7. Liked the impact / effort diagram. Very good long range planning workshop
8. I liked and used the supplemental notes and project impact diagramming form. Very helpful. I thought the workshop format with breaks and time allotment based on the number of projects worked well. Presentations were clear and concise, and gave me what I needed to rank all FY26 projects.
9. Ran smoothly, good to have 10 minutes per project. The grid was helpful. Saving additional Q&A for the end is a great addition.
10. In person, great facility, agenda well done, staff members got to show how great they are, executive summaries. Thanks for the great gift!
11. Great flow, really enjoyed the format and time for dedicated questions after each slide.
12. The engagement /questions from most volunteers show their interest in the process.
13. I thought the 10 minutes per project was a good change, allowed speakers to plan timing and allowed adequate and fair time for each project.
14. Excellent engagement and questions.
15. Excellent technical support by Hans, abundant paperwork, good food and drinks, liked the tables pushed to the front.
16. I liked the format with immediate follow questions. I liked the project impact diagram.
17. So much more informed on projects, really helps.
18. Really liked cheatsheets put projects in order that are being presented. Positive feedback from the entire group.
19. The meeting was run really well.
20. Good meeting, liked the impact diagram. Thought the "table ice breaker" was effective and should be a bit longer next year. Please share the positive comments.

- 21. Celebrating Successes! After seeing it in practice, I now support the timed intervals for projects - good idea.
- 22. Schedule and time limit on presentations
- 23. The work we do here benefits many organizations, agencies and municipalities
- 24. Willing to try new things, but have done this a lot. In person time is important.

**Cons:**

- 25. Same board members in attendance, same board members missing
- 26. None come to mind
- 27. Getting here was the worst
- 28. A couple projects fell out of the 10 minute mark / hard to contain the Q&A
- 29. Could use slightly longer breaks, so much food... maybe not terrible :)
- 30. Much more time intensive of an ask for our volunteers
- 31. Not sure how you fix this, but there are a few people that provide a lot of commentary not relevant to what we're doing takes up time / energy
- 32. Consider a way of making the timing for the speakers visible to the room. Maybe a small countdown timer onscreen or an audible "ping" for the 5 minutes / 1 minute / time's-up - so that folks with questions are aware of how much time is left per project.
- 33. Can't do all projects.
- 34. Need more and longer breaks (we had time). Some committees took a lot of time talking about their mission and non-project ideas, so maybe we need to add a few minutes for the intro. Only 10 board members attended (an 11th was online for part of the time)
- 35. Only about 10 board members in attendance. Pretty good question asking.
- 36. We lack a mechanism for incorporating feedback into projects that arises during discussion, e.g increasing budget.

## PWSRCAC December Workshop Discovery Survey Results

### Section 1: Pre-Workshop

1. I participate in developing project ideas to be presented at the December Workshop.

	Yes	No	Total
Board	7	4	11
Staff	10	5	15
Committee	12	2	14
<i>Combined Total</i>	29	11	40

***If you do not participate, please let us know why not, (then skip down to question 9):***

***Board:***

- I do not have the time it would take for my full commitment.
- I haven't thought of any as of yet
- I am not generally involved in project development.
- I need to be more proactive and submit projects.

***Staff:***

- I am part of a more administrative role.
- I do not develop project ideas; I do all the other behind-the-scenes stuff.
- Because I am administrative support staff.
- I'm staff. So yes. I generally bring ideas to my committee, and they help me flesh these out.
- Due to my position, I am not involved in developing project ideas

***Committee:***

- I was out of town

2. As I develop a project idea, I also plan how the project fits into the five-year Long-Range Plan.

	Yes	No	Total
Board	4	5	9
Staff	9	1	10
Committee	10	3	13
<i>Combined Total</i>	23	9	31



3. The current process to submit projects prior to the December Workshop is effective.

	Yes	No	Total
Board	9	0	9
Staff	10	0	10
Committee	11	2	13
<i>Combined Total</i>	30	2	32

4. Tell us what you like about the current process to submit projects.


**Board:**

- It is a several month process that you have to pay attention and understand. As the longest member of the council I have adapted. I participate, help younger people do the thing they think needs to be done.
- They seem to be developed from across all the folks involved with RCAC, staff and volunteers
- It's straightforward
- So, the process works, but it is so hard to really know about all of the projects. I am on the IEC committee, so I am naturally biased to the projects that are developed out of that committee. Also, I am a board member, so my exposure to all the things PWSRCAC does is limited to how much time I have to participate. While I try to stay involved via IEC, Long Range Planning Committee, and Board Meetings - I certainly do not have the quantity or quality of information that the staff has. I like that both the board and staff have a say in projects. I like that the information comes out well before the meeting. I like that some board members stay involved.
- The process is clearly defined and easy to follow
- If you do your homework the process works and is an effective means to rank projects. Projects can be developed through a committee and synthesized with the help of a project manager
- lots of outreach by staff, committee meetings and discussion
- Everyone can submit and staff widely advertises requests for proposals.

**Staff:**

- It seems like some people make up projects simply to have work. We should think about ways to make sure current employees are aware of work that has been done in the past.
- Time between committee workshop and submittal and presentation of projects allowing for development, input, and committee ranking. I think the committee rankings





themselves are effective at informing the Board which projects are of priority to the committee.

- The deadlines are really clear, and Committee feedback is central to submittal of projects.
- Opportunities for a lot of folks to generate project ideas.
- All PWSRCAC volunteers are invited and encouraged to submit project ideas. There are templates to complete with requested information, and all 5 technical committees have meetings dedicated to developing project ideas. We also reach out to our member organizations and other stakeholders to solicit ideas.
- The projects are discussed in the technical committees prior to being brought up at the workshop.
- I think the process is methodical; discuss ideas and develop projects at committee level, formally type up budget sheets, explain ideas at DEC LRP workshop, rank ideas. Run with what's best ranked.
- The process is driven by the committees. This is typically a good thing, with the exception that each committee operates somewhat differently and has variable expectations about what makes a good project and what is an appropriate budget, so project ideas can vary greatly.
- Collaborative
- I think the current process takes input on proposed project ideas from both internal and external stakeholders, provides clear instructions for project proposals that includes what information is required including description, how it aligns with PWSRCAC's mission, budget information, and other information to make informed decisions related to the long-range planning process.

**Committee:**

- Project ideas generally come from outside groups that have a project idea that fits with the RCAC mission rather than being driven by priority information needs identified by the Council. The process for requesting outside ideas is not consistent or transparent. (This may not be true across all committees)
- We review the projects in committee and weigh them based on several factors. We then rank them and present them to the staff and board to rank. It's an effective process.
- There is much discussion and consensus prior to submission
- Open by invitation.
- Easy to submit. Involves staff who know the issues.
- The staff prepared the majority of the information and makes it easy to discuss.
- The budget sheets, clear and concise instructions on how to submit projects. Lining up with goals and objectives of the organization.



- It's inclusive and makes it clear that all ideas are welcome and can have stage time, but it makes it lengthy.
  - It allows all committees to have a voice and most of the time it is pretty egalitarian.
  - Group participation really helps formulate a project and also ranking its importance and cost.
  - That they originate from committees and staff
5. Tell us how you would improve the process to submit projects.

**Board:**

- So younger, professionals can learn the process.
- attach early planning process to a regular board meeting
- I think each project should get a little bit more time. Maybe we can use some of the Science Night time to get a part of the projects presented. It just seems that there is a great deal of information and not a lot of time to learn about the various projects. Is it crazy to say that committee members cannot vote for their own projects? Perhaps that would avoid the bias that is inherent to ownership.
- No suggestions as this process, though not easy for some, does work.
- Need more creativity to come up with useful and cost-effective ideas
- I think an improvement might be having more thought about data gaps and data needs prior to project solicitation. Sometimes the projects submitted appear to cover a wide array of topics within a committee. Maybe if the committees could spend more time on data needs and big picture it might help focus on the needs at hand.

**Staff:**

- Emphasizing positive framing: lowest ranked projects by committees are not bad or worst. Allowing room for committee comments within the ranking to share nuance of ranking decisions as needed.
- Some project ideas lack details. When this happens, it often leads to significant staff time spent clarifying expectations or working up project proposals that may not meet needs. The annual letter to stakeholders along with the project proposal template seems to be working to get details from stakeholders in a more helpful way. Consider ways to encourage internal folks to provide more details when proposing an idea. Possible solutions could be a modified proposal template or requiring the idea-proposer to attend one of the committee's LRP meetings to propose their idea.
- I think it would be valuable to have a running history of all prior projects so that we don't repeat work efforts. We could also do a better job capturing any recommendations for follow-up from prior projects that could turn into future projects.
- I could use more committee help/feedback on project details like budget estimates, expected completion timeframes, desired end products. I feel the budget estimates in



particular have caught me off guard as proposals to an RFP are received (my estimate is generally too low).

- There could be more collaboration between project managers that work with the different committees.
- There have been improvements made to the PWSRCSAC Long Range planning process over the past 5 years. I don't have any additional recommended improvements to offer at this time.

**Committee:**

- Priority information needs should be identified by the Council (board and committees) and then projects to respond to those needs should be broadly solicited.
- It seems to work well as it is.
- Might be improved by seeking out researchers with appropriate background and interests.
- Get more involvement from member entities in the initial stages.
- I can't think of anything. I like the process the way it is.
- It just seems cumbersome and lengthy. We spend a lot of time in our committee discussing ongoing "protected projects" vs. "new projects". And the process also seems to get into the weeds more than it should for board-level conversations--the board and committees should discuss and identify large goals/priorities, and then let the experts (i.e. paid staff recruited b/c they have specific skill sets) can determine the best way (the projects) to achieve the desired goals/priorities.
- Leave the committees out once the projects are submitted so they aren't wasting time on what is then a budgeting issue.

6. I have the support I need to submit projects.

	Yes	No	Total
Board	8	0	8
Staff	9	1	10
Committee	12	0	12
<i>Combined Total</i>	29	1	30

7. Tell us about the support and resources you utilize in submitting project ideas.

**Board:**



- I do not usually submit projects. I judge the submitted ones. Most of those are very good and well thought out. Wish we had more money.
- Issues identified in community then discussed with staff and board
- PWSRCAC staff is unparalleled in their knowledge and support. If you have a project idea, they will help you with it. I have no reason to complain in this area.
- Ideas for projects can be advanced through a technical committee for value and consistency
- Staff very available
- I haven't submitted, but I know support by staff would be provided.

**Staff:**

- Project managers, directors, and committees all available to help
- I am busy enough with the work I do on a regular basis. I do not need to take on more projects as I do not have time.
- I rely on input from the communications staff and managers to refine projects and their write ups (budget sheets).
- I use my Committee members and staff input for submitting project ideas, as well as Alyeska's provided schedule for projects.
- I mostly submit project ideas verbally through the appropriate technical committee, and if the committee likes the idea, then the lead project manager will fill out the project budget template.
- I bring my ideas to the OSPR committee workshop and if they like then they get developed into a promotional project.
- I try to lean on my committee's expertise and flesh out ideas to some degree in advance. LRP always seems to sneak up on me though. Maybe a check in with staff pre LRP season and better discussion in house on project ideas, who'll need help on a given projects or what projects might overlap committees, etc. We sort of do this on our own as PM's but something more formal perhaps ahead of LRP?
- In my position, I don't make many recommendations for project ideas, however, when I did have projects I was proposing, I could always reach out to project managers/project manager assistants, PWSRCAC management team members, committee members, Board members, and external partners as needed.

**Committee:**

- I bring them up in a committee meeting and potentially provide a short write-up
- The program managers over the past few years have supported and listened to ideas from the committee.
- I haven't personally submitted any ideas to date



- Direct communication with staff, Nelli Vanderberg and John Guthrie
- From staff plus materials and other as needed.
- Documents sent ahead of meeting for preparation to discuss is important. Preexisting project information where applicable is also helpful.
- I am on the Information and Education committee. We work with staff to help with submitting project ideas.
- Staff at committee meetings facilitate the process for the committee on which I participate.
- The staff and the written instructions are both very helpful.
- Support and discussion are critical parts of long-range planning meetings. Each participant brings their knowledge of resources into discussion.
- I bring them to the committee. If staff supports the idea, then they work it up, sometimes communicating via email to fill in details. During this process the project idea may be collaboratively tweaked. If the staff doesn't support the idea, they tell us why it's not possible. If the proposed project pleases the committee (personal approval, not based upon how relates to organizational goals), they rate it well enough to progress in the process.

8. Tell us how you would improve the support for project development

**Board:**

- Provide board venue to more formally present projects
- Perhaps better education to member entities on what type of projects they could submit.
- Support is there if you reach out.
- See above

**Staff:**

- It can be challenging to go back and forth and gather all committee member input and then synthesize. Especially on brand new projects.
- It is so incredibly difficult to get commitments from Alyeska on when they will provide requested information. Oftentimes, projects languish for months on end before progress is made because the requested information is not provided, even when a timeline for receipt is provided.
- Focusing more on how the information or results from the project will be used to promote our mission, and how it fits into the Board's strategic plan, would be an improvement.



- My committee and the board, tend to see projects as a yearly cycle. I'd like more long term vision and prioritized focus areas (strategic plan) i.e. I want the Board to say VMT maintenance in a general sense is our top priority. That would lead me to develop projects related to secondary containment, power generation best practices, etc. In a roundabout way...we see the board priorities given our current ranking system. But know broad topics the Board want to address would help me better define long term planning and projects.

**Committee:**

- A clear information need should be identified first and then the technical committee, or project team, should develop a general project description with support from staff and outside experts as needed.
- There seems to be ample support and available resources as it is.
- Add more art and drawing support.
- I'm not sure it's the role of the volunteers to be developing the projects. Just setting goals and priorities, and passing a budget that reflects this intent.
- Maybe get the information out to the universities to encourage more students working on their Masters and PhDs to submit projects.
- This is more, I think, about the makeup of my committee than the process, but the other members have expertise/interest in only a couple areas, with not much to provide for potential projects that are still within the committee's purview that might contribute to the organization as a whole or other committees' projects. If we could broaden committee makeup, that might improve but no one seems to know how to recruit new committee members. Some years ago, cross-committee work was stronger; now it's just a tick box that a project has support from another committee. My committee isn't allowed to put up projects that might benefit another committee's work because their projects belong to them. I suspect this has to do with territorial issues to do with how staff works together, or not, than anything a committee member can do.

9. How long do you spend reviewing the projects in the packet prior to the December Workshop

	1-3 hours	4-6 hours	7+ hours	No review	Total
Board	5	5	1	0	11
Staff	9	2	3	1	15
Committee	4	5	2	3	14
<i>Combined Total</i>	18	12	6	4	40



10. Tell us how we could make it easier for you to review the meeting packet prior to the December Workshop.

**Board:**

- You all are fantastic. I'm just swamped in the fall.
- Join one of the committees
- More time. Printed copies with room for notes.
- No suggestions as long as lead time is sufficient. 3 weeks.
- I'm ok with the process. Generally, prefer reading paper instead of screen

**Staff:**

- Staff provides short executive summaries of all projects as well as the more detailed budget templates. Staff even provides a cheat sheet of how to read the more detailed project budget sheets! The information is sent out about 2 weeks before the workshop, and I have no idea what staff can do to make it easier to review the packet.
- I find the information is pretty straightforward to review, just lengthy. I think the streamlined budget sheets will help, as well as the consistency of having all the budget sheets look more similar.
- Not sure, I think people have time to review them if they are actually interested.
- I think some visual aids would help make the packet easier to review.
- Budget briefing sheets are too long and repetitive with so many projects to review.
- I think everything makes sense and we provide enough information and context to review the packet.
- I like the workshop and Q and A that can occur. I think it's good when other committee members force you to speak to project ideas. Maybe rotate staff around tables to answer specific questions or give people time to get into more Q&A that's more one on one with project managers?
- I don't know if there is a way to simplify or streamline the packet for the December Workshop. As Board and staff members are the ones scoring and ranking the proposed projects it is important for everyone involved and attending the Workshop to read the packet/briefing sheets so that they can make the most informed decision to score/rank the projects according to the criteria provided. This should ensure that the projects that most closely meet these criteria are ranked highest and have the best chance of being funded within or limited budget. Those projects that are ranked lower can then be considered for out years (years 2-5).

**Committee**

- Maybe just a reminder email
- More executive summaries. Some of the projects are very technical and it is impossible for me to read and understand all the data.



- I don't vote on projects so I don't review them. I'm a volunteer on a committee.
- Works o.k. now. After the meetings, the projects are sent to committee members for review and ranking.
- As a committee member, once our committee's project rankings are decided by the committee as a whole, I have no further role in the process and consequently do not participate.

11. I am clear on the Long Range Planning process and goals while reviewing the projects.

	Yes	No	Total
Board	11	0	11
Staff	15	0	15
Committee	14	0	14
<i>Combined Total</i>	40	0	40

12. I am clear on the Strategic Plan goals while reviewing the projects.

	Yes	No	Total
Board	10	1	11
Staff	13	3	15 (one staff answered both yes and no)
Committee	14	0	14
<i>Combined Total</i>	37	4	40

## Section 2: Workshop Design and Flow

13. I have attended a December Workshop in person during the past 3 years.

	Yes	No	Total
Board	9	2	11
Staff	14	0	14
Committee	7	6	13
<i>Combined Total</i>	30	8	38

14. If yes, how many times have you attended the December Workshop in person over the last three years?

	1 Time	2 Times	3 Times	Total
Board	1	4	4	9



Staff	2	5	7	14
Committee	2	5	2	9
<i>Combined Total</i>	5	14	13	32

15. I have attended a December Workshop online during the past 3 years.

	Yes	No	Total
Board	4	7	11
Staff	5	9	14
Committee	5	9	13 (one member answered both yes and no)
<i>Combined Total</i>	14	25	38

16. If yes, how many times have you attended the December Workshop online over the last three years?

	1 Time	2 Times	3 Times	Total
Board	4	0	1	5
Staff	5	1	1	7
Committee	3	1	1	5
<i>Combined Total</i>	12	2	3	17

17. For online attendees only: As a virtual participant I felt engaged in the workshop and was able to ask questions.

	Yes	No	Total
Board	3	0	3
Staff	3	1	4
Committee	4	1	5
<i>Combined Total</i>	10	2	12

18. For online attendees only: The technology utilized for the workshop made participating virtually easy.

	Yes	No	Total
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Board	4	0	4
Staff	4	0	4
Committee	4	1	5
<i>Combined Total</i>	12	1	13

19. For online attendees only: Tell us what you would improve about the virtual workshop experience

**Board**

- No suggestions

**Staff**

- In 2021, the entire event was online due to Covid, so I do not think my virtual experience is the same as someone attending a hybrid experience online.
- Virtual attendance was during COVID, not a regular thing.
- Normally, I always attend the Workshop in person, but I believe in 2021, due to the COVID-19 pandemic, we held it virtually in 2021. I don't remember anything that I would improve from the virtual Workshop that was held that year.

**Committee**

- Participation is encouraged and the presentations are well structured.
- Better viewing of the room and people speaking from the floor.
- I have only attended once during covid. I thought it was fabulous. I felt very engaged.
- Online lunches (just kidding).

20. For all attendees: Tell us what you like about the workshop.

**Board**

- Combination of workshop with Science Night and annual dinner.
- It seems to be informal with a sense of interest in all the projects
- I like the board and volunteers meet in person. I like the time of year. I like the variety of presenters.
- I like that there is open dialog to discuss projects etc. I think the workshop is great
- Easy to get an understanding of projects by asking questions.
- Socialize and ask questions relevant to RCAC



- It is informative. Allows for questions and input.
- It is straight forward, however if data needs or data gaps were identified ahead of time, project scoring could be weighted towards those proposals that address a data need or data gap.

#### **Staff**

- It's a chance for Board members to ask clarifying questions of the committee members and staff.
- I enjoy hearing about other people's projects.
- The thing I like most about the workshop is the ability to ask questions about a project before they are ranked. I learn more about the project through the questions than just reading the materials.
- I like learning about the other committees' projects in depth.
- The ability to be around each other and discuss ideas.
- It's a chance for committees to hype up their proposed projects.
- I like having the project managers give a high level presentation on their committees proposed projects and to handle Q&A. I am in favor of the project managers giving presentations, rather than the committee members.
- I like that it gives everyone an opportunity to present their projects and answer any questions that stakeholders have about them.
- The Q & A. Especially questions from people who don't know your project ideas as well or necessarily support the project. This banter is healthy.
- It is very interesting to listen to the presenters and learn more about the projects.
- It is an opportunity to hear what other committees are working on and planning for the future.
- I think the Workshop is a great opportunity for the Committee members and project managers to present their projects. They can discuss the Committee prioritization of projects at the Workshop that helps the Board and staff members that have the responsibility of scoring and ranking the projects.

#### **Committee**

- The opportunity to share the committee's projects with the board and staff and answer questions. Important to explain to the Board why projects were ranked the way they are.
- Getting together and discussing the projects
- Well organized and presentations are smooth and inviting of response.
- Interaction with staff, board members, and committee members.
- Workshop is good.
- A chance to hear about all the projects and ability to ask questions in person. Also a way to combine different committees to all the projects.



- Being in person!
- It is a great way to understand to project proposals more in-depth.
- Collaboration.

21. For all attendees: Tell us what you would improve about the workshop agenda and flow.

#### ***Board***

- Everyone needs to read the projects and try to understand
- Each committee getting a prescribed amount of time and then they pick how to use it.
- Better attendance especially by Board members. Emphasize current fiscal year vs long range

#### ***Staff***

- I would like to have more and/or longer breaks during the workshop to be able to talk individually to the staff and volunteers about the proposed projects.
- Stop discussing the fish philosophy start. It is getting really old.
- I would like to see it facilitated by someone from staff rather than a volunteer. In past years, the facilitator hyped up their committee's projects more than other committees.
- I'm not advocating for an open schedule with no time limits, but allotted time can sometimes feel a bit short to really explain projects. Or seems we sometimes get cut short when there is good Q&A going.
- I think some more interactive items would be fun and helpful
- It is often rushed because the workshop moderator is hurrying through things; this limits thoughtful discussion.
- I think the agenda is set up so each of the five Committees have an equitable amount of time based on the number of projects that they have to present. I would also recommend that project presenters use the prescribed project presentation format that is designed to ensure a level playing field and reduce any real or perceived competitiveness in the process.

#### ***Committee***

- I like the process and don't see any need to change what seems to work well
- Have the chair stop reading everything back to us and just get it done.
- Curious if staff had enough time to pivot projects if changes are made.
- I really like the way it is right now. We have worked hard over the past 10-15 years to improve the process and I think it works well.
- Focus on setting priorities and then let the staff figure out how to allocate resources to achieve those priorities. Less micro-managing of project details.
- I would like to see committee chairs and members to present more and have staff as backup.



22. If you have not attended a December Workshop in the last 3 years, tell us why.

**Board**

- work/life conflicts arose
- I'm confident in staff identifying and prioritizing work

**Staff**

- N/A.

**Committee**

- I participate in committee LRP but not the December workshop.
- I've usually not have had time, although I attend the events leading up to and after
- My issue for attendance has been the covid-19 impact.
- Only been involved for the last 2 years.
- I am just a low-level volunteer. The December Workshop is for board and staff, although I believe some high-level volunteers may also attend.

23. The current agenda format allows enough time to adequately present all the projects.

	Yes	No	Total
Board	9	2	11
Staff	12	1	13
Committee	11	1	12
<i>Combined Total</i>	32	4	36

24. Does presenting projects at the December Workshop feel too negatively competitive in nature.

	Yes	No	Total
Board	5	6	11
Staff	4	10	14
Committee	2	10	12
<i>Combined Total</i>	11	26	37

If yes, what would you suggest to make this a more equitable process?

**Board**

- It feels like a brutal interview in front of everyone sometimes.
- Sometimes people feel that they have to argue their project over others. We just don't have enough money to do everything



- Sometimes. I don't like it when one committee is told that it is presenting too many projects. To make it more equitable, I suggest limiting the amount of points a rater can give to projects if they are members of the committee bringing them forward.
- At times. different committees use different methods. Committee member input is good but may not be as slick as a powerpoint by a staff member

#### **Staff**

- My real answer is sometimes. Certain volunteers will resort to negative framing. Continued emphasis on positive framing of projects and the way they are ranked, with the idea that all projects have merit, but there are budget limitations. Donna and others have done well reiterating this multiple times throughout the workshops and LRP process.
- I think some people make it unnecessarily competitive, but we already made all PowerPoint presentations look consistent and laid down presentation rules so I'm not sure what else we can do.
- As noted in Q8, if staff presented, rather than volunteers, the competitive nature would likely be greatly reduced.
- Here again, have Board set overall priorities would set tone. IE; we want to see VMT infrastructure projects first and foremost, and not like we don't care about school kid outreach, but it's just not our top priority, etc.
- Strategically think about projects across committees rather than in silos.

#### **Committee**

- I'm hedging here based on 25 years of involvement. There has been improvement in this area but there is still confusion as to how staff management actually uses this process to develop budget and how the presentations affect this.
- I don't think there should be voting on projects as much as ranking of priorities for the organizations to pursue, with staff having more ownership in pursuing projects that then help address the priorities identified by the Board.

25. I believe there is an acceptable level of discussion of how the December Workshop fits into the Long-Range Plan.

	Yes	No	Total
Board	3	0	3
Staff	10	3	13
Committee	11	1	12
<i>Combined Total</i>	24	4	28

#### **Comments – Board:**

- Sometimes I feel this is a big disconnect for newer members.



- Yes, but I do not like the statistical information presented about how staff and board members compare. It is a waste of time. If a board member or staff member wants it fine, but I don't feel it is worth the time to present it to the whole group.
- For some it is difficult to understand the relationship between annual budget and carrying over to budget for multi-year projects.
- Usually just a few folks who ask questions that may or may not stimulate more discussion

26. I believe there is an acceptable level of discussion of how the December Workshop fits into the overall Annual Budget Process.

	Yes	No	Total
Board	10	1	11
Staff	13	1	14
Committee	10	2	12
<i>Combined Total</i>	33	4	37

If no, how would you improve the December Workshop in conjunction with the overall Annual Budget Process?

**Board**

- Most folks do not tune into this. An inexpensive project often gets evaluated at the same level as a costly one.

**Staff**

- I think we can always improve our processes, and maybe adding some additional information related to how the December Workshop fits into the Long-Range Planning process and annual budget process on the front end would be beneficial and potentially result in better participation/attendance at the Workshop.

**Committee**

- See above comment. The budget process should be separated from the LRP process.
- Budgeting and project development are somewhat disconnected. Budgeting needs to be included up front even for protected projects. Budget should be included explicitly in the ranking process rather than implicitly.

27. It is easy to see the connection between the projects presented and the one-page strategic plan.

	Yes	No	Total
Board	10	1	11
Staff	10	4	14
Committee	11	1	12



<i>Combined Total</i>	31	6	37
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28. I believe the correlation coefficient statistics showing the difference between board and staff scores is important.

	Yes	No	Total
Board	10	1	11
Staff	6	8	14
Committee	9	3	12
<i>Combined Total</i>	25	12	37

### Section 3: Workshop Ranking and Project Selection

29. I have participated in project ranking in a past December Workshop.

	Yes	No	Total
Board	10	1	11
Staff	10	4	14
Committee	4	8	12
<i>Combined Total</i>	24	13	37

30. The ranking process for project prioritization is easy to complete.

	Yes	No	Total
Board	9	1	10
Staff	14	0	14
Committee	3	1	4
<i>Combined Total</i>	26	2	28

31. Committee project prioritization plays a significant role in how I rank the projects presented.

	Yes	No	Total
Board	7	3	10
Staff	12	3	15
Committee	4	0	4
<i>Combined Total</i>	23	6	29

32. The current ranking process is equitable across committees.

	Yes	No	Total
Board	8	2	10
Staff	12	2	14



Committee	3	2	4 (one member answered both yes and no)
<i>Combined Total</i>	23	6	28

33. The score a project gets is significant to me, e.g. I feel a high ranked project should have a high probability of being selected in the budget process.

	Yes	No	Total
Board	10	0	10
Staff	14	0	14
Committee	3	1	4
<i>Combined Total</i>	27	1	28

34. I agree that protected projects are a necessary part of the ranking process.

	Yes	No	Total
Board	9	1	10
Staff	9	5	14
Committee	3	1	4
<i>Combined Total</i>	21	7	28

35. I agree that the board should have final determination of which projects are funded.

	Yes	No	Total
Board	8	2	10
Staff	13	1	14
Committee	4	0	4
<i>Combined Total</i>	25	3	28

36. Should all staff members be allowed to rank projects? (Board members asked this question)

	Yes	No	Total
Board	7	3	10

37. Should the board's ranking be weighted higher than the staff ranking?

	Yes	No	Total
Board	3	7	10
Staff	4	10	14
Committee	3	1	4
<i>Combined Total</i>	10	18	28

38. There is an appropriate level of feedback for why projects are not included in the budget.

	Yes	No	Total
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Board	9	1	10
Staff	11	3	14
Committee	3	1	4
<i>Combined Total</i>	23	5	28

39. Tell us what you like about the current ranking process.

**Board**

- It's easy to complete.
- It allows all projects to compete equally.
- It seems like a fair way to rank the proposed projects
- Board and staff participation.
- It is so simple to do.
- After many years I feel this system works if one puts in the time. There is no way to make this process easy if a person does not engage.
- Glad there is input but would be nice to know why folks rank projects as they do. Was it a slick presentation or committee preference or project manager emphasis?
- I don't have any strong feelings on this. It seems to be working at present.

**Staff**

- That staff who would be implementing and leading projects have a say in addition to the Board.
- I appreciate that it is relatively anonymous.
- It provides a useful guide for the staff to use when developing a balanced budget for Board consideration.
- I like that it is a good way to learn about all of the proposed projects, and it helps better prioritize where our money goes in a way that aligns with Board and staff views.
- I like that all of the potential projects are ranked and averaged out to determine priority projects.
- Straightforward, easy to understand and to interpret
- Re the question: Committee project prioritization plays a significant role in how I rank the projects presented. - I selected yes and no because it depends on which committee projects we are talking about.
- The current process seems very fair, and I like it.
- Staff and board correlation. I think this is a healthy discussion and in my opinion, things don't have to be perfectly in alignment, but the discussion is good. Good to also discuss protected projects and re-evaluate them from time to time.
- It is easy to fill out, but a different format would be helpful



- All projects across all committees are considered by all staff and board, it's valuable to have an opportunity to weigh in on the broader scope of work.
- I think the current ranking process is clearly defined with instructions and criteria to base point assignments to the projects being ranked. The project criteria are listed at the top of the scoring sheet as well as how many total points are available to be assigned, the maximum number of points that can be assigned to each project, etc.

#### **Committee**

- Good opportunity to review and evaluate and finally provide input. Final system analysis is provided by staff and the board.
- Background information. I am currently a committee chair but I spent 16 years on the board and was one of the original board subcommittee which developed our planning process. Hence my input here reflects both points of view.
- Seems to be sufficient

40. Tell us how you would improve the current ranking process.

#### **Board**

- More info on projects and each committee given the same amount of time.
- On paper the Board is the final decider but in essence the Staff does the heavy lifting [along with contractors]. Board needs to know they can alter the final budget if they do not agree with the priorities. Need better take into account dollar cost of projects. Possibly need to balance budget among committees. Need to get oral or written input from more Board members at meetings. Need to be sure there is transparency.

#### **Staff**

- I think people are distributing points using very different methodologies. For example, giving out mostly 0s and 5s vs spreading points more evenly.
- I would like more feedback on why projects were not included in the budget.
- I wish people would stop saying others don't care about a low ranked project. It's not about like or dislike, it's about prioritizing to make tough choices to get to a balanced budget.
- I do not think the correlation statistics are important because people use their points differently so it looks like we are not as aligned as we could be. For example, some people only give projects 5 points. Other people spread their points out more so that more projects get points. There may be a more consistent way to handle this, like having everyone prioritize all of the projects, but I think that might be more complicated for people to fill out, and the current process seems to work well for its intended purpose.



- It is tricky because people score things differently, so some people give everything a 5 or a 0, whereas other people give out more evenly distributed scores (I think also the number of projects each year varies, making the 75 points trickier to hand out some years over others). Possibly some sort of rubric of what each number represents would be helpful?
- I don't like that the project titles are often what sells one project over another and many people base their ranking off the title vs understanding the project and its implications.
- Make sure everyone completes it
- I think the Board's ranking should probably be weighted heavier than that staff's rankings.
- I'm open to changing the point system to force us to prioritize more with less points. A statistics expert would probably have guidance here... but I would do less points so there's more scarcity and we can't give everything 1 point, etc.
- An auto-calculated sheet that tells you how many points you have already used would be helpful. Also, the sheet is pretty busy, having a more simple form would be more visually appealing.
- The current approach asks board and staff members to rate projects with scores from 1-5, it does not RANK the projects. Only committees are actually asked to rank projects in a preferred order that are then presented at the workshop. Individuals use different approaches to score projects from 1-5, e.g., some use only fives, some give all projects at least 1, and others pay close attention to committee prioritization. This variability isn't necessarily bad, but it's an important distinction from individuals ranking all the projects. The collective scores are used to rank projects.

#### **Committee**

- Seems sound, fair and appropriate.
- Eliminate the limit on points assigned. A simple yes or no for funding approval is all that is needed.
- I think it's ok, but willing to hear new ideas

41. Is the December Workshop a worthwhile effort for the board?

	Yes	No	Total
Board	11	0	11
Staff	12	0	12
Committee	11	1	12
<i>Combined Total</i>	34	1	35



#### Section 4: General Questions

42. I can participate in a phone interview to further discuss improvements for the Five-Year Long Range Planning and Annual Budget Development. (Please note you will only be contacted by PGS if you select YES to this question).

	Yes	No	Total
Board	2	7	9
Staff	7	7	14
Committee	6	6	12
<i>Combined Total</i>	15	20	35

If "Yes", the best phone number to contact me for an interview is:

**Board:**

- Mike Bender: 907 244-0654
- Robert Archibald: (907) 299-0852
- Jim Herbert: if time and schedule allows, but I would prefer face to face at the December sessions. 907.362.0020

**Staff:**

- Maia Draper-Reich: 9072736235
- Donna Schantz: work: (907) 834-5070 cell: 907-255-5116
- Roy Robertson: 9074414079
- Nelli Vanderburg: 907-834-5030 (Nelli Vanderburg, Project Manager Assistant LRP)
- Danielle Verna: 9073010954 -
- Joseph Lally: 907-834-5060

**Committee**

- Davin Holen: 907-229-1971
- John Kennish: 9072308093
- Steve Lewis: 9072409412
- Tom Kuckertz: 907-538-7351
- Cathy Hart: 907-244-1223. I can also meet in person as I live in Anchorage. I will be out of the country from October 11-26.
- David Goldstein: 9072440234



43. If you are familiar with other organizations completing a similar process, please share their best practice's used or organization name for reference. (Please note, we are reaching out to CIRCAC for benchmarking).

**Board**

- None given

**Staff**

- None given

**Committee**

- OSRI
- City of Whittier Commissions/Council/Administration/Public workshops.

44. How can this process be more engaging to encourage participation from all members?

**Board**

- I don't know how to make people read or understand.????
- I will try to plan my life better to participate more. Solicit project ideas from the town and submit those
- I feel it is sufficiently engaging.
- Make a point to interview Volunteers, Staff and Board members who attend the December meeting. You will see how things go at Dec workshop but would be good to schedule face to face interviews the afternoon/morning before Science night for folks from out of town. You can figure out how to work with the folks who live in ANC. Maybe instead of one on one, you could have small groups of Board members, small groups of Staff and committee members. Sometimes better points of view come out in group settings. Tho not important to me, food and drink might stimulate the tongues.
- It is already tied to science night and the holiday party - it is pretty engaging now. (perhaps make it mandatory if you want to travel)

**Staff**

- As a staff member, I feel the staff are engaged. Not sure how to encourage further volunteer input.
- I find the workshop engaging because I learn more about what the technical committees consider to be the most important projects. However, some committee members feel deflated when their projects don't rank high, and this has caused unhappiness to the point that I think some members no longer participate.
- This is a volunteer organization. However, some of the volunteers are being paid to attend as part of their role for work and others are not and at times that shows in their motivation.
- That's the million-dollar question.



- I think making it more interactive would be nice, then you aren't listening to multiple speakers for hours on end, it can get a little exhausting. Also, maybe assigned seating that encourages Board members to sit with staff members rather than staff and Board grouping separately.
- I would hope board members feel compelled to participate in the process because it their responsibility to guide the direction of the Council's work and approve the budget. That is not always the case. I'm not sure that trying to be "more engaging" at the workshop is the answer. Perhaps board members need to know/be reminded that their input matters and is critical to how we spend our funding and our effectiveness as an organization.

**Committee:**

- Provide a general review to all participants and expect feedback and then provide response to all participants,
- Lack of board engagement is obvious and ripples down through the organization. If change does not come from the top there will be no progress.
- I'm not sure if it happens at other meetings, but it'd be good to take time to celebrate the successes and highlight the big recent wins that demonstrate how RCAC has helped achieve recent priorities before diving deep into setting the next priorities. Celebrating success can help "warm up the crowd" and make the setting more inclusive and positive as discussions get into future priorities/trade-offs, etc.
- State of the Art communication devices and high speed/reliable internet connections.
- The process of improving the workshop or the process of the workshop itself? Since not all members are meant to participate in the workshop, I don't see why they might be encouraged to attend something in which their participation has ended. It's a budgeting matter for the board and staff.



# RFP #4005.25.01

Prince William Sound Regional Citizens' Advisory  
Council

Five-Year Long Range Planning and Annual Budget  
Development Improvement, 2024

Interview Responses



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## Interview Overview

### Areas of Interest for Interview Questions Based on Survey Results:

Based on the survey results the following areas of interest will be expanded upon for the 15 individuals who responded Yes to being contacted for interviews.

**// Board Provided Strategy:** Throughout the survey there were responses that indicated having a clearer view of strategic initiatives the board wished to focus on would assist in not only project identification and development but also in determining the projects to fund in the budget. Interview goals would be to understand how this would be viewed, how it would vary from current strategic plan and established goals, and the potential impact to committees.

**// Project Presentations and Workshop Flow:** There were several mixed comments on the best way to present the projects, ranging from time allotments and who should present the project. One recommendation that stood out was utilizing break time for additional Q&A with staff and volunteers about the proposed projects. How would we engage participants virtually during breaks? Could incorporate breakout sessions for those online?

Interview goals would be to gain further clarification of how informal project conversations may aid in workshop effectiveness, impact of modifying the time allotments based on discussion generated by projects.

Interview Questions:

**// Ranking:** While most respondents agreed the current system is easy to use, themes emerged around developing a consistency or rubric for scoring. There are mixed emotions on correlation coefficients and staff versus board ranking. Interview goals would seek further clarity on how to implement a rubric without over complicating the system.

Interview responses were captured as completely as possible during the interview, with some responses being paraphrased as close as possible to the respondents intent.

## Interview Responses

### **1. In the survey, participants highlighted a need for greater direction from the board of directors on organizational goals to aid in project identification and development. Do you agree that the strategy needs more direction?**

#### **Board Responses:**

- I wouldn't. I know a fair amount about oil transportation, but it seems like the whole thing comes together. Don't see a lack of projects, impressed and pleasantly surprised on projects from the staff and committees.
- If board members did their homework they would know what they are doing. Strive to put enough information out there on projects. Could provide a packet sooner for more time to read it, and collaborate with project managers if there are questions.

**Staff Responses:**

- It would be tough - my program area is outreach, connecting with regions and getting feedback. My work-area has a routine consistent process, new ideas are low budget. I do not have the strongest opinion. I feel it's important for the board to have a say, but it's not as obvious.
- Initially - no, need more board directors to be actively involved in providing that direction. This is the biggest thing - there are only a handful of board members that show up to the December workshop.
- I guess, technical committees submit projects to the board. Ideas from stakeholders, but can be difficult to come up with actionable projects. It may be easier for committees to come up with projects with more guidance for the board, but there are a lot of non-engaged board members. Mix would be helpful if the board has meat of the project direction it is welcome - they can come to the PM to give ideas of the project. More specific than Protect PWS.
- I think the board should give strong feedback from them, would be helpful, and would be better to know that upfront. Before the LRP cycle begins, and provide direction to the committees that start brainstorming in the fall.
- This has been a long time issue with a select few people where some voices are louder than others. In the past it's been stated that board direction is needed. Maybe some more, but not a show stopper. We have what we need to get project ideas together and present them. If it's all driven by the board then the committee isn't really needed.

**Committee Responses:**

- The board is the governance and it represents the communities, the communities should be telling the staff what the concerns are. Aging members from the EVOS event, and staff don't have first hand experience. Have to find out what the member entities are interested in, so if something doesn't fit within that mission, it shouldn't be conducted. Focus on air pollution, maintenance that may increase the probability of the oil spill.
- It's pretty good, I don't think it needs to be improved as far as direction.
- Yes, my frustration with the process was the response from the board was - we are the ones that make the decisions. That response made me think why am I here? What is the role then if the board doesn't take in advice from the committee. I believe in the mission, and want to support it, but the process doesn't matter because we make all the decisions.
- Absolutely, critically, tired of guessing what the board needs to know and trying to do.
- Yes. would like to see that board more active, and it feels driven by committees instead of the board, and the committees would like more direction.

## ***2. If the board set clearer project expectations, how often would you expect these expectations to be updated (annually, every 3 years, 5 years?)***

**Board Responses:**

- At least annually
- Annually - because most projects are an annual project. Except for those with carry over, there should probably be a report on how those are going (phased or designated project for out to five years). Annual budget, long range plan and strategic plan - board members get

confused about what is what - especially with a 5 year plan, but 95% is discussing and approving the annual budget. Confusion between annual budgeting and calling this a 5 year plan (call it a designated project that extends out for multiple years).

#### **Staff Responses:**

- Instinct says every 2-3 years, every year is too much and 5 is too long. There would have to be room for dynamics of work and allows for projects to be addressed. Many projects require multiple phases as it is.
- Annually - part of the process to develop the budget.
- Every 5 years is sufficient.
- 3 years - we have a current 5 year plan, but they don't think 5 years out. Annually may be too soon and knee-jerk, and less strategic in nature. Even board members providing project ideas, or soliciting ideas from external entities would be really strong. The board members that are engaged are in the committee, but even then they are more passive to project ideas.
- At this point every year, maybe this could shift to every 3 years, but review on an annual basis

#### **Committee Responses:**

- The Long Range Planning process is for this purpose, on an annual basis - should look out more than a year. Hard to do a 5 year review when on an annual budgeting cycle and reactive nature of the work. The background mission is to look at lowering the probability of the spill and harsh consequences of the oil spill if there is one.
- Probably every 2 years they would need to be reviewed, unless there is a major crisis.
- Every 3-5 years, that's how the SAC considers things, sooner may be difficult to track them. When you are building out projects, thinking through the full process. Identify different types of projects to balance and meet all the goals of the SAC. Every time the committee does this it looks out 5 years.
- Strategic goals - every 2 to 3 years, and should be looked at for changes in political changes with the magnitude of present day.
- Every 3 - 5 years.

### ***3. How could setting clearer board driven project identification be set in a way that doesn't limit project submission?***

#### **Board Responses:**

- As I see the process going, all those project ideas are developed through the committee, ranked by committee, staff and board. Never experienced in one that interested in going forward that's being shot down.
- Don't think so, you would have to point it at the proper committee. Anyone can submit a project to the committee as long as it fits, and it's the discretion of the committee to pursue it. Board engagement is varied.

#### **Staff Responses:**

- There would have to be a dialogue, which the system currently supports between the board / staff / committee. In outreach there may be board ideas that are not realistic / feasible based on resources. Ex. new information projects around gathering and organizing census

data - would be helpful for several areas. Balance between idea generation and grounding of reality. Board members seem to do this already through the committees. Unsure of when in the process this would take place. There are board members who are very involved, and then board members less engaged.

- Part of the budgeting process - this would be a high priority project, but all other projects getting funded. Once it's funded you have to do it that year.
- Presenting ideas as a brainstorm "here are the ideas the board wants to see explored, but also don't ignore the other requirements."
- Don't see that as a concern, the committees can discuss it - don't believe it will preclude talking about other things. It would potentially carry more weight, but not impact idea generation.
- More budget would help as it's a limiting factor. There are some projects that we just can't afford to do. When projects are proposed or not yet shovel ready - not ready to be completed within a fiscal year.

#### **Committee Responses:**

- The board of the directors provide strategic guidance of where it wants to go and the staff should follow that. Should follow the board guidance and to go outside the board would be against their superiors. It's not easy to run this organization, the mission is nebulous, and is there mission creep?
- Presenting each project without concentrating on one would be the best approach. Each project has a datasheet with cost, expected time frame - there's an opportunity to review.
- Just describing that it is an interesting project, but still open to other ideas.
- I think part of the answer to that would be an understanding of the board's role and committee role and open communication in between. I know in my committee that wouldn't occur. Fostering more inter-committee communication, would assist. They are currently siloed, have to reach out to each one to explain that there may be overlap. Historically there was a meeting committee leaders to discuss shared ideas, and once they left that fell through the cracks. This hasn't been brought up in any organized fashion. Limited understanding of how much staff is cross-communicating between committee interests. Perceived lack of willingness by some staff members to pursue collaboration in a historical context.
- Part of it would be directed to the committee involved in the area that the project would be housed, which would leave the other committees available to submit ideas.

#### ***4. Survey responses suggest potential timing inequities between groups with many project presentations and those with fewer. How would you feel about switching to a time-per-project schedule instead of time allocated per group?***

#### **Board Responses:**

- That would be fine, can't think of a time where the project ran short.
- I think that's a good idea.

**Staff Responses:**

- I don't feel strongly about that at all. I have been here 2 full years, there's an attitude amongst volunteers with an element of competition and is it fair or not? Donna tries to frame it positively that all projects are good. Truth is it varies from year to year, based on committee work. I feel like I undercut my time the last two years, and don't feel strongly about it. This is the competitive element that is silly, there is not enough money.
- Fine with that, it makes sense. Not rushing if you have numerous.
- Yes, that would be fine. The only issue would be (agenda developed after idea of number of projects - easier to block time per group, but better for by project)
- Really nitpicky, I present all the projects for the committee, some require more explanation than others, based on longevity and explanation. Don't feel like an equal number of minutes per project will add much value. Currently I have enough time, I might have the most number of projects to present and feel like it's adequate and not thinking about the time limit.
- Would be good with that, should be prorated based on the number of projects. Extra time is filled by the chair of the committee, but then you deviate from what you are there for. It should be time weighted, maybe not a one-for-one but cut back to a reasonable amount of time so one group doesn't 45 minutes and one 10

**Committee Responses:**

- Ambivalent on this, if a project is worthwhile - all the time should be allotted. If the project isn't worthwhile, then it shouldn't be presented. Don't see people battling to get others' budgets, and don't feel like it is a competitive process as it is.
- Some projects require more time, especially if some are unclear, I don't think having a blanket time slot works out the best, needs to be built in flexibility.
- Completely open to it. SAC submits a lot of projects, but cognizant of not overwhelming the board, have tried to weed out those that don't have good potential. Only advance those that should be advanced. The type of direction that needs to come from the board is filtering of projects, how many they want to see - guidelines, expect to only submit X projects, or time. The board needs to make decisions based on the importance of projects, not based on budget at this level. The board needs leeway on what they will take action on versus not.
- Sounds sensible, that would imply a certain degree of flexibility of group and facilitator. Would give project distribution time to prevent cramming things.
- I like that idea, it's a great idea, never thought of it before.

**5. *How might adding informal meeting time to the workshop agenda, extended breaks or breakout sessions help participants follow up on projects they are interested in learning more about?***

**Board Responses:**

- I guess it could be done on a limited schedule - it's a long day at times. I have asked people afterwards, I write questions down and follow up after.
- Breakout sessions would be a good idea, but do we have the time to do that? If it fits in.

**Staff Responses:**

- Unsure about what that would look like, a loose structure for communicating, but the Q&A answers a lot of the questions, would recommend doing it at the end, and frame it as a time for further discussion. Staff stays put and is available? Can see potential for fluctuation each year.
- Already pretty generous with breaks - there is plenty of time for this. The bigger one is that there needs to be more involvement. It's done on a Friday and people may not be available to be at the meeting. Project managers and committee members are willing to talk to anyone, extending time will not help. By the time it gets to this day the project is well developed. In person workshop for project development at the committee level. People could come to any meeting - it's on the calendar.
- If the group would want that it would be fine. Again a few people would be into it and most would then leave. Unsure of breakout sessions - but maybe breakout sessions instead of breaks.
- That would be great, each of the committees present the project and that's it. There is less time for project discussion, and cross committee development. This would be an opportunity for that.
- I don't know that there would be that much impact, most time is taken up by general information less apt to say this would add value. Better to stay focused than let it drift.

**Committee Responses:**

- Hate breakout sessions, can't recommend them. It's useful to know what the organization does and how it can succeed and what it can do to survive.
- It does help.
- Roughly a good idea, but rarely had a board member approach me asking for more. Not sure having extra breaks will help. Haven't seen decisions made in the hallway,
- If you want to do breakouts you would have to have an extended time, and people interested in attending the meeting (which has been hard to get people there) and lack of preparation prior to the meeting. Historical: board was extremely activist board composition, more than half had been on the ground after the spill, people involved in drafting OPA 90, some people hated each other, creating an active and dynamic board. Now no actual experience but only a historical understanding, more of administrative and willing to rubber stamp what puts staff in front of them.
- I like the idea, but it's hard with people who are under pressure to get things done in their everyday lives. We have tried to do that for committees to talk amongst each other, but don't know if it is practical.

**6. *Would you be in favor of extending the total workshop time to incorporate any of these ideas?***

**Board Responses:**

- Pretty limited basis - maybe an hour or so.
- I would be, if you don't ask the questions you never get the answers.

**Staff Responses:**

- The day isn't long as it is, and last year ended early. Tagging on 30 minutes would be fine, but anything over 8 hours would be questionable.

- Basically that Friday goes from 9 am to 3 / 4 pm and then a holiday party follows it, not sure how much more you could extend it. People are ready to wrap up by the last hour.
- No. It's such a long workshop already, sometimes it is short because of lack of questions - there is a certain time in between the workshop and then the holiday party. Don't recommend extending it beyond 3:30 - 4:00 end time.
- Sure, we always end early anyhow.
- No

#### **Committee Responses:**

- I wouldn't, the workshop in December coming to Anchorage, people can go participate in the city environment. Don't think adding time will go over well.
- The workshop time itself is pretty adequate - there's enough flexibility in there that the work can get done. I think it's fine the way it is.
- No, it is fine as is.
- Only if people would actually participate, but you don't know until you give them the opportunity. What are their feelings about that meeting - why are they not attending?
- Yes.

#### ***7. The majority of participants responded they were fine with the scoring ranking process as is, do you think it is a worthwhile effort to revamp the scoring and ranking system? If so, do you have specific suggestions on how to revamp this system?***

#### **Board Responses:**

- I don't have any idea of where it would go from there - pretty well balanced. At the end of the day I make notes during the presentation, partial on tangible things - weather, helping shippers, line throwing projects. When things go bad, I have to figure out how to solve those problems. Can't find fault or deficiency that the current ranking system has.
- Unsure of how else we would do it. Sometimes the scores will - the worst thing that will happen board members will score by proxy. But if they don't know anything, Try to have a conversation about the most important projects for the annual cycle. This is where the breakout room will be good, to allow for more time for project managers to share (4-5 tables) then they could follow up (Couldn't say what percentage is for those that complete the day of compared to during)

#### **Staff Responses:**

- Would be open to revamping it. We need to get on the same page, people use the scoring system differently (top projects get 5s, where others get more of a gradient) There is an element of personality which may be fine. I don't have the answer for that one, but I would be interested in hearing other ideas.
- Initial response is no, because people are familiar.
- I don't know how it would be revamped - it's already gone through several reiterations, and would have to be put together in a few weeks. Don't know how else we could do it that would be fair, not feasible to prioritize. Assigning points is the best way forward. A few back

- (6-8) that same day, the rest trickle in, and definitely not all by the due date. Reminder emails sent, used to call but people don't want to participate in the process.
- It's imperfect, its important to note we are not ranking the projects, we are scoring them 1-5. The committees rank them and it's a recommendation to everyone else. It's ok, because people rate projects differently and that leads to the disparity to what the staff view as important vs board. I would be open to changing it. The committee rankings are important, first vetting of projects. This may or may not influence project scores. Most committees have a hard time ranking because they are all valuable. Move away from committee ranking and have it all equal.
  - I like the process as it is, there are ground rules and levels the playing field. Forget how they determine the number of points, but I think this works well. Not to say it may be different, always room for improvement.

#### **Committee Responses:**

- Big Peeve, is the protected projects business, they should still be scored, as well as those that are not protected. Management needs to know how the board views these protected projects. This is how you get information from the board on what is important, and then you can answer the why and the disconnect to scoring. The scoring is adequate and ensures you cannot dump all the points on one project - need to understand all the other projects and if the organization should be moving towards those projects. Can't give them enough points so that everyone gets a 5.
- No
- No, it's fine the way it is.
- I think the scoring system is a farce, but there is no point in revamping it if everyone else is fine with it. I don't like the ranking system, but if the board doesn't want it messed with. Limiting the number of points to any project is in error, if you have 100 points, do it what you want. I have never felt I understood the contentions, if someone wants to give 100 points to a project they are really high on they should be able to do that.
- Not necessarily, I know some people hate it. I find myself going over this, and I can't think of another way to do it.

#### **8. *Survey feedback highlighted different views on how scores should be weighted between staff and board scoring. What do you like or dislike about the correlation coefficient?***

#### **Board Responses:**

- I like how it lays out, as it is now. Couldn't think of a way better, unless there was an example of how the staff or committee would have. Everything is developed, gone through the committee process, I don't think I have ever given anyone a zero - all warrant consideration.
- We don't spend a whole lot of time on it, but if you understand the graph it helps. The scoring between staff and board members is interesting - project directors are well versed, but some of the rest of the staff may not be, so the project manager or administrative staff is on that. Want people to score things that have an idea of what they are talking about. Not upset about project managers getting a voice in the ranking.

**Staff Responses:**

- I like that it provides a visual, this is a visual learning group, the quad plot where you can see the rankings of projects is helpful. The numbers are less helpful and it depends on the project. It's important that staff input be known, but it's the board's budget. Do you think something would be missing or less impactful in conversation if the correlation? - only if there is a strong disagreement. It seems like the agreed upon projects are agreed upon by both. It may spark conversation that may not come up, would be open to other alternatives.
- This is not very useful, it shows where staff / board agree. It's good to have differing opinions. There is so much time spent on this and I don't understand the value of it for the time we have, not much benefit.
- I do not care about this, it comes back to people who don't want to participate. I usually get 100% staff participation, but if I don't get 100% board participation, it's on the board members if they want an equal say then they should have an equal number of people to respond. Don't feel like staff should be weighted more than the board, but not fair that the staff are not weighted equally. Appreciate all the time the volunteers help. People have different ways of scoring, only use points in blocks of 5s, others more gradient and thoughtful of the numbers are put down. Correlation coefficient isn't about board vs staff, but more personalized ranking score. Also staff have more details than the board based on the amount of time spent looking at projects. Tried to make more uniformity for presentations, to eliminate discrepancies in presentation to remove competition. Costs per projects vary between the committees (SAC is spendy because of lab time) compared to less expensive projects.
- I don't think staff and board should be weighted differently, would choose priority on staff, but wouldn't go there. People get really worked up about the correlation coefficient. There was value in seeing the statistics that staff and board approach scoring differently, but the strategy of how you provide points is shown. Staff on average use a different approach than the board. It's not magical, just an analysis of data.
- I like that it shows how like-minded we are on certain projects, and areas we aren't anti-correlated. Not sure how much value it adds, but like the four quadrant look of where it falls. Should be correlated for the most part and have discussion on areas we are not correlated. Can't recall that we have done much delving into this.

**Committee Responses:**

- I introduced the correlation coefficient - noticed other managers if the staff and board are seeing things the same way and how will we know? Staff is meant to be working for the board not the other way around. Can see if there is reasonable agreement between board and staff. There was one time where a committee was anti-correlated with the board.
- I don't have a lot of firsthand experience with it, but it makes sense to me.
- They bring it up, I don't think it's a very useful exercise. It's interesting, but I think the board gets into the weeds and loses track of why it's being presented. Felt like I was put on the spot to explain the lack of alignment, it made me uncomfortable. Having a difference of opinion is a good thing. A large presence of staff that show up to the SAC committee and creates a feedback loop. Staff and committee were close, but the board wasn't, it's not a good exercise to conduct. Due to board members' level of engagement and preparation.

- I think that is a very valuable tool, if you look at it and ask questions as to why there are discrepancies. To look at it after the fact is of little value. Discussion between board and staff would drive conversation, but it has to be used as a tool.
- I used to hate it, but the more I understood it the more I liked it. Showed if the board and staff are working together. To know we are on the same path - it's a red flag if the correlation is way off. Allows for discussion, and engagement in the process.

## **9. Are there any additional improvements you feel could enhance the process?**

### **Board Responses:**

- It's not obvious to me right now.
- 5 people that will ask out of 21-22 people, don't know how to engage the board more with what we are doing throughout the whole year. You want people to come to the board meeting to come with good questions.

### **Staff Responses:**

- The process feels complicated, but unsure of structure and work we do, if this could be simplified. Unsure of other logistic ideas to simplify. The biggest piece of eliminating competition would help. Curious on what the responses from the board are on the process.
- Nothing that comes to mind at the moment.
- Not that we haven't had a chance to talk about. It would be nice to have a little bit of a longer timeline, but summers are not a good time for anything. Greater harmony between everyone.
- I think the meeting itself needs a strong facilitator. We move through things quickly, less facilitated discussion. Maybe that means hiring a facilitator. Allowing space for conversation rather than moving it along, and when questions come up facilitating discussions around it. Helping to facilitate what the breakout sessions look like, and think strategically about what we are trying to do. If we want this to be a 5 year plan we need help getting there.
- Used to be much more involved in LRP process, and improving, and one that came up was that there is a limited budget, take the competition out of things, so standardized slides (vanilla and bland) so no selling. Try to stay away from budgetary line - board has right of refusal and rearrange projects. It's good to see projects presented, and whether its project manager or staff lead or chair that presents. It's the best possible way to level the playing field to ensure fairness, based on criteria.

### **Committee Responses:**

- Getting information on protected projects for board feedback.
- A lot of the use of modern technology into the process, for those who cannot physically attend has made it easier to attend and participate.
- Not above what I have already mentioned.
- The strategic planning and annual work plan / budget need to be separated.  $\frac{3}{4}$  of the work under the LRP is annual work plan and budgeting, the other  $\frac{1}{4}$  is reviewed the one-page strategic plan, but done by a few board members, senior staff and a couple committee chairs. Should be done as separate types of work as goals and objectives.

- I think it gets better and better every year. It used to have way too many projects, an area for improvement with the scientific projects - need to present the projects in short / concise information. Executive summaries that are easy to understand when presenting their projects.

### ***10. Are there any additional improvements that could enhance the workshop experience?***

#### **Board Responses:**

- Nope
- More visual aids - when committees want to speak to projects talking to large groups, various levels of public speaking - unsure how to even out the playing field. Project Manager can speak to all of the projects, but they will help with outlines.

#### **Staff Responses:**

- It's really helpful if the staff and committee chair is clear on who is presenting. No uniformity is not bad, but there should be a plan ahead of time. Really value the clarification and emphasis of why they are there and what is happening for the day compared to the process. LRP timeline and memo to help ground people in the process. Speak to a person with the least experience.
- Various committees, some have staff present and some committee members want to present - consistency here would be valuable, would prefer committee members to take ownership (project manager and committee member could be good). (what's attractive about the project and the feasibility of the project from the PM) It wouldn't hurt to shake it up a bit with the FISH theory, committees run through projects fairly quickly. A lot of the ranking happens based on the name of the project.
- Time per project will be a good one. It would be great if we could have more board participation, but how are you going to do that? Better way to come up with the number of available points in scoring. X # of projects, increase or decrease # of points available, but any time there is a change in the point total - there is a question on it.
- Additional feedback: briefing sheets and materials that go into the packet is overwhelming. No one is reading it, it's too much, people are not reading it, waiting for the workshop and are not vetted through the process. Don't know that it is contributing to the value of the day.
- Nothing comes to mind other than consistency and fairness throughout the process.

#### **Committee Responses:**

- December workshop would be the ideal time for this with the correlation coefficient, can see if it's positive or negative for useful information.
- It's always been pretty good.
- No, the process needs to be revised from the very beginning. Would have to have an early approach.
- Difference in how committees are presenting projects, some have committee members present, some chairs present, some staff present, or combination. There is a difference in how effective the communication is, that depends on the individual speaking to understand the project and explain it in a transparent matter. Projects get rated down or up based on presentation. Do we need to train group presentations or is that not really our business?

The quality and presentation style is so variable, it impacts the analysis of the data in front of you (the cost/benefit analysis of the organization) It appears that there's a lack of continuity of who should speak to this. Speaking to present committee, I could do it if you want me to, but can't say on people's willingness to chomp at the bit to present.

- Used to have workshops a day before the meetings, educational or otherwise (marketing, strategic planning, project - work we have done with communities) Unsure if it was the expense, or otherwise it stopped. Used to have a good turnout.

### ***11. Are there any additional items we haven't asked about through the survey or interview that need to be addressed?***

#### **Board Responses:**

- No - everything seems like it flows well. Think it's a wonderful program.
- Chairs of committees have been upset with the way projects get rated - 5 projects from 1 committee than the 1 from another committee. People believe we should divide the funding among the committees. My opinion is that the most important projects should be budgeted. Keep those as possibilities or budget line moves they could get funded throughout the budget year if it becomes available.

#### **Staff Responses:**

- No additional comments on this.
- Nothing else that was missed.
- It would be great if we received more external project ideas - we don't get a whole lot. Putting that call out more than once a year. Missing a big demographic that aren't youth or retired, limited light touch volunteer efforts.
- No additional comments, the survey seemed comprehensive.

#### **Committee Responses:**

- I like RCAC, it's been one of the better jobs I have had, once you reach consensus you work on it. But you were able to talk and resolve problems.
- No additional feedback
- I felt I was able to be honest in the survey and interview - I had the ability to voice my opinion. I have a huge amount of respect for the RCAC, my frustrations stem from lack of direction from the board.
- Already expressed it, but to rephrase it - problem of confusion of work plan and budget, with strategic planning, now they have done a strategic planning workshop - board hasn't felt as though they wanted to do it. may be a problem they won't be able to address. Will be doing the workshop remotely - possibility that some of my comments may be based on not being in person. Enhance the ability of those who are not in the room, or feedback on what the room is doing, cannot read the room. See the person who is speaking, but truly interactive process that would be helpful
- I can't think of anything else.

Item	Agenda Time	Alloted Minutes	Average Time Per Project (Alloted Minutes / # of Projects)	Approximate Video Time Stamp	Approximate Actual Minutes	Presentation Minutes	Discussion Minutes	Questions Asked
Welcome	9:00 AM	5		0 minutes to 2	1.00			WIFI Password
Roll Call	9:05 AM	5		2 minutes to 3	1.00			
Process / Goals & Objectives	9:10 AM	10		3 minutes to 17	14.00			
COMMITTEE PANELS								
Port Operations & Vessel Traffic								
Systems Committee	9:20 AM	45	15.000	17 minutes to 54	36 minutes			
Project 1 - Miscommunication in Maritime Contexts Phase 3 (\$50,000)			15	21 minutes to 36	15	8	7	1. What vessels do you plan to put observers on that you will get a laboratory approach to non-english speakers? Any cruise ships? 2. Budget Sheet - additional budget line for FY26? (phase 4) 3. Confidence of Phase 1 and 2 will be completed?
Project 2 - Assessing Non-Indigenous Species Biofouling on Vessel Arrivals (\$5,750)			15	37 minutes to 48	11	3	8	1. Effectivess of paints they use, barnacles grew when paint wasn't good, see this as a low priced project? 2. Additional budget in presentation compared to proposal sheet? 3. Support of Biofouling and foundation of information
Project 3 - Maritime Autonomous Surface Ships (MASS) Technology Review (\$40,000)			15	48 minutes to 53	6	3	3	1. Include study of AI? Could solve potential problem and future best practice 2. Additional support on AI (after the presentation ended)
Scientific Advisory Committee								
Project 1 - Peer Listening Manual Distribution (\$35,000)			7.5	58 minutes to 60	2	2	0	none
Project 2 - Marine Invasive Species - Internships (\$6,500)			7.5	60 mintues to 64	4	3	1	1. Any internship opportunities in other communities? 2. Do they get included in other projects?
Project 3 - PWS Marine Bird and Mammal Winter Survey (\$88,928)			7.5	64 minutes to 72	8	3	5	1. Sept / Nov. weather can be rough, what would happen if they cannot go out? 2. Has the contractor proposed any feedback from previous comments? 3. How long do surveys take and number of people on board? 4. What about low light conditions in November? 5. It is challenging in winter due to limited time period and get good data on birds (too many unknowns)
Project 4 - Transcriptomics Monitoring Plan (\$109,703)			7.5	72 minutes to 79	7	2	5	1. If it doesn't get funded, does that negate all the work already put in? 2. What are the results from previous studies and why is this so enticing? 3. Past analysis - was it the same amount of samples or is this more? Does expanded sample add value?
Project 5 - Social Science Workshop (\$30,000)			7.5	80 minutes to 86	6	3	3	4. Any recognition of testing from scientific community? 1. How much money will it take, seems low? How many people are expected? 2. 30-40 people seems like a lot of people, for housing and food.
Project 6 - Dispersants (\$10,000)			7.5	86 mintues to 89	3	1	2	3. Appreciate working with other committees / groups can you highlight that?
BONUS_ LTEMP (Protected SAC Project) (\$145,000)				89 mintues to 90	1	0.75	0.25	1. New dispersants policy, do we need to push to new agencies for regulations?
BREAK	10:50 AM	10		10:40:00 AM Return				1. How would you travel to locations

Terminal Operations & Environmental Monitoring Committee								
	11:00 AM	45	5.63	91 minutes to 127 and 3 minutes to 20	43 minutes			
Project 1 - Maintaining the Secondary Containment Systems at VMT (\$38,000)			5.63	93 minutes to 105	12	6	6	1. Not a question, but statement on liners and interface 2. This is a tremendous credit for having liner, is there leverage?
Project 2 - Title V Air Quality Permit Review (\$25,000)			5.63	105 minutes to 108	4	2	2	1. Hard to find expert, how is that going? 2. Disclosure to the board - on budget in January 3. Would contractor also write comment letter?
Project 3 - Finalization of Full PWSRCAC Air Quality History Report (\$10,000)			5.63	109 minutes to 110	1	1	0	
Project 4 - Review of the VMT CP System Testing Protocols (\$34,000)								1. You have to get buy in - wont fly unless there is buy-in correct? 2. Do you know how often they do look at this? 3. annual or monthly seem less than ideal, can you follow up on how often they look at this? 4. Is there a better technology practice? 5. Can you explain the report versus practices on aggressive corrosion? Assuming we look at other data in between replacement and assessment? 6. Was there a previous study on this?
Project 5 - Timeline of Tank Repairs from 1976 to Present (\$15,000)			5.63	110 minutes to 124	14	3	11	
Project 6 - Storage Tank Maintenance Review (\$30,000)			5.63	124 minutes to 127	3	2	1	medical concern ended presentation early
Project 7 - Crude Oil Piping Maintenance Review (\$51,744)			5.63	3 minutes to 7	4	1	3	1. How much use does tank get used?
Project 8 - Review of VMT's Oracle System for Reliability - Centered Maintenance (\$50,000)			5.63	8 minutes to 10	2	1	1	1. Will this be reviewing the Alyeska interpretation of the data
								1. Would this take place through an audit? 2. Discussion on software and risk assessment
LUNCH	11:45 AM	60						
Oil Spill Prevention and Response Committee	12:45 PM	45	7.50	21 - 63	42 minutes			
Project 1 - Analysis of Port Valdez Wx Buoy Data 2024 (\$17,000)			7.5	23 minutes to 28	5	2	3	1. How would we move forward after year 5 2. When is the anniversary of the 5 years?
Project 2 - Copper River Delta & Flats GRS Workgroup (\$25,000)			7.5	29 minutes to 40	11	4	7	1. How far east does it go? 2. Does this look at previous GRS work?
Project 3 - ANS Crude Oil Properties Analysis (\$30,500)			7.5	41 minutes to 46	5	2	3	1. Where does other report fit into this one?
Project 4 - Comparison of Windy App & Seal Rocks Wx Buoy Wind / Wave Data (\$35,000)			7.5	46 minutes to 59	13	7	6	1. Look at past data, but how do you deal with forecasting? 2. Are you able to get old data? Does Windy utilize buoy data? 3. Resource as a climatologist
Project 5 - History of VMT C-Planning (\$10,000)			7.5	59 minutes to 61	2	2	0	none

Project 6 - Vessel Decon Best Practices (\$20,000)			7.5	61 minutes to 63	2	2	0	none
Information and Education Committee	1:30 PM	45	9.00	63 - 87	24 minutes			
Project 1 - Youth Involvement (\$50,750)			9	64 minutes to 67	3	2	1	1. What is the range through the region?
Project 2 - Public Engagement Toolbox (\$10,000)			9	67 minutes to 70	3	3	0	Comment - toolbox to fill box of what they might be missing
Project 3 - Illustrated Prevention & Response Outreach (\$6,800)			9	70 minutes to 82	12	2	10	1. Partnership opportunities? 2. Essential to print, what would happen if not funded? 3. Support for hardcopy - what does a small batch hardcopy do? 4. Will this be sold online - Amazon?
Project 4 - Fishing Vessel Pgm Community Outreach (\$19,000)			9	82 minutes to 84	2	1	1	1. which communities do you see for FY24 2. Do you see support from Alyeska on this?
Project 5 - Internship (\$4,000)			9	85 minutes to 86	1	0.75	0.25	1. Where would work be done?
BREAK	2:15 PM	10						
Closing Comments	2:25 PM	15						
Adjourn	2:40 PM							
					Average Project Total Time	5.90		
					Average Presentation Time	2.67		
					Average Discussion Time	3.26		



Name: \_\_\_\_\_

## Volunteer Workshop for Long Range Planning: Supplemental Notes and Project Impact Diagramming

To help you evaluate projects, please use the workbook provided as a tool to assist with determining your final project scores.

The workbook includes space for your notes, along with two reflection questions to guide your decision-making when scoring each project. Additionally, there is an Impact / Effort Diagram for each project, designed to capture your initial reaction to the project's potential impact and the resources required for success.

Project scoring follows the same method and criteria as previous years, with a scale from 1 to 5. The score should reflect the following criteria:

- 1) Relevance to PWSRCAC's mission
- 2) Value to PWSRCAC
- 3) Benefit to Member Organizations
- 4) Probability of Success
- 5) Cost Effectiveness

**Please mark your final scores using the Proposed Project Ranking Sheet.**

### Directions for the Impact / Effort Diagram

**Impact:** The potential positive impact or value a project could have to PWSRCAC or its members. Consider the following when evaluating impact:

- a. Relevance to PWSRCAC's Mission
- b. Value to PWSRCAC
- c. Benefit to Member Organization

**Effort:** The amount of effort in terms of work, resources or complexity required to complete the project. Consider the following when evaluating effort:

- a. Probability of Success
- b. Cost Effectiveness

Mark an "X" on the grid based on your perception of the project's impact and the effort required.

High  
Impact

Low  
Impact


Low Effort

High Effort

Please note, this exercise is intended to guide your thinking, not dictate your project score. After completing the workbook, review your notes and initial assessments to help determine the final score of the project.

## Example for the Impact / Effort Diagram:

The following are examples of how four projects would fall into an Impact / Effort Diagram for a non-profit with a mission to end world hunger.

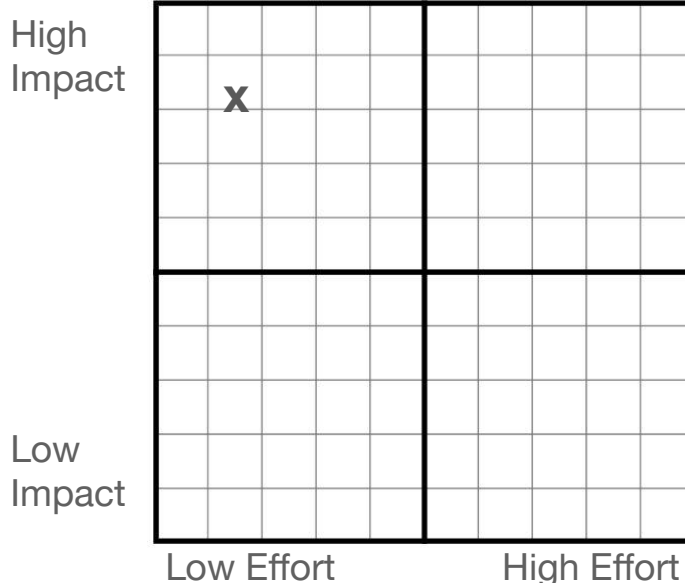
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### High Impact / Low Effort:

**Project** - *Community-based urban gardens*

**Description** - A project that establishes small urban gardens in areas with food insecurity. It requires low financial investment and minimal logistical effort but can have a substantial impact by providing fresh produce to local communities. This initiative addresses immediate hunger while also empowering local communities.

**Reasoning** - This project can generate a significant impact without requiring extensive resources. It is scalable and can often be set up in partnership with local organizations.

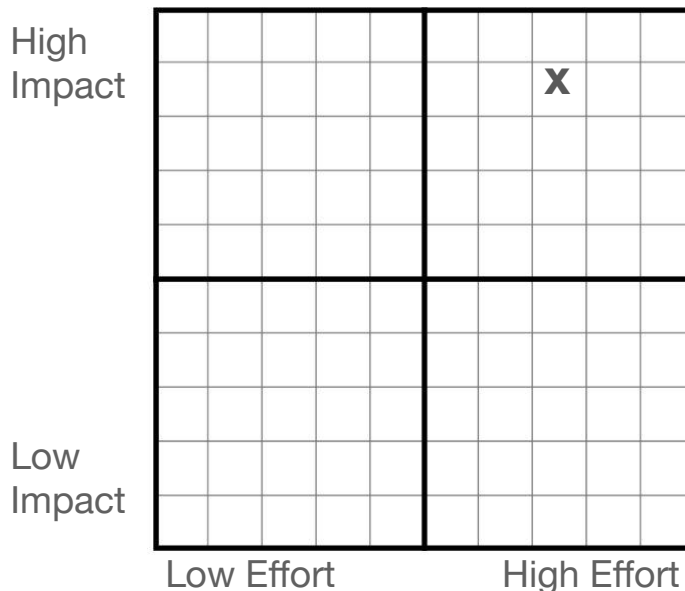


### High Impact / High Effort:

**Project** - *Global Food Distribution Networks*

**Description** - Building a global infrastructure to distribute food to regions experiencing chronic hunger or famine. This would involve partnering with governments, logistics companies, and local organizations to create an efficient supply chain for food distribution. It would require significant funding, resources, and coordination across countries and organizations.

**Reasoning** - While this project can dramatically address hunger on a global scale, it requires significant financial and human resources to ensure that food is delivered to the most affected areas. The effort involved is immense, but the impact is also incredibly high.



## Example for the Impact / Effort Diagram:

The following are examples of how four projects would fall into an Impact / Effort Diagram for a non-profit with a mission to end world hunger.

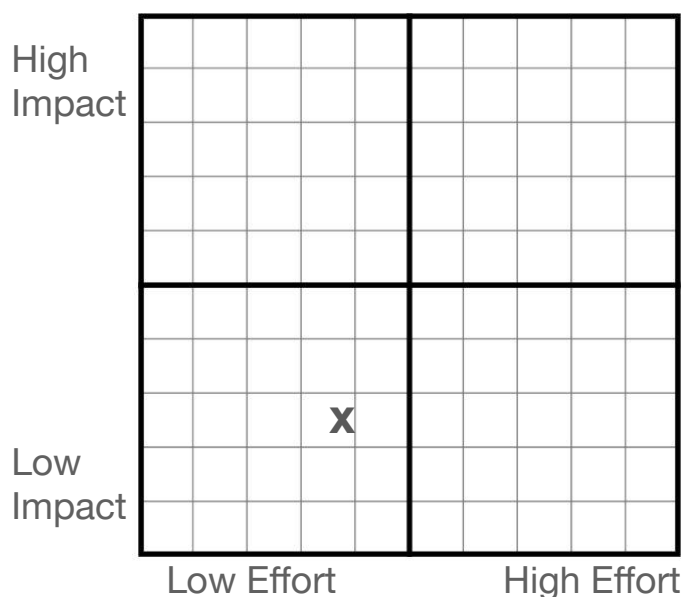
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### Low Impact / Low Effort:

**Project** - *Awareness Campaigns in Developed Countries*

**Description** - Running educational campaigns to raise awareness about hunger issues in more affluent countries. These campaigns may involve social media efforts or informational events to inform people about the challenges of world hunger and ways to contribute.

**Reasoning** - While raising awareness is important, the direct impact on alleviating hunger in underserved areas is limited. The effort to create awareness is relatively low, but the outcome is not as immediate or significant in terms of providing food security.

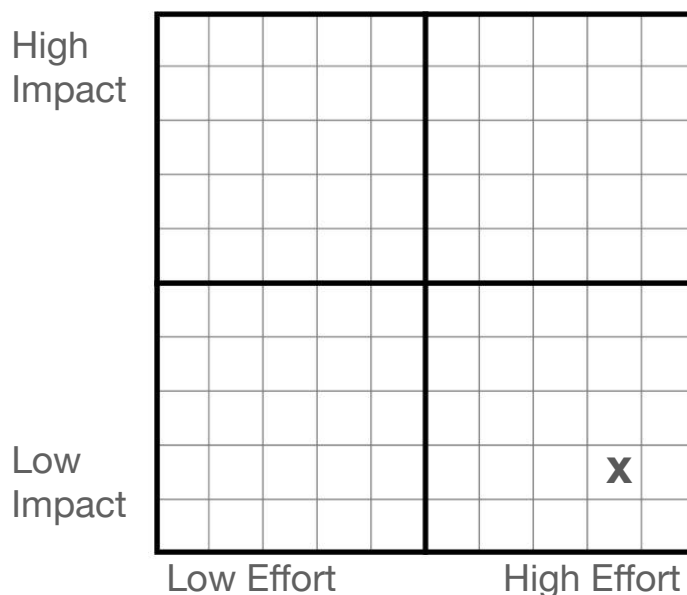


### Low Impact / High Effort:

**Project** - *Organizing Large-Scale International Hunger Conferences*

**Description** - This project would involve hosting large, international conferences focused on discussing global hunger issues, where experts, government officials, and nonprofit organizations come together to share research, policy recommendations, and strategies. The event would require significant resources to organize, such as funding for venue rental, travel costs, and accommodations for participants, along with time-intensive coordination.

**Reasoning** - While such conferences may help foster dialogue and promote awareness of hunger issues, the direct impact on alleviating hunger is minimal in the short term. The effort involved in organizing such an event is substantial, with logistics, planning, and coordination needed for a large international audience. However, unless the outcomes of the conference lead to concrete, actionable steps with sustained impact, the immediate effects on hunger may be limited.



**Project Name:**  
**Committee:**  
**Committee Priority:**

**Project Budget:**

1. How does this project add value to PWSRCAC and its members?
2. What do you anticipate will be the greatest challenge for the project to achieve success?
3. Notes:

High  
Impact


Low  
Impact

Low EffortHigh Effort

**Project Name:**  
**Committee:**  
**Committee Rank:**

1. How does this project add value to PWSRCAC and its members?
2. What do you anticipate will be the greatest challenge for the project to achieve success?
3. Notes:

High  
Impact


Low  
Impact

Low EffortHigh Effort

**Project Name:**  
**Committee:**  
**Committee Priority:**

**Project Budget:**

- 1. How does this project add value to PWSRCAC and its members?
- 2. What do you anticipate will be the greatest challenge for the project to achieve success?
- 3. Notes:

High  
Impact

Low  
Impact


Low Effort

High Effort

Item	Agenda Time	Alloted	Approximate	Approximate	Approximate	Presentation	Discussion	Questions Asked
Welcome and Role Call	8:30 AM	5	8:35					
Process / Goals & Objectives	8:35 AM	25						
Ice Breaker	8:50 AM	10		9:03				
COMMITTEE PANELS								
Information and Education Committee	9:00 AM	40	9:03	9:44	41.00			
Project 1 - Youth Involvmnt \$50,750			9:05	9:18	13	4	9	1. Point of Order. - Why is it already ranked? 2.All funds were utilized from previous year? 3. Are the projects being previously vetted, and how are these evaluated - kid engagement and response? 4. Robert participated in Homer to judge enthusiasm with kids - go participate they get excited
Project 2 - Communities in Focus \$5,000								1. Stakeholder committee to be passing up Is 5K enough to sift to get the right information? 2. Follow up is 5K enough, support the project, but why are we stopping at an excel document? Can we put this into a report? Can we add more to this into another project? 3. In Anchorage127different languages - school system may be a good reference point 4. Great idea, not enough money. Can we use better technology - AI or. language technology to translate text to make it reliable and useful 5. Define parameters to the project, with number of lines or scope to keep it in budget.
Project 3 - Fishing Vessel Program Community Outreach \$19,000			9:18	9:28	10	3.5	5.5	1. Cordova would be one to aim at. 2. Politicians joined in Cordova we should make sure they are invited what are the limitations to get a boat to Kodiak 3. Amanda said cost and weather to get their as well as regulations 4. Any opportunity to borrow state Tustumena? 5. An awesome trip to be on, there are programs like public Tv, this would be a great one to do online (TikTok). Can we get an influencer? Communication is crucial 6.Reserved about this project at first - but as I got involved realized the impact, its a great project
Project 4 - Internship \$4,000			9:28	9:38	10	3	7	1. Is it a student's degree program? How does it relate to their area of study? 2. How. much time to "babysit" the intern? What would an LTemp role consider of?
			9:38	9:44	6	1	5	3. Is there a deliverable to the board?
BREAK	9:40	10	9:45	9:56				
Port Operations &Vessel Traffic	9:50 AM	30	9:57	10:30	33 minutes			introduction or closing notes)

[illegible]

Project 3 - PWS Marine Bird & Mammal Fall & Early Winter Survey \$80,060						1. What did this year's study look like? Did it accomplish what they set out to do? Similar plots used in similar surveys, are they still doing those other ongoing surveys? 2. John mentioned last night they had a survey.
Project 4 - Dispersants \$10,000	11:01	11:05	4	3	1	
						1. To clarify this is a retainer? 2. Dr. Fingas is quite well known even among oil industry. Sub Part J is a big deal, now testing is required for understanding how dispersants actually work 3. There is a question if Correctzit would be authorized to use? 4. More toxic dispersants are being removed from inventory. Support is going away from Correctzit - but unsure what will replace it. 5. Good understanding of toxitiy is paramount for those that use it. 6. What we have heard is there will take Correctzit, add another chemical and rebrand it. 7. Question of regulation of use is in the air - efficacy was the consideration,but now toxicity is important too. 8. Sarah Allen - Online participant - lot of action on this due to fluidity and EPA and corporate considerations.
Project 5 - Assessment of Contaminant Exposure Using Transcriptomics of Mussels \$132,922	11:06	11:15	11	3	8	
						1. Are there other stressors besides hydro-carbon? 2. Online participant Sarah added commentary on the transcriptomics 3. If there is no ANS crude in the outer Kenai peninsula, will this be baseline data? Also this is the most expensive project 4. Supportive doing this, as no benefit in previous work without the analysis 5. What makes it so expensive?
Project 6a - Analysis of Ballast Water Treament Efficacy in Commercial Vessels \$85,883	11:16	11:25	9	5	4	
						1. Are people from the Smithsonian going to come out multiple times? Is most of the budget for travel and accomodations for 3-4 week stay? 2. Is anyone required to test these systems? Or do I push these buttons and assume they work? 3. Steve Lewis online - didn't say this is cross committee, but POVTS is of high interest and support this project 4. sample from the tanks or the discharge? 5. Going through all these projects - writing down what you anticipate greatest challenge would be cooperation with tankers, but what about discussion with the coast guards? 6. Any reason internal personnel could go do the sampling, and what are those challenges? 7. Efficacy of the discharge,how does that correlate with legal limit?
	11:25	11:36	11	4	7	

Project 6b - Decadal Assessment of Non-Indigenous Marine Species in SC Alaska: Kachemak Bay & Cook Inlet \$151,344			11:36	11:43	7	4	3	1. Difference in the cost from ranking sheet and presentation? Confirm 151 2. Whatever we produce as a product, the person on the street needs to understand. it 3. Does cook Inlet (CIRCAC) want to share, is there a collaboration? 4. Who funded the last decadal survey? 4. Lease areas is Kachemak, but it would be deeper water? A lot of tankers in kachemak Bay
LUNCH	11:40 AM	60	11:45					Donna and team appreciate staff with take aways from locally made in Homer.
Terminal Operations & Environmental	12:40 PM	60	12:42	1:07	25.00			
Project 1 - Maintaining the Secondary Containment Liner \$30,000			12:43	12:45	2	1.5	0	
Project 2 - Review of Tank Bottom Processing Best Practices \$35,000								1. When. you are investigating industry best practices, is it just Alyeska or others? 2. The report that was prepared. in the wake of the accident, has it been provided? Does Alyeska have a check list to see if they didnt follow thier proces? 3. In the past, process was done in west bench, but concerns about cost. Past employees cannot believe that this was moved into an active cell 4. Is there a difference in the way that they did this previously that became cheaper to current process? There are probably safety experts that can help
Project 3 - Addressing Risks & Safety Culture at the VMT \$25,000			12:45	12:52	7	3	4	1. Will Billie Garde be available to participate? I heard she was phasing out 2. Sensitive information may not be forthcoming from Alyeska, is that a possibility here? 3. Conflicting statements from people doing snow removal of tanks versus those of the terminal.
Project 4 - Air Quality Review of VMT \$30,000			12:52	12:57	5	2	3	1. Mentioned the public has raised concerns about air quality, are there specific concerns? 2. This is to help us draft a response to the concerns?
Project 5 - Timeline of VMT Tank Repairs and Inspection Intervals \$20,000			12:57	12:59	3	1	1	
			1:00	1:03	3	1.5	2	1. Are you looking for information on tank vent repairs, and if they will replace the ones they put blinds in? 2. My recollection is that they glue this, and when they repair they will weld it as they should be. Is it up to the finished standard? 3. Confirm a compound was used, that is not a permanent repair, and the next time the tank was due for inspection they. would complete the repairs.

Project 6 - Minimizing the Environmental Impacts of PFAS at the VMT \$40,000						1:04	1:07	3	1	2	1. What is the money for, is a contractor doing this? 2. Do you have any idea how much of fff they used over. there. Any idea of how much might have been used?
Break	1:40 AM	10	1:07	1:17							
Oil Spill Prevention and Response	1:50 AM	30	1:18	1:48	20.00						Protected projects reminder for OSPR,
Project 1 - Improving Oil Spill Trajectory Modeling in Port Valdez \$40,000											1. Earlier on during SAC the issue was to use disperssants or focus on mechanical recovery, is this part of oil dropping below and resurfacing? 2. This is mostly in the port, is there more data for the rest of the sound or is to specific areas? 3. More background - Oil Map, there was only one person who could manipulate the algorithms to. show the oil flowing where it actually is going.
						1:24	1:29	5	2.5	2.5	
Project 2 - Port Valdez Weather Buoy Data Analysis 2024 & 2025 \$18,000											1. What are the expectations of changing any of these scenarios with our bouys? 2. As part of ground truthing a historical spill indicates that oil moves with the tides, moves east and west.
						1:30	1:35	5	1	4	
Project 3 - Meeting with SERVS Fishing Vessel Program Representatives \$19,000											1. Donna put in plug for this project with story of engagement with fishermen. Wish there was a way to do this with Alyeska employees, finding less employees coming to speak with pwsrcac. this is a great project 2. 6 different ports - you may have mentioned where they were, but I wasn't listening
						1:35	1:38	3	2.5	0.5	
Closing Comments	2:20 PM	10	1:48	1:58							
Project Insights Q&A	2:30 PM	30									Handful of participants stayed and engaged with committee
room. cleared by 2:46											
								Average Project	7.17		
								Average	2.87		
								Average	4.17		

**Closing comments**  
Jim added commentary at the end for budget decisions based on project dollar value versus impact.  
Joe - added commentary to toem and ospr projects - request for secondary review was put forth to AEDC for approval that may impact projects presented today  
Question to ask if we can see the positive brainstorm notes we did in the beginning  
Steve - had a plea for board to engage within the committees, to gain further understanding of the projects  
Many Thanks to Hans for doing all the IT  
Read out positive comments brainstorm with claps and cheers

**PGS Notes from Conversations**

Mako - really appreciated the impact effort diagram

dorthy - try to put the scores out by group and then rated, so it is spread out. felt that this project was

Jim - would be helpful to engage an ad hoc committee for strategic planning for big picture 5 year plan with

Robert - likes the grid and notes page for refernece later in evaluation

Amanda - appreciated the changes in the brainstorm (if it had to be done.)

Joe - Like the change to time, and the notes impact /effort diagram - have been using it

Jim and Donna. - consideration of budget in point allocation, do people give less points to projects with less funding?

### **Online Participation**

Initial online participants: Sarah, matt, Angela, Steve

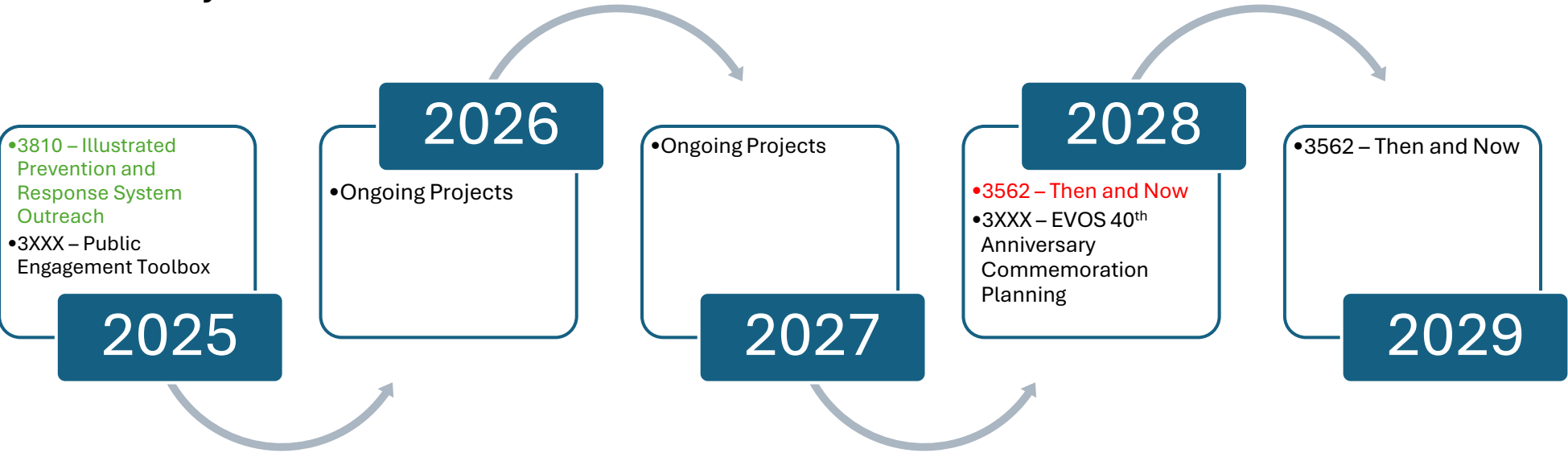
Angela joined waiting room to be admitted at 10:24

david goldstein joined online at 11:35

# Information and Education Committee (IEC)

Mission statement: “The Information and Education Committee (IEC) supports the Council’s mission by fostering public awareness, responsibility, and participation through information and education.”

## Five-Year Project Plan



### 3-Year Strategic Initiatives

- Initiative 1
- Initiative 2
- Initiative 3
- Initiative 4

**PGS Notes:** This is an example to consider if a 3-year board driven strategic initiative is developed, listing them on the slide deck with color-coded indicators for projects would be helpful to tie projects to initiatives.

## Ongoing Projects

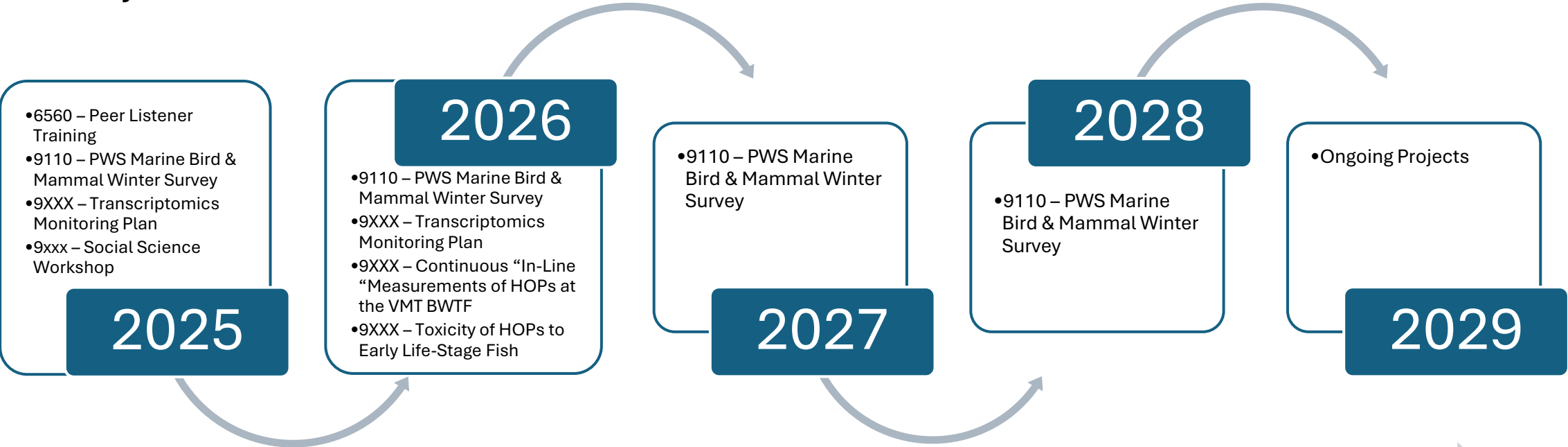


\* Indicate a project is protected or the funds are already committed.

# Scientific Advisory Committee (SAC)

Mission statement: “Scientists and citizens promoting the environmentally safe operations of the terminal and tankers through independent scientific research, environmental monitoring, and review of scientific work.”

## Five-Year Project Plan



## Ongoing Projects

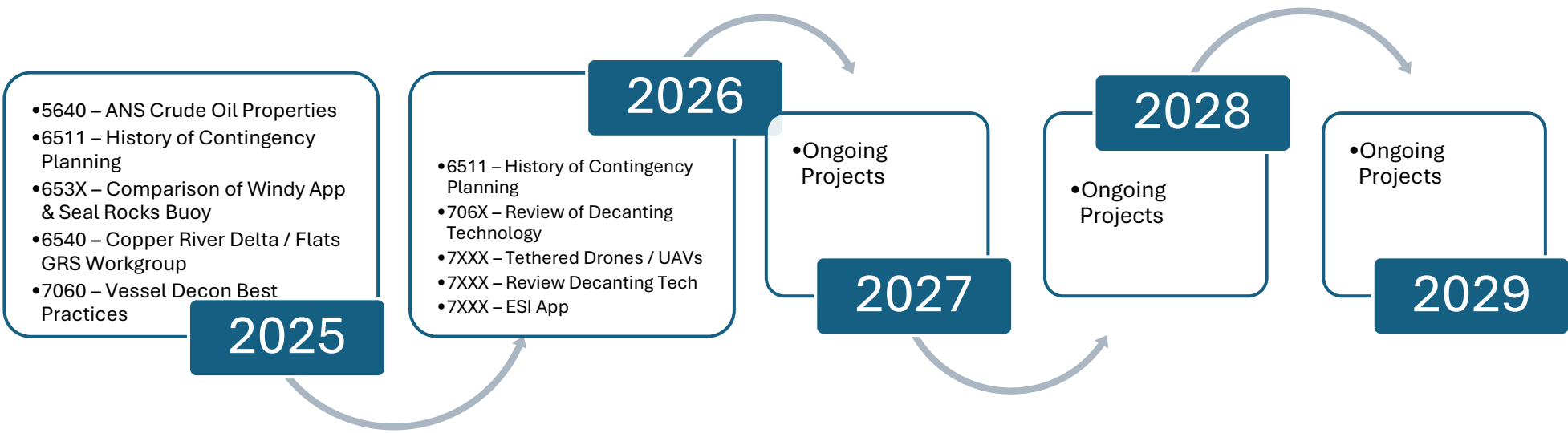


\* Indicate a project is protected or the funds are already committed.

# Oil Spill Prevention and Response Committee (OSPR)

Mission statement: “The Oil Spill Prevention and Response (OSPR) Committee works to minimize the risk and impacts associated with oil transportation through research, advice, and recommendations for strong and effective spill prevention and response measures, contingency planning, and regulations.”

## Five-Year Project Plan



## Ongoing Projects

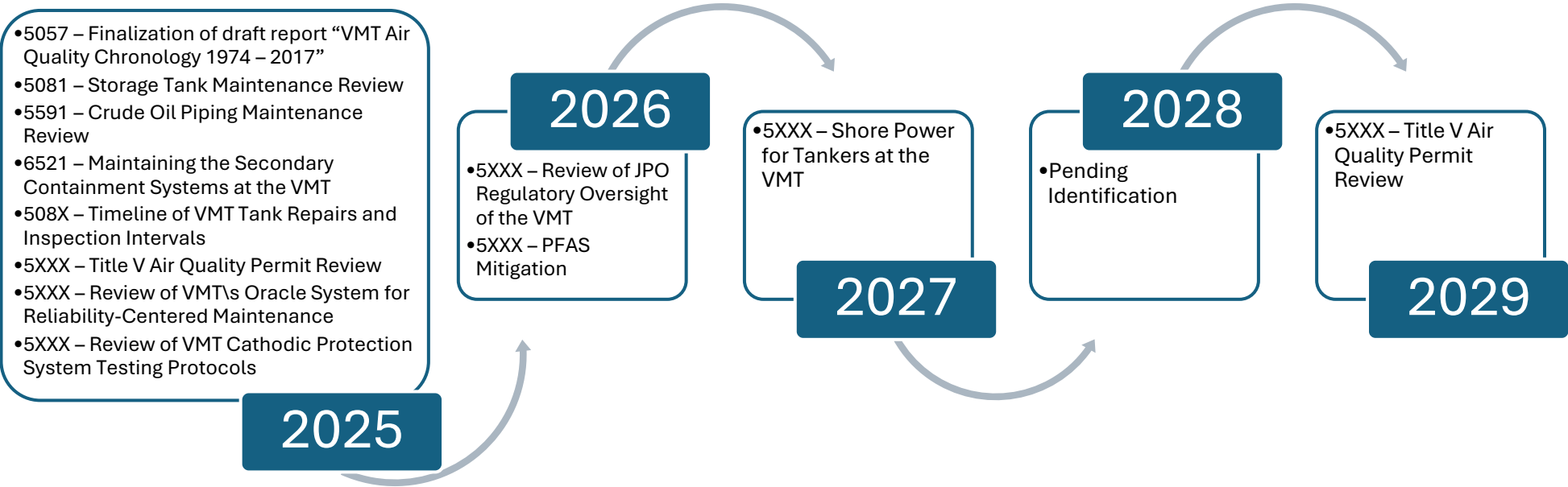


\* Indicate a project is protected or the funds are already committed.

# Terminal Operations and Environmental Monitoring Committee (TOEM)

Mission statement: “The Terminal Operations and Environmental Monitoring (TOEM) Committee identifies actual and potential sources of episodic and chronic pollution at the Valdez Marine Terminal.”

## Five-Year Project Plan



## Ongoing Projects

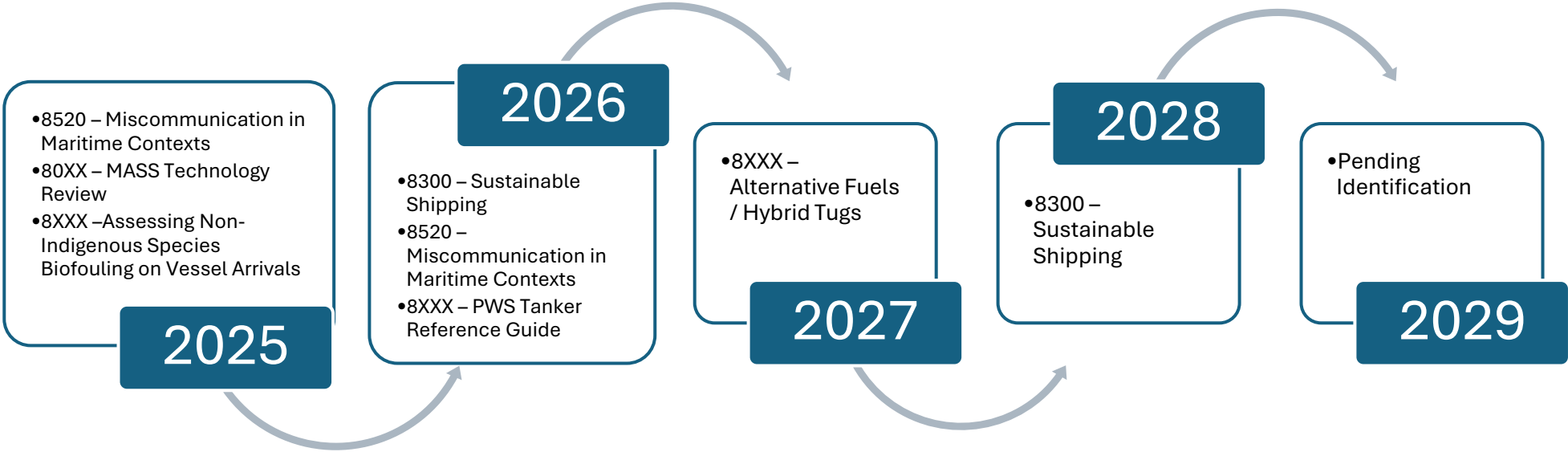


\* Indicate a project is protected or the funds are already committed.

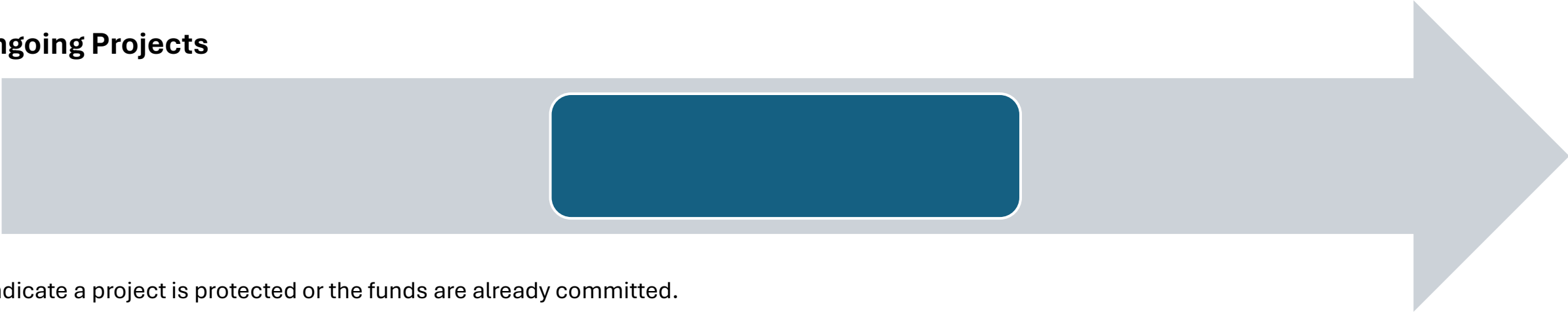
# Port Operations and Vessel Traffic Systems Committee (POVTS)

Mission statement: “The Port Operations and Vessel Traffic Systems (POVTS) Committee monitors port and tanker operations in Prince William Sound.”

## Five-Year Project Plan



## Ongoing Projects



\* Indicate a project is protected or the funds are already committed.

## Briefing for PWSRCAC Board of Directors – January 2025

**ACTION ITEM**

**Sponsor:** Ashlee Hamilton, Director of Finance  
**Project number and name or topic:** FY2024 Form 990 (Return of Organization Exempt from Income Tax)

1. **Description of agenda item:** Review and approve filing of the FY2024 Form 990, required by the Internal Revenue Service (IRS) on or before May 15, 2025.
2. **Why is this item important to PWSRCAC:** Because of its tax-exempt status, PWSRCAC is required to submit a Form 990 annually, which provides financial and other information to the IRS. Once submitted, the form becomes public information. Failure to file the form in a timely and accurate manner may result in the loss of PWSRCAC's tax-exempt status.
3. **Previous actions taken by the Board on this item:** The Board has approved submission of the Form 990 annually since 2010.
4. **Summary of policy, issues, support or opposition:** Because the Board of Directors is responsible for the financial affairs of PWSRCAC, directors should review information on the Form 990 prior to submission. Part VI, Section A of the form requires PWSRCAC to describe the process by which the Finance Committee and Board of Directors review the form before it is sent to the IRS. In addition to the financial information on the form, there is information about the organization's activities and governance policies, and the Board should ensure that this information is correct.
5. **Committee Recommendation:** The Finance Committee will review the draft IRS Form 990 at its January 14 meeting and deliver its recommendation at the January Board meeting.
6. **Action Requested of the Board of Directors:** Authorize the Executive Director to sign the Form 990 on behalf of PWSRCAC and submit it to the IRS on or before May 15, 2025.
7. **Alternatives:** None recommended.
8. **Attachments:** A draft copy of the Form 990 will be made available to Board members only at the meeting for review. Once the form is approved and submitted, it will be made available on PWSRCAC's main website, [www.pwsrcac.org](http://www.pwsrcac.org).



## PRINCE WILLIAM SOUND REGIONAL CITIZENS' ADVISORY COUNCIL

**January 2025**

**Status Report**

As of December 13, 2024

### **Exxon Valdez Oil Spill – 35th Anniversary**

Project Manager Amanda Johnson, Outreach Coordinator Maia Draper-Reich, and Director of Communications Brooke Taylor coordinated efforts (online, in print, and in-person) to honor the 35<sup>th</sup> anniversary of the Exxon Valdez oil spill. No official project was funded; however, staff used the opportunity to showcase the Council's mission in a variety of ways. A summary of these activities was shared at a recent IEC meeting, and is available online here: <https://tinyurl.com/EVOSupdate35th>. Note that list was current as of late February. Please contact Amanda Johnson for a final list.

### **3100 – Public Information Program**

**Objectives:** Inform members of the general public, member entities, and agency and industry partners of PWSRCAC projects. Support legal requirements for ongoing updates to the public.

**Accomplishments since last report:** Staff continues to inform the general public and others about PWSRCAC's projects and mission through publications and online presence.

### **3200 – The Observer**

**The Observer:** The Council's newsletter, *The Observer*, is produced three times per year in both print and email format. Individual articles are posted to the Council's website. Over 700 folks are subscribed to the email edition, approximately 2000 print copies are mailed to subscribers, and around 250-300 copies of each edition are given out either at the Council's information booth or other events.

Fall/Winter 2024 edition: <https://www.pwsrcac.org/document/the-observer-fall-winter-2024/>

Full archive: [www.tinyurl.com/ObserverArchive](http://www.tinyurl.com/ObserverArchive)

### **3300 – Annual Report**

**Objectives:** Prepare and publish PWSRCAC's Annual Report each year to:

1. Inform the general public, member entities, and agency and industry partners of PWSRCAC projects and activities; and
2. Support legal requirements for ongoing updates to the public.

**Accomplishments since last report:** The latest annual report (July 2023-June 2024) was completed and released. It has been posted to our website and copies distributed to our mailing list. It has since been available at our booth events as well.

### 3410 – Fishing Vessel Program Community Outreach

**Objectives:** For bringing the realities of oil spill response tactics, equipment, and planning to life for citizens within the Exxon Valdez oil spill region communities, the fishing vessel community outreach program is a perfect venue. Each fall and spring SERVS holds its contracted fishing vessel program training in the following communities: Cordova, Valdez, Whittier, Seward, Homer, and Kodiak. The on-water portion of the training, viewed by the public during this outreach tour in partnership with Alyeska/SERVS, shows real-time capabilities of oil spill prevention and response equipment and tactics. This project contracts a local tour boat that will allow interested students, members of the public, and media to observe and learn about oil spill prevention and response.

**Accomplishments since last report:** The FY2025 tour took place in Whittier on Monday, September 30<sup>th</sup>. Overall, the tour went extremely well. Included in this status report are a description of the event, event details, and some example feedback comments.

**Event Description:** We had 96 passengers on board to spend time viewing the different training components in Shotgun Cove. Then we traveled to nearby Pigot Bay to discuss Geographic Response Strategies. Narration was provided by Mike Day and Kate Dugan of Alyeska and Jeremy Robida and Maia Draper-Reich of PWSRCAC staff. All PWSRCAC staff and volunteers on board engaged in informal education such as explaining props and otherwise connecting with attendees about our work.

The Stan Stephens Vessel transited from Valdez which allowed some of our staff, Alyeska staff, and the KVAK media representative to travel from Valdez for the day. It was perfect weather and the tour group saw killer whales in Passage Canal close to Whittier, which was incredible and a rare sighting for that area.

**Attendees of Note:** Alaska State Senator Cathy Giessel, ADEC Commissioner, Deputy Commissioner, and Spill Prevention and Response (SPAR) Division director as well as a few other ADEC staff (including our Ex Officio member Ytamar Rodriguez). Attendees from other Council partners included PWS Stewardship Foundation, Alaska Geographic, ADF&G, U.S. Fish and Wildlife Service, U.S. Forest Service, and U.S. Coast Guard.

**Media Coverage:** Because Whittier is the community with easiest access from Anchorage, Brooke Taylor did reach out to Anchorage and PWS media outlets. We ended up having attendance from Alaska's News Source (KTUU/Channel 2) and ABC/Fox (Channel 13) as well as KVAK from Valdez. She gave and facilitated interviews and all three outlets published stories:

- Alaska's News Source: [Whittier fishing vessels trained as "backbone of spill prevention" in Prince William Sound](#)
- ABC/Fox: [Whittier Oil Spill Training Tour](#)
- KVAK: [Fishing Vessel Training](#)

**Youth Engagement:** One of our goals for this iteration of the tour was to develop youth engagement activities.

- Voices from the Spill: On board, we had a version of Kate Morse's Voices from the Spill activity which we have facilitated previously on the Youth Involvement Bligh Reef Expedition Boat tour.
- Scavenger Hunt Activity: Maia also created, with encouragement from Andrea Korbe, a scavenger hunt style worksheet for middle and high school age students.
  - This worked very well with the 26 middle school and high school students on board.

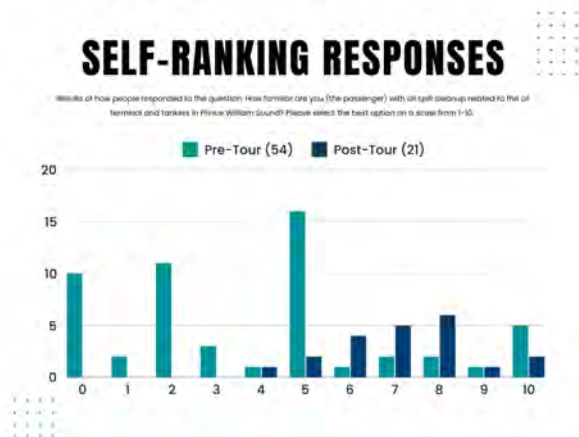
- The activity had the students speak to adults on board to ask questions, which their teacher informed Maia was a highlight for the students when they reflected after the tour:
  - From Whittier teacher Jennifer: "Once we got back to school, we had the students reflect on what they learned and what they thought was cool. They had some great answers. Many were impressed by the spill response training. For others, it was the first time they had ever seen Whittier from a boat, which made the day special for them. And the orcas certainly didn't hurt! Multiple kids also reflected that they appreciated the scavenger hunt and that it made it ok for them to go and talk with adults. Often, teenagers want to engage but don't always know how to break through the barriers. Your activity was perfect for helping them to connect to multiple adults on board the boat."
  - We also received handwritten thank you notes from the Whittier students.

**Post-Tour Survey Responses:** We received 21 responses through the short online form post-tour survey. This was shared on the boat over the microphone and with posted QR codes and through emailing the survey link to attendees the day after the tour.

In both the sign-up form and the post-tour survey, we asked the question: *How familiar are you with oil spill cleanup related to the oil terminal and tankers in Prince William Sound? Please select the best option on a scale 0-10.*

- ☐ 0 - I know nothing
- ☐ 1
- ☐ 2 - I know a little bit, but not very much
- ☐ 3
- ☐ 4
- ☐ 5 - I probably know more than the average person in my community
- ☐ 6
- ☐ 7
- ☐ 8 - This is an important topic to me; I know a lot!
- ☐ 9
- ☐ 10 - I work in the field or am an expert

Here are the responses from the sign-up form and post-tour survey.



## SELF-RANKING AVERAGES

**Pre-Tour Average Response:**  
3.93

**Post-Tour Average Response:**  
7.14

These numbers came from adding all the responses and then dividing by the amount of people who responded for each respective survey.

We asked two open-ended questions in the post-tour survey. Select responses are included here:

- *Overall, what was your impression of the tour on September 30?*
  - "Very well put together and organized. The information provided was also super helpful and "basic" enough that someone who didn't [know] much about any of it really understood what was going on and why."
  - "It was a wonderful tour! Very informative and it really opened my eyes to how much work is done to prevent oil spills."
  - "Really awesome opportunity to engage with locals involved with recreation in the sound - great approachable information as well. SUPER NICE boat."
  - "I'm grateful for the opportunity to participate. The tour helped bring to life different aspects of spill response on PWS."
- *Please share something interesting or important you learned about preventing impacts from oil spills.*
  - "It was helpful to see the fishing (response) vessels and oil spill collection equipment on the water to put into perspective the amount of resources that would be required to adequately respond to a large spill."
  - "The importance of the work the fishing fleet can play in spill response can't be overstated."
  - "I learned that the trainings provided help instruct the vessel crew about personal safety regarding oil exposure; I also learned about the location specific precautions such as identifying salmon streams, specific boom line length needed, and possible bear encounters."
  - "Watching what each of the different vessels contributes"
  - "I found the Geographic Response Strategies my favorite section, as I'm most interested in how the oil changes the ecosystem and surrounding area."

We also gathered a total of **45 Observer email sign ups** through the sign-up form, posting the Observer subscription link and QR code throughout the tour, and our follow up email.

**FY2025 FVPCO tour photos by Cathy Hart:**







### 3500 – Community Outreach Program

**Objectives:** Increase awareness of PWSRCAC and increase communications with member organizations and communities in the Exxon Valdez oil spill region.

#### Accomplishments since last report:

- **September 10** – Presentation on EVOS/PWSRCAC for [Overfix Ambiental](#), Paranaguá, Brazil
  - This group reached out for an online virtual presentation following a conversation at the International Oil Spill Conference.
- **September 18** – Become a Master of Disaster, Kodiak, AK
  - Hosted at the Kodiak Fisheries Research Center, Kodiak youth and their caregivers experienced seven interactive learning stations on oil spill and marine science topics. Activities run:
    - Oil Spill Clean Up
    - Wildlife Rescue
    - Wind and Waves
    - Build Oil Molecules
    - Where Does Oil Come From?
    - Microscopes: Observing Plankton in Seawater
    - Green Crab Attack
    - Reflection Activity
  - Council volunteers Aimee Williams, Wayne Donaldson, and Cathy Hart along with staff and Youth Involvement contractors Switgard Duesterloh and Patrick Stewart staffed the interactive activities.
  - This was the first iteration of this September Board meeting-associated outreach event in many years due to the COVID pandemic.



*Participants at various activity stations during the Kodiak Become a Master of Disaster event.*

- **September 19** - Kodiak Public Reception, Kodiak, AK
  - Also hosted at the Kodiak Fisheries Research Center, Council Board, volunteers, and staff gathered with partners and members of the Kodiak community to visit over food and drinks.
  - Attendees could also enjoy the exhibits and touch tank of the aquarium space.



*Scenes from the Kodiak Reception. Photos by Nelli Vanderburg.*

- **September 30** - Fishing Vessel Program Community Outreach tour, Whittier, AK
  - See full report in FVPCO project status report in this packet.
- **October 10** - Presentation to PWS College students, Valdez, AK
  - Maia Draper-Reich presented via Zoom to students in the Outdoor Leadership program about the Council, EVOS history, and our work.
  - This is a presentation requested annually by PWS College.
- **November 20-22** - Pacific Marine Expo, Seattle, WA
  - Board member Jim Herbert and Maia Draper-Reich traveled to cohost a booth with CIRCAC at this expo event for Pacific fisherman and other maritime professionals.
  - ~300 people stopped by the booth.
- **December 5** - Science Night, Anchorage, AK
  - Science topics relevant to the Council's work and region were presented in person and via Zoom. This year's event theme was *Staying Alert & Proactive in the Exxon Valdez Oil Spill Region*.

- The ~127 attendees included board members, volunteers, staff, partners, and other invitees that attended in person and via Zoom. This year, the audience included attendees at partner-facilitated watch parties in Cordova, Homer, and Valdez with good attendance and excitement to host again next year.

### 3530 – Youth Involvement

**Objectives:** Select proposals for youth activities, in collaboration with partner agencies and organizations throughout the Exxon Valdez oil spill region. Coordinate activities to facilitate hands-on learning about topics related to the Council's mission. Where appropriate and feasible, participate in mission-relevant youth activities.

**Accomplishments since last report:** The Information and Education Committee received and reviewed eight project proposals on the RFP released during October-November 2024. Final award announcements will be made by January 31, 2025.

Five contractors completed their summer project's final reporting requirements this fall (by September 30, 2024):

- Alaska Geographic – *Blackstone Bay Marine Stewardship Youth Expedition*
- Alaska Geographic – *Prince William Sound Teacher Course June 2024*
- Copper River Watershed Project – *Bligh Reef Expedition*
- Kenai Mountains-Turnagain Arm National Heritage Area – *Expanding Access to Equitable Outdoor Youth Education*
- Wrangell Institute for Science and Environment – *Copper River Stewardship Program*

Three contracts are currently underway for projects happening during the 2024/2025 school year:

- Alaska Marine Conservation Council/Kodiak Ocean Science Discovery Program – *Kodiak Marine Ecosystems Lessons & Collaborative Outreach*
- Center for Alaskan Coastal Studies - *Elevating Student Advocates & Educators through Afterschool Leadership*
- Kenai Mountains-Turnagain Arm National Heritage - *Expanding Access to Equitable Outdoor Education*

One school year project is currently still in the contracting process:

- Alaska Maritime National Wildlife Refuge - *"Tiġlax in the Bay" School Program*

### 3600 – Public Communications Program

**Objectives:** This program disseminates information and increases awareness through the Observer newsletter and the Council's online presence. This work helps publicize information generated from the Council's technical committee projects. Project results and information are disseminated in a format that is easily understood by the general public.

This program funds training for the Public Communications Project Manager to maintain knowledge of the latest technology and best practices for public communication. Recently attended trainings include: Nonprofit Technology Networks' course on AI, Google Analytics and Google's Looker Studio (software for creating dashboard reports on website analytics), search engine optimization, and introduction to U.S. Census' online database.

**Nonprofit Technology Network conference:** Project Manager Amanda Johnson is preparing to attend the upcoming Nonprofit Technology Network Conference in Baltimore, Maryland, in April 2025. Details about the conference: <https://www.nten.org/gather/ntc>.

### 3610 – Web Best Available Technology

**Objectives:** This project helps ensure the Council's websites and web presence using the best and most up-to-date technology available by funding new features, repairs, and upgrades to the Council's websites. This includes regular maintenance and technical upgrades as well as upgrades to such aspects as user experience and branding.

**Website data:** Website usage for [www.pwsrcc.org](http://www.pwsrcc.org) is tracked through Google Analytics for information such as numbers of visitors, location of visitors, how visitors found the site, which pages are visited most often, how much time is spent on particular pages, whether visitors were engaged enough to visit more than one page and much more. A dashboard report with some basic information is available here: <https://lookerstudio.google.com/reporting/5acb0b03-619c-4b0d-ae5b-e13edeb08a50> Please contact project manager Amanda Johnson if you have questions or need additional details.

### 3810 – Illustrated Prevention & Response System Outreach

**Objectives:** Work with artist and author Tom Crestodina to develop artwork for a book and other materials showcasing the oil spill prevention and response system in Prince William Sound.

1. Educate stakeholders and the general public about the importance of spill prevention and response, why the PWS prevention/response system is one of the best in the world, and how it can be kept that way.
2. Create new work partnerships with industry and regulators, similar to how groups collaborate during the fishing vessel training community outreach tours.

**Accomplishments since last report:** Staff collected input and edits from the project team and industry on the draft materials and is now working to edit the text to the appropriate reading level. Work with Crestodina is planned to start up again in the spring, after he completes other commitments. The tentative plan is to finish the book at that time and go to print by summer 2025.

### 5000 – Terminal Operations Program

**Objectives:** The goal of the Terminal Operations and Environmental Monitoring (TOEM) Program is to prevent hazardous liquid spills and minimize the actual and potential environmental impacts associated with the operation and maintenance of the Valdez Marine Terminal.

#### **Accomplishments since last report:**

**VMT Projects and Maintenance Monitoring:** The Council continues to follow up for additional information from regulatory agencies on oversight of tank bottom processing, in response to the tank bottom processing fire that occurred in August 2023 in an active dike cell.

**Outstanding Requests for Information and Responses to Recommendations:** Council staff continue to maintain a track record of all information requests made from 2021 to present. There are several outstanding requests for information needed to complete FY25 projects that, as of December 12, 2024, have not yet been received.

**Tank Vent Damage Monitoring:** Taku Engineering, LLC made further refinements to their report, titled "2022 Tank Pressure/Vacuum Pallet Damage: Crude Oil Storage Tank Headspace Gas Assessment." This report was drafted in response to Alyeska's October 2023 request for additional information related to Taku Engineering's calculations.

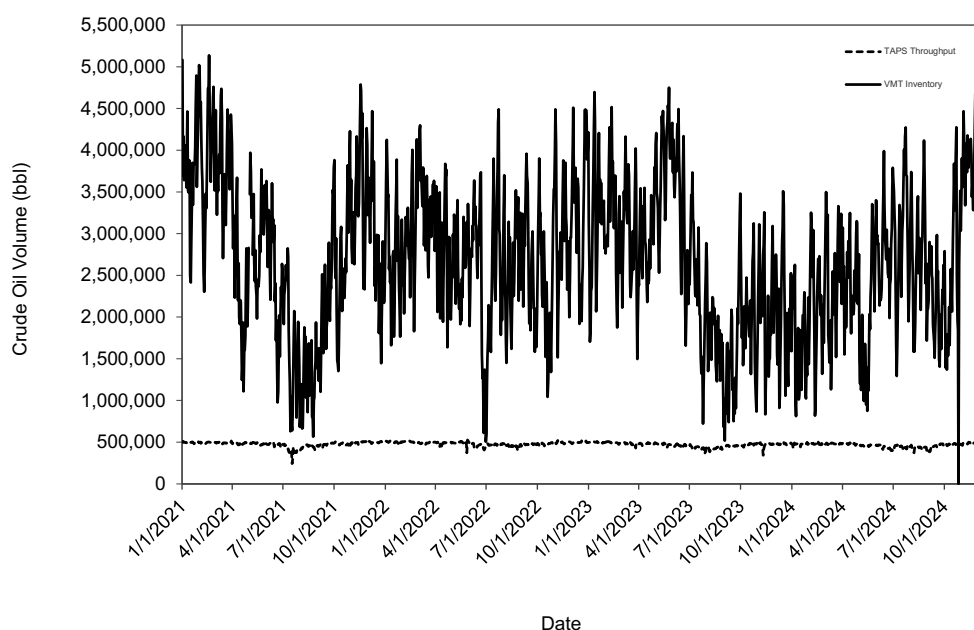
In PWSRCAC's November 3, 2023 response letter, we asked how Alyeska would like to proceed: either by scheduling a meeting mid-December 2023 for a presentation on Taku Engineering's calculations and assumptions, or by providing the outstanding information needed so that the model and report can be refined appropriately. At this time, the Council has not received a response to our November 3, 2023 letter.

This report was recommended by TOEM in October 2024 to be accepted by the Board for their approval at the January 2025 Board meeting.

**Attachments:** Graphs depicting a variety of data related to the operation and environmental impacts of the Valdez Marine Terminal.

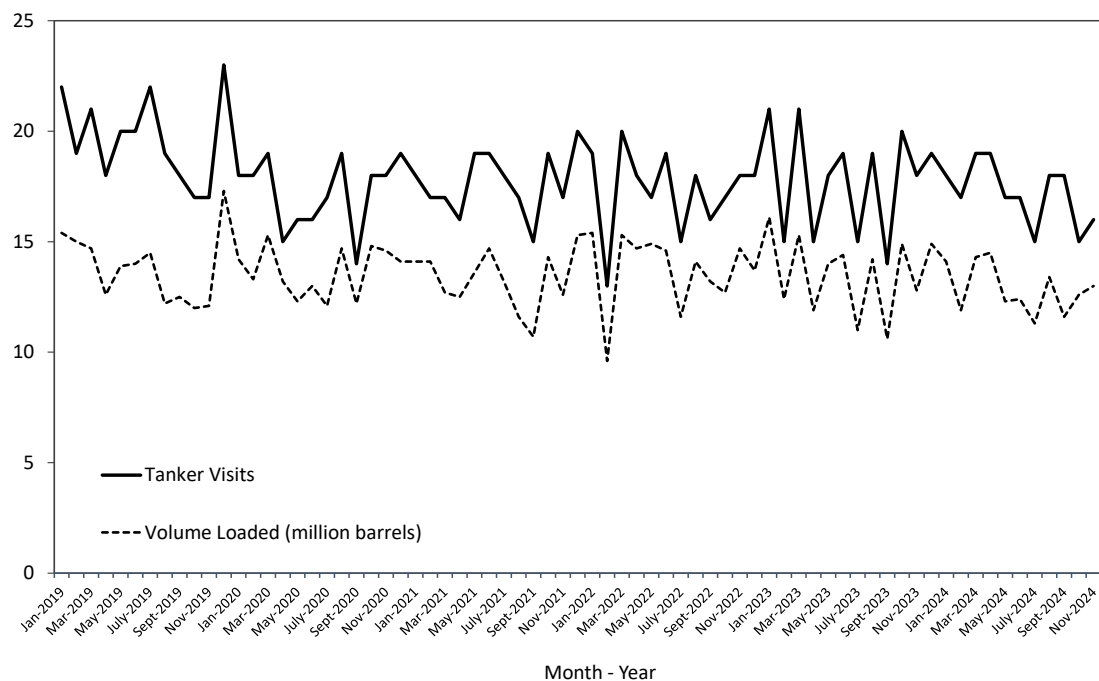
### Daily Oil Inventory at the Valdez Marine Terminal and Trans-Alaska Pipeline Throughput

(Source: Alaska Department of Revenue - Tax Division, <http://tax.alaska.gov/programs/oil/production.aspx>)



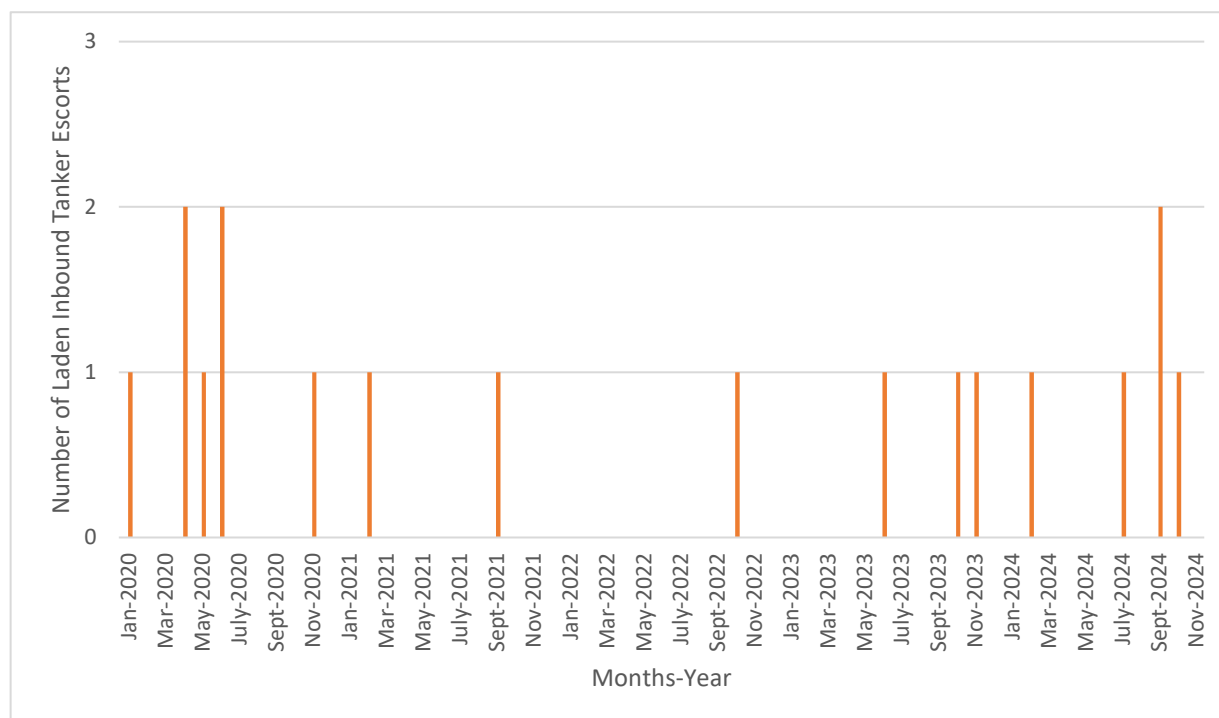
### Number of tanker visits and crude oil volume loaded onto ships from VMT

(Source: Alyeska Pipeline Service Company. Partitioned by VMT vessel arrival date.)



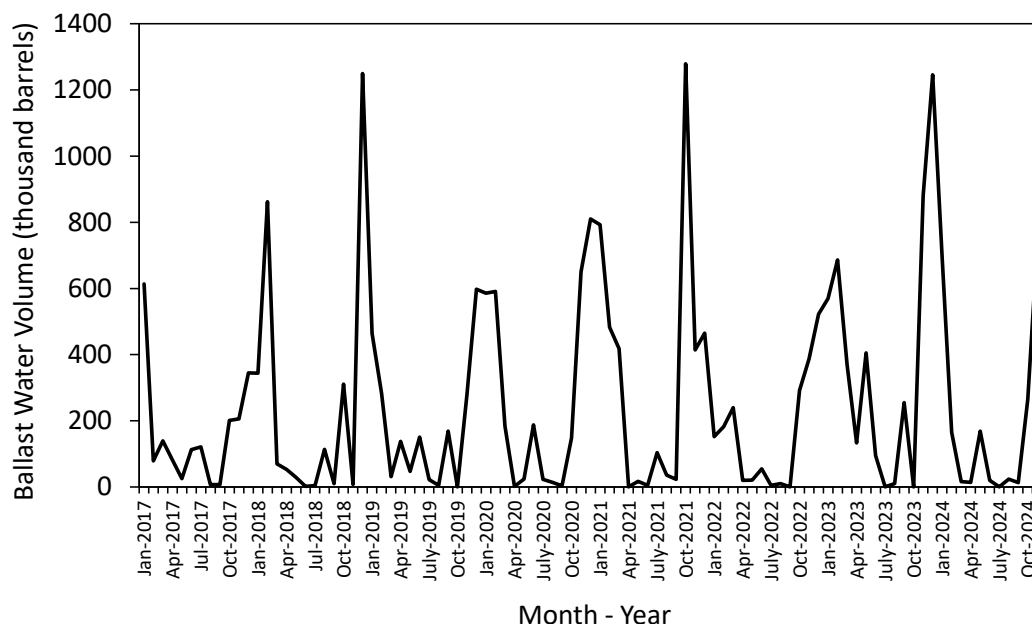
### Inbound laden tanker escorts to VMT

(Source: Alyeska Pipeline Service Company. Partitioned by VMT vessel arrival date.)



### Monthly ballast water deliveries to Ballast Water Treatment Facility from tanker ships

(Source: Alyeska Pipeline Service Company. Partitioned by VMT vessel arrival date.)



#### 5051 – Water Quality Review of VMT

**Objectives:** This project entails a review of 2018-2023 water quality data. The goal of this project is to ensure the terms of the Valdez Marine Terminal's water quality permit minimize the environmental impact of wastewater effluent discharged from the facility.

**Accomplishments since last report:** Fjord & Fish Sciences, the contractor for this project, has reviewed the draft permit and is currently awaiting ADEC's release of the water quality permit for public comment.

#### 5053 – Addressing Risks and Safety Culture at Alyeska's VMT

**Objectives:** This project will provide a retainer to Billie Garde to provide support to assist the Council in tracking and implementing recommendations identified in the Council-sponsored report, "Assessment of Risks and Safety Culture at Alyeska's Valdez Marine Terminal."

**Accomplishments since last report:** A report is expected in early 2025 from the Government Accountability Office (GAO) on their review of federal and state oversight of the Valdez Marine Terminal. Staff has been following up and consulting with Billie Garde on her recommendations from her 2023 assessment. She is also assisting staff on Process Safety Management information, Alaska Occupational Safety and Health (AKOSH) investigation, human factors in safety management, and developing a protocol on how to handle information received from concerned employees.

#### 5057 – Air Quality Review of VMT

**Objectives:** This project ensures that Alyeska is mitigating and reducing sources of air pollution at the VMT which may pose adverse environmental and health impacts on residents of Valdez. The goal of this project is to provide actionable, clear, and specific recommendations to advance efforts to reduce sources of air pollution at the VMT.

**Accomplishments since last report:** Ron Sahu, PhD, the contractor for this project, reviewed available documentation related to the 2022 tank vent damage incident to assess the feasibility of calculating emissions estimates. Dr. Sahu determined that a conservative assessment could be made, and presented to the TOEM Committee and EPA staff, both from Region 10 and EPA's Office of Air Quality Planning and Standards. A draft report has been completed and is currently under review by the TOEM Committee.

#### 5081 – Crude Oil Tanks 7 and 2, and Ballast Water Tank 94 Maintenance Review

**Objectives:** This project would entail performing a technical review of the maintenance of crude oil storage Tank 7 and ballast water storage Tank 94 at the Valdez Marine Terminal. Both Tank 7 and Tank 94 underwent comprehensive internal inspections in 2021. The last time Tank 7 underwent a similar internal inspection was in 2008, and Tank 94's last internal inspection occurred in 2012. The 2021 internal inspections of both tanks will result in a large amount of new information pertaining to the past, current, and future maintenance of each storage tank. Additionally, since their last internal inspections were completed back in 2008 and 2012, Alyeska has gathered and maintained other information, such as cathodic protection system testing records and external inspection results pertinent to the maintenance of Tanks 7 and 94. The new information generated from the 2021 internal inspections and the other, older information must all be considered to continue to safely maintain each of these tanks. This project is necessary to ensure that Alyeska is using industry best practices and considering all the pertinent information in the decisions they make to safely maintain both tanks, now and in the future.

**Accomplishments since last report:** Taku Engineering, the contractor for this project, completed a review of the preliminary documentation available. Further information was requested from Alyeska on August 27, 2024; these requests are still outstanding.

#### 5595 – Review of VMT Cathodic Protection System Testing Protocols

**Objectives:** This project funds a review of cathodic protection system testing protocols at the Valdez Marine Terminal (VMT). The goal of this project is to ensure cathodic protection data is being collected in a manner consistent with the Association for Materials Protection and Performance (AMPP) protocols to have an accurate assessment of current cathodic protection levels of steel structures at the VMT.

**Accomplishments since last report:** The TOEM Committee reviewed six proposals submitted in response to an RFP issued in November 2024. A contractor will be selected in the coming weeks.

#### 5591 – Crude Oil Piping Maintenance Review

**Objectives:** This project involves a technical review of the internal inspections of crude oil piping that occurred at the Valdez Marine Terminal (VMT) from 2016 through 2018, and a follow-on inspection of the buried crude oil relief piping that occurred in 2022. The goal of this project is to ensure that the

crude oil piping at the VMT is maintained using industry best practices, such that the risks of a spill are minimized.

**Accomplishments since last report:** The Council requested the necessary information to complete this report in June 2023. The information has not been received as of December 12, 2024. This project is being deferred.

#### 5640 – Alaska North Slope Crude Oil Properties

**Objectives:** This project entails analyzing the physical and chemical properties of Alaska North Slope (ANS) crude oil and interpreting how those properties would impact the effectiveness of oil spill response measures including mechanical recovery, in-situ burning, and dispersants. A crude oil sample will be obtained then sent to a laboratory for physical and chemical analysis. That data will be reviewed by a spill response subject matter expert to interpret how the oil's chemical and physical properties would influence various spill response techniques.

**Accomplishments since last report:** On April 16, 2024, the Prince William Sound Response Planning Group shipped an ANS crude sample to Dr. Robert Faragher of Environment and Climate Change Canada (ECCC) to perform an analysis of the current properties of ANS crude oil. ECCC has agreed to perform this testing free of charge to PWSRCAC. Some testing has already taken place, but the completion of test and resulting report is expected 6 to 9 months from the date that they received the sample. This project is still ongoing, however ECCC recently contacted us about the possible need to extend the timeframe until potentially February 2025. Once we receive the analysis, we will contract with Dr. Merv Fingas to write a report on the findings of the analysis.

#### 6000 – Oil Spill Response Program

**Objectives:** Through this program, PWSRCAC develops positions and recommendations on oil spill response technologies; reviews state and federal contingency plans (c-plans) and plan-related issues; promotes compliance, enforcement, and funding of existing environmental regulations; and promotes the incorporation of local knowledge of sensitive areas into contingency planning.

##### **Accomplishments since the last report:**

**Alaska Regional Response Team (ARRT):** General information on the ARRT can be found [HERE](#), and meeting summaries and presentations can be found [HERE](#). The next ARRT meeting is scheduled for March 5-6, 2025 in Anchorage.

The Regional Stakeholder Committee (RSC) Task Force completed their work on the job aids for members of the RSC and the RSC Liaison Officer.

PWSRCAC has offered to participate in the Cultural Resources Committee of the ARRT. This committee will be working on updates to the "Alaska Implementation Guidelines" for the 1997 National Programmatic Agreement.

**Prince William Sound Area Contingency Plan (PWS ACP):** The next PWS Area Committee meeting met on October 8, 2024 in Cordova, followed by a meeting of the Geographic Response Strategies (GRS) workgroup on October 9.

**Outstanding Questions or Issues:**

**BP-Hilcorp Transaction:** In 2020, the Regulatory Commission of Alaska (RCA) issued two orders regarding Hilcorp/Harvest Alaska's purchase of BP's assets in Alaska:

- Order No. 6, issued March 2020, allowed Hilcorp/Harvest Alaska to keep its financial information confidential; and
- Order No. 17, issued in December 2020, approved BP's and Harvest Alaska's transfer application thus transferring TAPS assets (including the Valdez Marine Terminal) from BP Pipelines to Harvest Alaska.

The City of Valdez subsequently appealed both orders to the Alaska Superior Court and ultimately to the Alaska Supreme Court.

On June 27, 2023, the Alaska Supreme Court heard arguments on the appeal from the City of Valdez, the State of Alaska (on behalf of the RCA), and attorneys for Hilcorp and affiliates and BP.

On May 3, 2024, the Alaska Supreme Court issued an opinion to:

1. Reverse the Alaska Superior Court's dismissal of Order No. 6, and
2. Affirm the appeal of Order No. 17.

This means the City of Valdez's argument that Hilcorp/Harvest Alaska's financial information should not be confidential will be remanded back to the Alaska Superior Court. This allows the City of Valdez to continue their quest to have financial information released to the public.

PWSRCAC had planned to submit an amicus curiae brief to the Alaska Superior Court in support of the City of Valdez's appeal of the RCA's March 2020 Order No. 6 back in 2021. As this issue has now been brought back to the Superior Court, PWSRCAC should have another opportunity to submit the amicus curiae brief.

### 6510 – Contingency Plan Review

**Objectives:** The purpose of this project is to monitor, review, and comment on state and federal contingency plans (c-plans) for the Valdez Marine Terminal (VMT) and the Trans Alaska Pipeline System (TAPS) tankers that transit Prince William Sound. Reviewing c-plans is a major task for PWSRCAC as outlined in both the PWSRCAC/Alyeska contract and OPA 90.

The Prince William Sound Tanker Oil Discharge Prevention and Contingency Plan (PWS Tanker C-Plan) and associated vessel response plans for Alaska Tanker Company, Andeavor (subsidiary of Marathon Petroleum), Crowley Alaska Tankers, Hilcorp North Slope, and Polar Tankers, was renewed on January 31, 2022, and will expire in 2027. Alyeska Pipeline Service Company (Alyeska) Valdez Marine Terminal Oil Discharge Prevention and Contingency Plan (VMT C-Plan) was renewed on November 15, 2019, and will expire in 2024.

**Accomplishments since the last report:**

**PWS Tanker C-Plan:** There have been no major amendments to the Prince William Sound tanker operators in the past several months. The last major amendment, submitted in September 2023, was approved by ADEC on June 21, 2024. The Basis of Decision document can be viewed [HERE](#). This major amendment covered replacement of the Mineral Creek barge with OSRB-5 that is used for lightering and nearshore response storage.

**VMT C-Plan Renewal:** On November 6, 2024, the Alaska Department of Environmental Conservation (ADEC) approved the renewal of the Valdez Marine Terminal Oil Discharge Prevention and Contingency Plan (VMT C-Plan) and issued its Basis of Decision on the renewal. The 5-year renewal is effective as of November 6, 2024 and expires on November 5, 2029. ADEC's approval letter and Basis of Decision document can be found [HERE](#).

ADEC's approval includes five conditions of approval ranging from secondary containment evaluation, to requiring additional details on the greatest possible discharge, providing API 653 inspection reports and supporting documentation, and providing prevention and response training documentation. ADEC also addressed 19 major topics in their Basis of Decision document.

Of particular interest to PWSRCAC is **Condition of Approval #1 East Tank Farm Secondary Containment Area Required Evaluation**. As outlined in Issue #7 in the Basis of Decision document, further analysis of the liners is required. This renewal requires Alyeska to complete the following:

- A. *Submit the final report of secondary containment liner testing method to be used to evaluate the condition of the East Tank Farm secondary containment area by March 1, 2025.*
- B. *Complete liner investigations of the East Tank Farm secondary containment area within the plan cycle (prior to plan submittal of the 2029 renewal).*

This issue was the subject of a Request for Informal Review approved by the Board of Directors on November 26, 2024. PWSRCAC requested the Spill Prevention and Response (SPAR) Director review ADEC's decision and require information provided to ADEC on the liner be subject to public review, creation of a schedule for completing liner inspections, and require corrective action if the liner inspections fail to demonstrate that the existing liner meets the "sufficiently impermeable" standard.

#### 6512 – Maintaining the Secondary Containment Systems at the VMT

**Objectives:** This project entails promoting methods Alyeska could use to verify the integrity of the secondary containment systems at the Valdez Marine Terminal's (VMT) East Tank Farm, otherwise known as the catalytically blown asphalt (CBA) liner. The goal of this project is to ensure that the buried CBA liner at the VMT will hold spilled oil long enough to be cleaned up prior to ground or surface water contamination.

**Accomplishments since last report:** The Council received WSP's (Alyeska's contractor) report on the secondary containment pilot test, titled "ELL and ERT Survey at VMT SCS: Pilot Study, West Tank Farm" on November 14, 2024. Dr. Joe Scalia and Dr. Craig Benson were tasked with reviewing this report in detail and will be issuing a report analyzing WSP's findings and conclusions.

#### 6530 – Weather Data / Sea Currents Project

**Objectives:** This project studies wind, water current, and other environmental factors near the Valdez Marine Terminal, in Prince William Sound, and in the Gulf of Alaska. Weather conditions affect the safe navigation of vessels and aids the ability to prevent, respond to, contain, and clean up an oil spill. Accurate weather data for the region supports research and decision making in areas like oil spill response, traffic management, vessel performance specification, and contingency planning.

**Accomplishments since last report:** The weather station at Cape St Elias is showing its age. Components have been ordered and on hand in Cordova. A site visit is planned for spring 2025.

A long-time contractor for this project, Micro-specialties, has become difficult to reach. The project manager will work with Dr. Rob Campbell to have PWSSC manage Iridium communications for the Cape St. Elias weather station in the future.

The Kokinhenik Weather Station stopped reporting on November 2 when it ran out of batteries. New batteries have been purchased and Rob Campbell will attempt to make a site visit to install them if his schedule allows.

#### 6531 – Port Valdez Weather Buoys

**Objectives:** This project originally assembled and deployed, and continues to maintain, two buoys which measure ocean currents and common weather parameters in Port Valdez. The first buoy is installed near Jackson Point [61.0910°N 146.3811°W] in the vicinity of the Valdez Marine Terminal (VMT). The second buoy is installed at the Valdez Duck Flats [61.1201°N | 146.2914°W]. The Prince William Sound Science Center (PWSSC) partners with the Council to facilitate this project.

The Oil Pollution Act of 1990 requires the Council to study wind and water currents and other environmental factors in the vicinity of the terminal facilities which may affect the ability to prevent, respond to, contain, and clean up an oil spill.

The Council's Board of Directors has long advocated that robust weather monitoring systems be installed in the vicinity of the VMT. This includes proposals to install ultrasonic anemometers at the loading berths and a weather station at the VMT. On January 22, 2016, the Council's Board passed a resolution expressly requesting a weather station be employed at the terminal.

Weather is a significant factor in the management of safe crude oil transportation through Prince William Sound. Some of these concerns include marine safety, tanker escort operations, oil spill contingency planning, containment boom design, and safe loading of oil tankers.

**Accomplishments since last report:** The Board and Alyeska have agreed to continue the project for the next two years. Both buoys are in place and operating normally. The next service is scheduled for Spring 2025. Since redeployment of the VMT buoy in August, SERVS has called twice worried about the buoy drifting close to shore. It was deployed in August with longer scope so the watch circle is larger than the previous five years. A link to a map of recent positions of the VMT Buoy has been added to the Council website.

#### 6536 – Port Valdez Weather Buoy Data Analysis

**Objectives:** In 2019, PWSRCAC was able to install two weather buoys in Port Valdez, one in the vicinity of the Valdez Marine Terminal and the other near the Valdez Duck Flats. The buoys have collected weather data for most of five years. The buoy websites provide real-time weather information as well as information for the last five days. The data from these buoys is collected and stored, but without periodically analyzing the data much of the value from the buoys will not be realized. The information provided by this analysis will aid in the understanding of the weather and currents within Port Valdez. This information will aid in oil spill contingency planning, potentially in improved oil spill trajectory models, and fill in gaps regarding the weather and currents at the buoy locations in Port Valdez. This project would have been the fourth project to take the data collected in each of the years since the buoys were deployed.

**Accomplishments since last report:** This project has been deferred and repropose for FY2026 since the VMT Buoy broke free of its anchor last winter and was offline for most of the year until it was redeployed in August 2024. The FY2026 project would cover calendar years 2024 and 2025.

#### 6540 – Copper River Delta and Flats GRS Development

**Objectives:** The goal of this project is to create ten new GRS's in the Copper River Delta and Flats (CRDF) vicinity. The Consultant is being tasked to coordinate PWS Area Committee leadership, local stakeholders, trustee agencies, and the regulatory community via a workgroup process, to identify and build ten GIS-based GRSs, and move these to ADEC for incorporation into the GRS database. GRS work done circa 1999 in this area was some of the first GRS work done in Alaska, and this material needs to be updated and/or new sites developed in a modern format.

**Accomplishments since last report:** Additional funds for this project were secured at the special Board meeting on November 26. At this meeting, the Board approved:

*The commitment of \$38,000 in the FY2026 budget for project 6540 Copper River Delta and Flats Geographic Response Strategies; and authorized the Executive Director to enter into a sole source contract with Nuka Research and Planning Group, LLC for project 6540 - Copper River Delta and Flats Geographic Response Strategies in an amount not to exceed \$45,000.*

FY2025 monies will be used to start the workgroup process, and the protected FY2026 funds will allow for completion of the project, and pay for charter services to do site visits, project manager travel, and the continued facilitation of the workgroup process and construction of the GRS's. Including the additional FY2026 funds, the project cost is \$63,000 in total.

#### 6560 – Peer Listener Training

**Objectives:** Update the Council's Peer Listener program, which was created and implemented shortly after the Exxon Valdez oil spill to promote community resiliency through a peer-to-peer support network. The update will include assessing the current program, reviewing similar programs nationwide, and revising the Peer Listener Training manual and delivery methods according to contemporary best practices.

**Accomplishments since last report:** The Peer Listener Project Team has met multiple times to discuss the objectives and anticipated outcomes of this project. A Request for Proposals was distributed, and one proposal was received. The Project Team and SAC recommended working with Agnew::Beck Consulting to develop a distribution plan and outreach tools for the Manual. A contract has been drafted and the first deliverables will be due from the contractor in January.

#### 6575 – Comparison of Windy Application and Seal Rocks Buoy Wind/Wave Data

**Objectives:** The National Data Buoy Center hosts a weather buoy at Seal Rocks (46061) that is used to determine closure limits for laden tankers outbound from the Valdez Marine Terminal through Hinchinbrook Entrance. Closure occurs when wind exceeds 45 knots of wind (sustained) or waves exceed 15 feet in height. Buoy 46061 has failed several times in recent history and repairs typically take an inordinate amount of time to accomplish. During buoy failures, the SERVS' Hinchinbrook Tug may make weather observations in the vicinity of Seal Rocks.

This project proposes to do a comparison of data from the Windy mobile application (Windy), specific to wind and wave predictions, to data generated by Buoy 46061. The project would then evaluate which forecast model (i.e., ECMWF (European Centre for Medium-Range Weather Forecasts, European Centre for Medium-Range Weather Forecasts Ensemble Model), GFS (Global Forecast System) and Icosahedral Nonhydrostatic) used by Windy most closely matches historic data provided by Buoy 46061 and provide recommendations on the use and efficacy of the Windy application for this purpose.

**Accomplishments since last report:** Project team had its first meeting on October 22. Before the Seal Rocks Buoy wave sensor stopped functioning, a comparison was made for closure conditions on October 12 showing that ECMWF outperformed GFS in forecasting wave heights. Due to limited availability of data, the project team decided not to move forward with an RFP at this time. Project manager will work on wave height forecast comparisons between ECMWF and GFS and the Seal Rocks Buoy going back to 2021 as time allows. Comparisons will also be made for wind speed closures.

If wind speed closure conditions at Hinchinbrook Entrance look likely, the project manager will make comparisons between forecast models and wind speeds at the Seal Rocks Buoy. Similar comparisons will be made for wave heights once the wave sensor is operational again.

#### 7000 – Oil Spill Response Operations Program

**Objective:** This program encompasses monitoring and reporting on the activities related to the operational readiness of the oil spill response personnel, equipment, and organization of the TAPS shipping industry. The program also encompasses monitoring actual oil spill incidents within our region and evaluation of overall response readiness.

**Accomplishments since last report:** Fall fishing vessels training was completed. Robertson attended training in Cordova and Robida covered Whittier. There were operational readiness exercises in each port following usual classroom, hands-on time, and on-water training. PWSRCAC's community outreach boat ride was tied to the Whittier training, and it was a very well received outreach effort with much participation.

Robida traveled to Cordova for the PWS Area Committee meeting on October 8 and spoke about the Copper River Delta and Flats GRS development project. Robida spoke with several attendees who wanted to participate in the workgroup process, and it was a good opportunity to build momentum for efforts that will be starting in early 2025.

Though staff did not attend, OSPR chair and Board member Jim Herbert shared some feedback on the SERVS wildlife training in Homer with staff, and this was passed to Alyeska. The training was for a smaller subset of Homer and Seward contracted vessels. Herbert offered some suggestions for improvement and observations.

The Regional Stakeholder Committee (RSC) Task Force met on December 11 and finalized the Task Force developed RSC job aids which will be included under the Western Alaska and Arctic Area Plan that is going out for public comment in early 2025. The job aids (one specifically designed for the Liaison Officer and the other for RSC members) will eventually be referenced in all four of Alaska's area plans. However, the Western Alaska and Arctic area plan is the first to be revised and move to a new architecture convention. The job aids will specifically be verified as a new addition.

Staff is very happy with the finalized job aids and intends to offer comments to this effect with the public comment period. The Task Force is expected to meet again and adjudicate any RSC-specific public comments that are received.

The end product will be a basic RSC description included in the area plans, and the “how to” job aids referenced on the State of Alaska tools and references website.

## 7520 – Preparedness Monitoring

**Objectives:** PWSRCAC's Drill Monitoring Program falls under a broader program called Oil Spill Response Operations. Objectives for the Drill Monitoring Program are to promote oil spill response operational readiness within the EVOS region by observing, monitoring, and reporting on oil spill prevention and response drills, exercises, and training; to provide citizens, regulatory agencies, and responders (Alyeska and the shippers) with independent observations and recommendations to improve preparedness; and provide citizen oversight. Tasks to be completed include:

- Monitor and report on regular oil spill drills and training exercises at the VMT and throughout the Exxon Valdez oil spill region to citizens, the Board, industry, and regulatory agencies
- Provide quarterly recommendations to the PWSRCAC Board of Directors
- Keep PWSRCAC's standing committees (OSPR, TOEM, POVTS, IEC, and SAC) informed
- Produce an annual report on effectiveness and progress of the regularly monitored drills and exercises
- Continue developing and implementing staff training for drill monitoring

### Recent Exercises

**Tug Challenger U/J Deployment Exercise – November 1, 2024:** SERVS conducted a U/J deployment exercise with the tug Challenger in Port Valdez. These are performed with the tug and the onboard workboat using the tug's boom and skimmer.

**Marathon PWS Shipper's annual Exercise – October 15-17, 2024:** Marathon conducted the annual PWS Shipper's exercise in October in Valdez at the SERVS Valdez Emergency Operations Center (VEOC). The exercise included a transition from SERVS to Marathon and a field deployment of two nearshore oil recovery systems and aerial drones.

**Whittier Nearshore Operational Readiness Exercise – October 1, 2024:** SERVS conducted an operational readiness exercise in conjunction to the annual Whittier fishing vessel training for 2024.

**VMT Oiled Wildlife Stabilization Demonstration – July 31, 2024:** Alyeska demonstrated the new oiled wildlife stabilization modules they built for oiled birds and sea otters. These are state of the art for the initial processing and stabilization of wildlife before they are transported to longer term care facilities.

### Upcoming Drills and Exercises

Polar Tankers Annual Shipper's Exercise – May 13-15, 2025

Alyeska VMT Equipment deployment – July 23, 2025

Alyeska VMT Functional Exercise – October 8, 2025

## 8000 – Maritime Operations Program

**Objectives:** This program reviews port organization, operations, incidents, and the adequacy and maintenance of the Coast Guard Vessel Traffic System, and coordinates with the Port Operations and

Vessel Traffic Systems (POVTS) Committee. Major program components include participation with the Valdez Marine Safety Committee (VMSC), monitoring changes to the tanker escort system, reviewing Best Available Technology documents for the tanker escort system and the Vessel Emergency Response Plan (VERP), participating in monthly SERVSP/WSRCAC and ADEC/WSRCAC communication meetings, and supporting maintenance for the NOAA weather stations.

**Accomplishments since last report:** Working with the previous project manager, the transition into this position is complete. Alan Sorum remains available for support. The Project Manager relocated to Valdez in October. The Project Manager participated in the Marathon Shipper Exercise in October, acting as an evaluator for the on water portion involving fishing vessels, current busters and mini barges. The Project Manager works with the OSPR Committee on weather-related projects.

#### 8250 – Assessing Non-Indigenous Species Biofouling on Vessel Arrivals

**Objectives:** Two main mechanisms of non-indigenous species (NIS) introduction via commercial ship traffic are the intake and release of ballast water and biofouling on a vessel's submerged surface areas. This project will characterize the risk from NIS biofouling on vessel arrivals using vessel gross tonnage (GT) as a function of wetted surface area (WSA). Gross tonnage is a nonlinear measure of a ship's overall internal volume. Wetted area is the area of the watercraft's hull which is immersed in water. Each arrival within this temporal and spatial analysis will be analyzed for a vessel arrival profile to consider additional variables that affect the potential likelihood of NIS introduction for a given arrival. Additionally, this project proposal builds from the Master of Science in Environmental Science thesis project for a graduate student at Alaska Pacific University (APU) under the supervision of the Fisheries, Aquatic Sciences, and Technology (FAST) Lab, and advised by Dr. Danielle Verna, WSRAC's Environmental Monitoring Project Manager.

**Accomplishments since last report:** A purchase order has been issued and the selected contractor presented their preliminary results at the Alaska Invasive Species Partnership Workshop in Fairbanks the week of November 11. Contractor has completed work quantifying the total wetted surface area and now focusing on calculating the likelihood of an introduction for vessels arriving in the Exxon Valdez region. The contractor is on schedule to deliver a final report to the POVTS Committee in March and make a presentation at the May Board meeting in Valdez.

#### 8520 – Miscommunication in Maritime Contexts

**Objectives:** Seeking to identify and address various causes of miscommunication, the proposed project will provide a comprehensive perspective by collecting information on the linguistic, cultural, and pragmatic needs and practices of native and non-native English-speaking mariners in Prince William Sound. The proposed project would entail the first two of four phases.

**Accomplishments since last report:** The Committee received the Phase 2 Report at the end of August and the final report in the middle of November. Both reports have been recommended by the POVTS Committee to be forwarded to the Board for acceptance. After the Phase 2 Report and final report have been accepted by the Board, a new contract will be established to begin work on Phase 3.

Dr. Nicole Ziegler made a presentation at the September Board meeting in Kodiak that was well-received by attendees from the Council as well as outside organizations.

### 9000 – Environmental Monitoring Program

**Objectives:** Coordinate projects developed and overseen by the Scientific Advisory Committee and obtain scientific knowledge and technical information about issues related to the actual and potential environmental impacts of the Valdez Marine Terminal and associated crude oil tankers. The notable tasks to be accomplished under this program are as follows:

- Project manager to attend at least one technical scientific conference
- Plan and complete budgeted environmental monitoring and scientific research projects
- Conduct PWSRCAC Science Night

**Accomplishments since last report:** Projects managed under this program continue to be planned and executed successfully. Science Night 2024 was held on December 6<sup>th</sup> in Anchorage and virtually with positive feedback. The project manager attended the Alaska Invasive Species Partnership annual workshop in Fairbanks and also attended the first and second workshops on the Gulf-Alaska Knowledge Exchange: Evaluating Community Response, Advancing Transformative Recovery, and Enhancing Proactive Preparedness for the Impacts of Future Oil Spills, sponsored by the National Academies of Science, Engineering, and Medicine, in Anchorage, AK, and Thibodaux, LA.

### 9110 – Monitoring Spatial Variability of Marine Birds During Winter in PWS Tanker Escort Zone

**Objectives:** Provide up to date information on winter marine bird density and distribution throughout the Prince William Sound tanker transit zone, including under-surveyed areas such as the open waters and adjacent bays in and around Port Valdez, Valdez Arm, Tatitlek Narrows, Port Fidalgo, and Port Etches. The notable tasks to be accomplished under this project are as follows:

- Perform winter bird surveys in Prince William Sound for three consecutive years
- Analyze data obtained during winter bird surveys and report the results of the analysis
- Make winter bird survey maps readily available for use by spill response managers

**Accomplishments since last report:** Contractors from the Prince William Sound Science Center conducted winter marine bird surveys in Prince William Sound in and around the tanker lanes in September and November 2024. Results will be reviewed by the Scientific Advisory Committee in January.

### 9510 – Long-Term Environmental Monitoring Project

**Objectives:** Comprehensively monitor the actual and potential environmental impacts related to the Valdez Marine Terminal and associated crude oil tankers and provide the Council with information about the presence and effects of hydrocarbons generated by the terminal facility and associated tankers. Here are the notable tasks to be accomplished under this project:

- Obtain environmental samples in Port Valdez: marine sediments, mussels, and passive sampling devices
- Analyze environmental samples
- Interpret and report results of sample analysis
- Present analytical findings to the PWSRCAC Board of Directors
- Maintain Environmental Monitoring Project plan

**Accomplishments since last report:** Laboratories provided results from analyses of samples collected in Port Valdez (adjacent to the Valdez Marine Terminal, Gold Creek, and Valdez small boat harbor) and sites on the northern Gulf of Alaska coast (Aialik Bay, Windy Bay, and Shuyak Harbor) in 2024. Dr. Morgan Bender of Fjord & Fish Sciences reviewed the results and drafted a summary report and

technical supplement, as well as a summary of metals in sediments, and presented this information to SAC. The final reports will be presented to the Board for approval at this meeting.

#### 9520 – Marine Invasive Species

**Objectives:** Understand and minimize the environmental impacts of invasive species potentially arriving in the PWSRCAC region from tanker ballast water and hull fouling. Here are the notable tasks to be accomplished under this project:

- Obtain plankton samples in Port Valdez at three sites: the small boat harbor, Valdez Container Terminal, and Valdez Marine Terminal
- Perform metagenetic analysis on plankton samples to identify variability in the plankton community between locations and through time, and identify any nonindigenous species
- Interpret and report results of plankton metagenetic analysis
- Conduct monitoring of invasive crab and tunicate species in Valdez, Cordova, and Kodiak

**Accomplishments since last report:** Dr. Greg Ruiz from the Smithsonian Environmental Research Center submitted the final report and gave a presentation for this project at the September Board meeting.

#### 9521 – Marine Invasive Species Internship

**Objectives:** Support local students to monitor for invasive species potentially arriving in the PWSRCAC region from tanker ballast water and biofouling. Target species include European green crab and tunicates in the communities of Valdez, Cordova, and Kodiak.

**Accomplishments since last report:** Student interns completed monitoring for invasive green crab in the communities of Cordova, Valdez, and Kodiak in summer 2024. No green crab were detected. The project manager submitted the data to various databases.

#### 9700 – Social Science Workshop

**Objectives:** The goal of this project is to host a workshop with community members from our region to identify social science data needs and projects that fit within the PWSRCAC mission and could be supported by SAC. The workshop will be a 1–2 day event held in a spill-affected community. Representatives from spill-affected communities will gather for a facilitated event to share ideas, needs, and desires related to social science questions that affect the region and identify clear project ideas that are forward looking and benefit the region.

**Accomplishments since last report:** The Council will co-host the annual Subsistence Memorial Gathering with the Chugach Regional Resources Commission in Anchorage on March 27, 2025. SAC member Davin Holen with Alaska Sea Grant and Council staff will facilitate a workshop at the Gathering for Tribal and other community members in attendance.