

Prince William Sound Regional Citizens' Advisory Council

Board of Directors Meeting May 1-2, 2025

Zoom link for meeting audio and presentations <https://pwsrccac.zoom.us/j/89196164358>

Or participate via teleconference: 1-888-788-0099 Meeting ID: 891 9616 4358




Final Agenda

Thursday, May 1, 2025

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|-------|---|---|
| 8:15 | A | Call to Order & Roll Call <ul style="list-style-type: none"> Welcome – President Robert Archibald Introductions/Director reports on activities since the last meeting |
| 8:25 | B | 1-0 Approve Agenda |
| 8:30 | C | 4-1 PWSRCAC Director Appointments – Donna Schantz |
| 8:35 | D | 1-1 Approve Minutes of January 23-24, 2025, Regular Board Meeting
1-2 Approve Minutes of March 19, 2025, Special Board Meeting |
| 8:40 | E | Public Comment Period, limit five minutes per person |
| 9:00 | F | <u>Internal Opening Comments</u> <i>(Please limit to general information not contained in Agenda)</i> <ul style="list-style-type: none"> Technical Committee Updates (SAC , IEC, POVTS, TOEM, & OSPR) PWSRCAC Board Sub Committee Updates (Governance, Finance, & Legislative) |
| 9:40 |  | BREAK |
| 9:55 | G | <u>External Opening Comments</u> <i>(Please limit to general information not contained in Agenda)</i> <ul style="list-style-type: none"> PWSRCAC Ex Officio Members Trans Alaska Pipeline System Shippers, Owner Companies, and Pilots |
| 11:40 | H | Approval of FY2026 Budget – Ashlee Hamilton |
| 12:00 |  | BREAK –lunch provided for those at the meeting |
| 1:00 | I | <u>Consent Agenda</u> <ul style="list-style-type: none"> 3-1 Approval of Resolution Designating PWSRCAC Check Signers 3-2 Approval of FY2026 Contingency Plan Contractor Pool 3-3 FY2026 LTEMP Contract Authorization 3-4 FY2026 Marine Bird Fall and Early Winter Surveys Contract Authorization 3-5 Annual Technical Committee Member Appointments 3-6 Approval of Amendments to the Council's Document Retention Procedure 3-7 Approval of Federal Government Affairs Monitor Retainer 3-8 Approval of FY2025 Budget Modifications |
| 1:05 | J | Alyeska / SERVS Activity Report |
| 1:50 | K | 4-2 Report Acceptance Regarding the Secondary Containment Liner – Sadie Blancaflor with Dr. Craig Benson |
| 2:20 | L | 4-12 Update on Adjudicatory Hearing Request on the Secondary Containment Liner – Linda Swiss |
| 2:40 | M | 4-3 Report Acceptance: Marine Bird Fall and Early Winter Survey – Danielle Verna with Dr. Mary Anne Bishop of the Prince William Sound Science Center |
| 3:05 |  | BREAK |
| 3:20 | N | Nomination of Officers & Executive Committee Members-at-Large |
| 3:30 | O | 4-4 Report Acceptance: Vessel Biofouling – John Guthrie with Natalie Kiley-Bergen of Alaska Pacific University |
| 4:05 | P | 4-5 Report Acceptance: 2022 VMT Crude Oil Storage Tank Vent Incident - Sadie Blancaflor with Dr. Ron Sahu |
| 4:45 | Q | PWSRCAC Annual Volunteer Recognition – Donna Schantz |
| 5:00 |  | RECESS |

Shaded Items Require Board Action

Friday, May 2, 2025

9:00	A	Call to Order & Roll Call
9:05	B	Election of Officers & Executive Committee Members-at-Large <i>(results to be announced after the morning break)</i>
9:15	C	4-6 Federal and State Government Affairs Update – Joe Lally with contractors Gene Therriault and Roy Jones, and CJ Zane of Blank Rome
9:55	D	4-7 Community Outreach Annual Report – Maia Draper-Reich and Brooke Taylor
10:45		BREAK
11:00	E	4-8 Addressing Risks and Safety Culture at the VMT– Sadie Blancaflor with Billie Garde, Clifford & Garde, LLP
12:00		BREAK –lunch provided for those at the meeting
1:00	F	4-9 Report Acceptance: Peer Listener Manual Distribution Plan – Danielle Verna with Lisa Fousek and Adryan Glasgow of Agnew::Beck
1:40	G	4-10 Report Acceptance: 2024 Annual Drill Monitoring Report – Roy Robertson
2:05	H	4-11 Annual Board Committee Appointments – Donna Schantz
2:20	I	Director of Finance’s Report to the Board
2:30	J	Executive Director’s Report to the Board
2:45	K	President’s Report to the Board
2:55	L	Consideration of Consent Agenda Items
3:10	M	Closing Comments
3:30		ADJOURN

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 May 2025 Program/Project Status Report

Volunteers, scan the code to submit your travel claim:



PRINCE WILLIAM SOUND
REGIONAL CITIZENS' ADVISORY COUNCIL
MINUTES
REGULAR BOARD MEETING
January 23-24, 2025
Anchorage, Alaska

Members Present

Robert Archibald	City of Homer
Amanda Bauer	City of Valdez
Robert Beedle	Cordova District Fishermen United
Mike Bender (via videoconference)	City of Whittier
Mike Brittain	City of Seward
Nick Crump	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
David Janka	City of Cordova
Melvin Malchoff	Port Graham Corporation
Dorothy Moore	City of Valdez
Bob Shavelson	Oil Spill Region Environmental Coalition
Angela Totemoff	Tatitlek Corporation & Tatitlek Village IRA Council
Michael Vigil (via videoconference)	Chenega Corporation & Chenega IRA Council
Aimee Williams	Kodiak Island Borough
Kirk Zinck	City of Seldovia

Members Absent

Elijah Jackson	Kodiak Village Mayors Association
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Committee Members Present

Matt Melton (via videoconference)	OSPR Committee
Wei Cheng	SA Committee
John Kennish (via videoconference)	SA Committee
Roger Green (via videoconference)	SA Committee
Steve Lewis (via videoconference)	POVTS Committee
Tom Kuckertz	TOEM Committee
Mikkel Foltmar	TOEM Committee
Ruthie Knight (via videoconference)	IE Committee
Savannah Lewis (via videoconference)	IE Committee
Cathy Hart (via videoconference)	IE Committee

Staff Members Present

Donna Schantz	Executive Director
Joe Lally	Director of Programs
Brooke Taylor	Director of Communications
Hans Odegard	Director of Administration

Ashlee Hamilton	Director of Finance
Jennifer Fleming	Executive Assistant
Danielle Verna	Project Manager
Roy Robertson	Project Manager
Linda Swiss	Project Manager
Jeremy Robida	Project Manager
John Guthrie	Project Manager
Amanda Johnson (via videoconference)	Project Manager
Sadie Blancaflor	Project Manager
Maia Draper-Reich	Outreach Coordinator
Nelli Vanderburg	Project Manager Assistant
Jaina Willahan	Project Manager Assistant
Suparat Prasannet	IT Coordinator

Ex Officio Members Present

Ytamar Rodriguez	Alaska Dept. of Environmental Conservation
Lisa Fox	U.S. Department of the Interior
Anthony Strupulis	Department of Natural Resources
Scott Pegau	Oil Spill Recovery Institute
Dave Reilly	Alaska Div. of Homeland Security & Emergency Management
Reid Olson (via videoconference)	Bureau of Land Management
Jonathan Kirsch (via videoconference)	Alaska Dept. Fish & Game
CDR Sarah Rousseau (via videoconference)	USCG MSU Valdez
Liza Sanden	NOAA

Others Present

Andres Morales	Alyeska Pipeline Service Company
Klint VanWingerden	Alyeska Pipeline Service Company
Alyssa Sweet	Alyeska Pipeline Service Company
Michelle Egan	Alyeska Pipeline Service Company
Kate Dugan (via videoconference)	Alyeska Pipeline Service Company
Diana Bouchard (via videoconference)	Alyeska Pipeline Service Company
Weston Branshaw (via videoconference)	Alyeska Pipeline Service Company
Graham Wood	Alaska Dept. of Environmental Conservation
Kathy Shea (via videoconference)	Alaska Dept. of Environmental Conservation
Anna Carey (via videoconference)	Alaska Dept. of Environmental Conservation
Kara Kusche (via videoconference)	Alaska Dept. of Environmental Conservation
Melissa Woodgate (via videoconference)	Alaska Dept. of Environmental Conservation
Teresa Melville	Alaska Dept. of Environmental Conservation
Mo Radotich (via videoconference)	Alaska Dept. of Environmental Conservation
Mollie Dunkin (via videoconference)	Alaska Dept. of Environmental Conservation
Erin Leaders (via videoconference)	Alaska Dept. of Environmental Conservation
Sarah Moore (via videoconference)	Alaska Dept. of Environmental Conservation
Paul Degner (via videoconference)	Bureau of Land Management
Andrea West	Polar Tankers
Rob Kinnear	Hilcorp
Ingo Rose	Crowley Alaska Tankers
Peter Laliberte	Santos

Capt. Ian Maury	Southwest Alaska Pilots Association (SWAPA)
LCDR Caroline Wilkinson	NOAA Office of Coast Survey
Nicholas Schneider	Teekay Tankers
Greg LeBeau	Witt O'Brien's
Billie Garde (via videoconference)	Clifford & Garde, LLP
Haley Michael	NORTECH Engineering
Breck Tostevin (via videoconference)	Nielsen, Koch & Grannis PLLC
C.J. Zane (via videoconference)	Blank Rome, PWSRCAC Legislative Monitor (Federal)
Genevieve Cowan (via videoconference)	Blank Rome, PWSRCAC Legislative Monitor (Federal)
Morgan Bender	Fjord & Fish Sciences
Bill Mott	Taku Engineering
Roy Totemoff	Tatitlek Corporation
Roy Jones	PWSRCAC Legislative Monitor (Federal)

Thursday, January 23, 2025

CALL TO ORDER, WELCOME, AND INTRODUCTION

A regular meeting of the Board of Directors of the Prince William Sound Regional Citizens' Advisory Council was held January 23 and 24, 2025, at the Embassy Suites, Anchorage, Alaska. President Robert Archibald called the meeting to order at 8:30 a.m. on January 23, 2025, 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 (via videoconference), Brittain, Crump, Cutrell, Donaldson, Haggerty, Hasenbank, Herbert, Janka, Malchoff, Moore, Shavelson, Totemoff, Vigil (via videoconference), Williams, and Zinck.

Introductions and Directors' reports followed.

1-0 AGENDA

President Archibald presented the agenda (green-colored sheet) for approval, noting the following changes to the agenda's order on January 23: Item H (Alyeska Presentation on Risk and Safety Culture Assessment Management Report) moved up to immediately follow the mid-morning break; and Item F (External Opening Comments) moved down to immediately follow the lunch break).

Amanda Bauer **moved to approve the agenda** (green-colored sheet) with changes noted. Mako Haggerty **seconded. The motion passed** without objection and **the agenda was approved.**

1-1 MINUTES

Dave Janka **moved to approve the minutes of the Regular Meeting of the Board of Directors of September 19-20, 2024.** Jim Herbert **seconded,** and the **minutes were approved as presented.**

1-2 MINUTES

Mike Brittain **moved to approve the minutes of the Special Meeting of the Board of Directors of November 26, 2024.** Jim Herbert **seconded,** and the **minutes were approved as presented.**

PUBLIC COMMENTS

(None at this time.)

INTERNAL OPENING COMMENTS – PWSRCAC TECHNICAL COMMITTEE UPDATES**INFORMATION AND EDUCATION COMMITTEE (IEC)**

Aimee Williams reported on the Information and Education Committee's activities since the last Board meeting.

- IEC had three regular meetings, an annual workshop, and one project team meeting since the Board met in September.
- **Fishing Vessel Program Community Outreach.** The annual Fishing Vessel Program Community Outreach tour for fiscal year 2025 took place in Whittier on Monday, September 30, 2024. The tour went very well. There were 96 passengers on board, including 26 middle and high school students from Whittier, who participated in a scavenger hunt activity to help them engage, interact, and reflect while on the tour. This tour also received media coverage from Alaska's News Source, ABC/Fox, and KVAK.

IEC has formed a project team that will work on developing an alternative format in the coming months for an event or events to deliver this outreach to the Kodiak community during fiscal year 2026.

- **Community Outreach.** In November, Board member Jim Herbert and Outreach Coordinator Maia Draper-Reich co-hosted a booth with Cook Inlet Regional Citizens Advisory Council (CIRCAC) at the Pacific Marine Expo in Seattle, sharing about the Council's mission and work with over 300 people. This past December, as part of Science Night, the Council invited partners to host virtual watch parties in their communities. Successful watch parties were held in Valdez, Cordova, and Homer, expanding the audience of this event. We want to give a special thank you to IEC member Amanda Glazier for facilitating the watch party in Valdez. Staff have coordinated and participated in additional outreach presentations which will be covered during the Community Outreach Annual Report at the May Board meeting.

IEC is excited to continue supporting outreach efforts during a busy spring season, which will include upcoming events such as the Alaska Forum on the Environment, the Alaska Ocean Sciences Tsunami Bowl, and the Chugach Regional Resource Commission's "The Gathering" in March.

- **Youth Involvement.** IEC accepted five final reports from the following contractors as complete and meeting all deliverables: Alaska Geographic, Copper River Watershed Project, Kenai Mountains – Turnagain Arm National Heritage Area, and Wrangell Institute for Science and Environment.

There are currently contracts underway with the Alaska Marine Conservation Council, Center for Alaskan Coastal Studies, Kenai Mountains – Turnagain Arm National Heritage Area, and Alaska Maritime National Wildlife Refuge. All four contracts are on track to be completed by June 30.

The most recent Youth Involvement RFP received eight project proposals, with seven being selected by the project team for funding. This will result in the distribution of the remaining fiscal year 2025 Youth Involvement funds.

- **Illustrated Prevention and Response System Outreach.** The committee is continuing to 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. Additional editing of the text by staff continues, with Tom Crestodina scheduled to restart his work in the spring.
- **Internship.** A \$4,000 budget modification to fund the previously deferred fiscal year 2025 Internship project was approved by the Executive Committee in December. These funds will be used for a stipend, travel costs, and conference fee for an intern working with the Council's Long-Term Environmental Monitoring Program. A Prince William Sound College student has been selected and their work will be co-funded by Prince William Sound College. Supervision of the intern will be shared between Council staff members Danielle Verna and Maia Draper-Reich, and IEC member Amanda Glazier, who is with the college.

TERMINAL OPERATIONS & ENVIRONMENTAL MONITORING COMMITTEE (TOEM)

Vice Chair Amanda Bauer reported on the activities of the TOEM Committee since the September Board meeting:

- In July 2024, TOEM brought Dr. Joe Scalia to Valdez to observe the secondary containment liner pilot testing in the Valdez Marine Terminal (VMT) West Tank Farm. Dr. Scalia has given subsequent verbal updates to the TOEM Committee and has submitted a draft report which is currently undergoing review and revision by the committee, the Secondary Containment Liner Project Team, and staff. It is expected that a report on this effort will be provided at the May Board meeting.
- The committee reviewed, revised, and recommends Board acceptance of a Taku Engineering report titled "Tank Pressure/Vacuum Pallet Damage: Crude Oil Storage Tank Headspace Gas Assessment," which was drafted in response to Alyeska's October 12, 2023 letter requesting additional information on Taku Engineering's original report calculations and assumptions. This is on the agenda for Board acceptance at this meeting. If Alyeska provides additional information on the 2022 tank vent incident after this report is approved, TOEM will work with Taku Engineering to refine and update the report appropriately.
- A contractor was selected via the RFP process on January 16, 2025, to perform the work related to Project 5595: Review of VMT Cathodic Protection System Testing Protocols. It is anticipated that the committee will be requesting Executive Committee approval for an additional \$5,000 for this work.
- The committee continues to follow up to better understand the August 2023 tank bottom processing fire which occurred in an active dike cell. On September 25, 2024, the Council received a letter from the Joint Pipeline Office (JPO) stating that no single regulatory agency has oversight over the many components of this process, with BLM and ADNR noting that they have no regulatory authority at the VMT because it is on private land. The PWSRCAC is currently drafting a response to this letter.

- The committee is in the process of reviewing and providing feedback on Dr. Sahu's draft report titled "Report on the Volatile Organic Compound (VOC) Emissions from the Snow Removal Incident at the Alyeska Pipeline Service Company's Valdez Marine Terminal East Tank Farm in Early 2022" which reviewed available documentation to provide a conservative emissions estimate from the 2022 tank vent damage incident.
- The committee has continued to follow up on recommendations related to the Billie Garde report, including Alyeska's Management Action Plan close-out and the Government Accountability Office (GAO) review process. The committee is also gathering information related to the human factors committee recommendation in the report, prior to officially taking on that role.
- PWSRCAC would like to express its appreciation for Alyeska's work to improve the response time to the TOEM Committee's requests for additional information in support of their projects and work. However, the committee continues to have outstanding requests for information from Alyeska, the answers to which are 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. Bauer noted, however, that PWSRCAC had received a large transmittal of information from Alyeska the previous day which TOEM had not had a chance to review yet.

OIL SPILL PREVENTION & RESPONSE COMMITTEE (OSPR)

Chair Jim Herbert reported on the OSPR Committee activities since the last Board meeting in September:

- The committee has been 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.
- ADEC's five-year renewal of the Valdez Marine Terminal (VMT) C-Plan was issued in November 2024 and expires in 2029. In November, the Council approved filing a Request for Informal Review on the Condition of Approval regarding the secondary containment liner evaluation at the VMT. The ADEC SPAR Director will issue a decision on the Request for Informal Review by February 24, 2025.
- The committee reviewed and accepted various drill/exercise reports. These reports will be conveyed to the Board for acceptance in the Annual Drill Monitoring Report.
- The committee has been kept updated on the USCG Work Instruction related to the Certificate of Inspection (COI) requirements that, if enforced, would prevent a significant number of the SERVS fishing vessel program fleet, or Vessels of Opportunity (VOO), from being able to participate in the program. The Council, along with other organizations, have been working to find a solution to exempt vessels from the inspection requirements while responding to an oil spill and/or during oil spill trainings and exercises. The OSPR Committee is concerned about this issue because if a solution cannot be found, it will directly impact SERVS' ability to respond to an oil spill to protect Prince William Sound and its downstream communities. PWSRCAC's Joe Lally will provide an update at this Board meeting on efforts to find a solution to this issue.

- The Committee has been kept updated 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. The Port Valdez buoys will be serviced in spring of this year.
- Environment & Climate Change Canada expects to complete their analysis of the Alaska North Slope (ANS) crude oil properties analysis by the end of February. Merv Fingas will prepare a report on the analysis which should be ready for Board acceptance at the May or September Board meetings. The last time PWSRCAC undertook this analysis of ANS crude, the characteristics had changed.
- The committee has also been updated on the Seal Rocks and Cape Cleare buoys in the Gulf of Alaska. Both buoys were replaced in Spring 2024, after escaping their moorings, but have since suffered a myriad of problems with their wave sensors, communications, and batteries. These issues will require both buoys to be pulled by a buoy tender in order to be repaired. The Cape Suckling buoy is also inoperable. These weather buoys, especially Seal Rocks, are important to ensure the safety of the tankers, tugs, and their respective crews, and for reducing the risk of an oil spill. PWSRCAC's main concern is to ensure that laden tankers do not depart the VMT in conditions that preclude the tug crews from safely and effectively performing a rescue should the tanker experience a problem in adverse weather conditions.
- Tab 5 in this Board meeting's notebook contains the current status of all of OSPR's projects.

SCIENTIFIC ADVISORY COMMITTEE (SAC)

Wei Cheng reported on the activities of the SA Committee (SAC) since the last Board meeting in September:

- **Social Science Workshop.** A workshop to gather community member input on the social and economic changes since the Exxon Valdez oil spill (EVOS) and to share ideas on future social science research in the EVOS region will be held during the 23rd annual Subsistence Memorial Gathering, hosted by the Chugach Regional Resources Commission (CRRM). The workshop will be held on March 27, 2025, from 9 a.m. to 4 p.m. in Anchorage and will be facilitated by SAC member Davin Holen of Alaska Sea Grant and Danielle Verna of staff. The workshop aims to foster relationship building and collaborative research with Alaska Native Tribes and other partners in the EVOS region. Board members are invited to attend the workshop and should contact Danielle Verna if interested or with questions. There will be activities, a dance performance, and a traditional foods dinner for Gathering attendees in the evening.
- **Long-Term Environmental Monitoring Project (LTEMP).** Dr. Morgan Bender of Fjord and Fish Sciences presented her results and draft report from the 2024 LTEMP sampling to the committee for review in November. This year, Dr. Bender also shared results from a pilot study, evaluating metals in sediment at the Valdez Marine Terminal and Gold Creek, which was done in conjunction with the regular LTEMP sampling for hydrocarbons. The final reports will be presented to the Board at this meeting, and the committee recommends their acceptance. The committee looks forward to establishing an LTEMP internship for a college student in Valdez in collaboration with IEC.
- **Winter Marine Bird Surveys.** Staff from the Prince William Sound Science Center successfully completed their boat-based transect surveys of birds and marine mammals in

September and November. Dr. Mary Anne Bishop of the Prince William Sound Science Center presented her findings and recommendations to the committee in January for their review. The final report is expected to be presented to the Board in May.

- **Peer Listener Manual.** The committee voted to award a contract to Agnew::Beck Consulting to develop a distribution plan and outreach materials for the revised Peer Listener Manual. The project team met earlier this month to review the first draft of the distribution plan.
- **Marine Invasive Species.** Student interns in Valdez, Kodiak, and Cordova will be asked to give a presentation about their internship in their respective communities this spring. Data collected during intertidal monitoring for invasive green crab in these communities were submitted to the Alaska Department of Fish and Game and the Pacific States Marine Fisheries Commission.
- **Science Night.** A successful Science Night took place on December 5, with four engaging speakers sharing on the theme of “Staying alert and proactive in the Exxon Valdez oil spill region.” There were over 70 in-person attendees, 20 online individuals, and three watch parties across Valdez, Homer, and Cordova, which added about 30 more viewers. All recordings are now available on the Council's website and YouTube page.
- **Transcriptomics.** The committee recommends the Board approve the budget modification and research contribution to the USGS to complete a transcriptomics analysis of blue mussels that have been collected at 10 LTEMP sites. Gene expression data from this sentinel species provides information about biological effects from environmental changes such as exposure to contamination. This request is a consent agenda item at this meeting.
- **Committee Membership.** The committee voted to recommend the nomination of Dr. Scott Pegau to the Scientific Advisory Committee. This recommendation was approved by the Executive Committee at its December meeting. Dr. Pegau is the Research Program Manager at the Oil Spill Recovery Institute (OSRI) and has been an ex officio member on the Board representing OSRI for many years. The committee looks forward to having Dr. Pegau's expertise and experience on the team.

PORT OPERATIONS & VESSEL TRAFFIC SYSTEMS COMMITTEE (POVTS).

Chair Steve Lewis reported (via videoconference) on the efforts of the Port Operations & Vessel Traffic Systems (POVTS) Committee since the last Board meeting:

- **FY2026 Project Proposals.** The POVTS Committee developed and submitted three projects for consideration in the Long Range Plan process.
- **Maritime operations locally.** The committee continues to stay informed about the weather-based projects, including buoys. The committee is extremely concerned about the Seal Rocks buoy outage and the impact of the outage on the ability of the USCG Vessel Traffic Service to make Hinchinbrook Entrance open/closure decisions.
- **Vessel-Whale Strike Mitigation.** The committee continues to monitor developments in whale strike mitigation locally and nationally. Due to the change in the federal administration, the proposed NOAA Marine Fisheries Service rule expanding the vessels covered by the Right Whale Speed Reduction Rule has been withdrawn.

- **Miscommunication in Maritime Contexts (8520).** The report and executive summary from Phase 1 and 2 of this project were reviewed and accepted by the POVTS Committee, then forwarded to the Executive Committee and accepted at their meeting on January 15.
- The contract for Phase 3 is being finalized and work should commence in late winter or early spring.
- **Assessing Non-Indigenous Species Biofouling on Vessel Arrivals (8250).** The committee has been working jointly with the Scientific Advisory Committee (SAC) to start a project examining biofouling on vessel arrivals in the EVOS region. The principal researcher, Natalie Kiley-Bergen, presented her preliminary findings at the Alaska Invasive Species Partnership workshop in November 2024. The POVTS Committee expects to have a presentation at its next committee meeting on February 4, and the final report will be presented to the Board at its May meeting.
- **Shipping Decarbonization.** Following industry news, the committee sees worldwide there has been progress towards meeting the International Maritime Organization (IMO) greenhouse gas (GHG) reduction targets of 20% by 2030, and 50% by 2050.

There are also signs that this may not be obtained. Efforts to date have largely been to convert from traditional marine fuels to LNG and methane combined with carbon capture. Efforts to develop truly zero emission fuels like hydrogen and ammonia are experiencing problems becoming technically viable and commercially scalable.

In Prince William Sound, POVTS has had little information come to it on the TAPS fleet actions to date and their plans to meet the IMO targets.

POVTS would welcome hearing from the shippers and their customers who are actually the companies of their efforts to date and their plan to meet the IMO guidelines.

Lewis noted that POVTS meetings are open to the public and the committee would welcome more members than the five currently serving (Lewis, Archibald, Bauer, Mitchell, and Terpening).

INTERNAL OPENING COMMENTS – BOARD SUBCOMMITTEES

BOARD GOVERNANCE COMMITTEE (BGC)

Chair Luke Hasenbank reported for the Board Governance Committee (BGC) on its activities since last Board meeting in September:

- The committee met once since the last Board meeting.
- During this meeting, BGC approved the following three Board policy updates:
 - Travel Policy 710.06, which increased the reimbursement threshold for trips without receipts from \$25 to \$75 in cases where a receipt cannot be obtained or has been lost. This update aligned the amount with IRS standards.
 - Fiscal Policy 310, which increased the asset stabilization target for the Council's net

assets from “no less than \$350,000” to “no less than \$400,000.” This update aligned the policy with the amount the Council currently has in its reserve.

- Fiscal Policy 304, which increased the threshold for Board of Director signature requirement on checks from \$15,000 to \$20,000. This update was made to reflect inflation.
- The committee also voted to create a new fiscal policy to require that all Automated Clearing House (ACH) electronic payments and other electronic payments be approved by two authorized individuals designated by the Board of Directors, with the exception of transfers related to payroll and rent. Furthermore, ACH payments exceeding \$20,000 must be approved by at least one designated member of the Board of Directors.
- These updates were on the consent agenda and approved by the Board at the Special Board meeting on November 26, 2024.
- Committee members reviewed the BGC Charter and the Board’s Bylaws and ultimately decided that no updates were needed at this time. They plan to review the Bylaws again at the end of 2025 to determine if updates need to be made.

Hasenbank noted that the committee could use more members than the four currently serving (Hasenbank, Moore, Beedle, and Bender).

LEGISLATIVE AFFAIRS COMMITTEE (LAC)

Chair Dorothy Moore reported on activities of the Legislative Affairs Committee (LAC) since the last Board meeting:

- **LAC Activities Since the Last Board Meeting.** The Alaska legislative session began on January 21, 2025. As in previous years, LAC or the LAC Project Team will be meeting bi-weekly for the duration of the legislative session that is scheduled to end on May 21, 2025.
- **Government Accountability Office Review.** The Government Accountability Office (GAO) is performing their review of regulatory oversight at the Valdez Marine Terminal (VMT). Originally, they planned to release their report on this matter in early 2025; however, based on a recent update from the GAO it is anticipated that the report will now be released in spring 2025.
- **Gulf of Alaska Weather Buoys.** The Council’s Legislative Monitors in Washington, D.C., and PWSRCAC staff continue to conduct outreach with Alaska Delegation’s staff, the National Oceanic and Atmospheric Administration (NOAA), and the National Data Buoy Center (NDBC) regarding the Gulf of Alaska weather buoys, all of which continue to experience issues, such as inoperable wind and wave sensors, even after being replaced in spring 2024.
- **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 first arose of the Coast Guard potentially applying vessel inspection regulations to the more than 350 contracted, uninspected vessels (vessels of opportunity, or VOOs) that form the backbone of the SERVS oil spill response system. The Council continues to work with its Washington, D.C., legislative monitors and as part of an industry/stakeholder workgroup that was formed to develop

legislative language to resolve this issue permanently with the Coast Guard. PWSRCAC's Joe Lally will provide a comprehensive briefing on this issue later in the Board meeting.

- **State Legislative Issues - ADEC/SPAR Budget:**

The Governor is proposing status quo funding for ADEC Spill Prevention & Response (SPAR). LAC will again be advocating for legislation that advocates for continued adequate funding for SPAR and the establishment of an Alaska Invasive Species Council.

FINANCE COMMITTEE (FC)

Treasurer and Chair Mako Haggerty reviewed the Finance Committee's activities since the last Board meeting:

- **Fiscal Year 2024 Audit.** Auditor Nicholas Stoudt of Porter & Allison presented the completed audit report at the committee's November meeting. The audit thoroughly examined the organization's financial statements and internal controls. Stoudt noted that it was a very successful year with no significant difficulties in completing the audit and indicated a clean bill of financial health. The Board approved the audit report at its Special Board Meeting in November.
- **IRS Form 990.** The committee reviewed the draft IRS Form 990 in detail earlier this month. This was the first time compiling the Form 990 with the new auditors, who helped the process go very smoothly. The committee noted some minor edits that Director of Finance Ashlee Hamilton shared with Porter & Allison. The committee voted to recommend the corrected Form 990 for Board approval at this meeting.
- **Copier Lease.** Staff reviewed the new lease with representatives from Konica Minolta and it was discovered that PWSRCAC's monthly payments will be slightly less than originally planned. The briefing sheet in the Board packet reflects the higher amount but no changes need to be made to the action requested.
- **Automated Clearing House (ACH) Payment Updates.** At the November Special Board Meeting, the Board approved a policy for Automated Clearing House (ACH) electronic transfers, wire transfers, and other electronic payments. Director of Finance Hamilton has begun implementing these sorts of payments for staff, Board, and volunteers who opted to be paid via ACH for things such as travel reimbursements. Those who signed up can now expect to receive an email notifying them when the payment gets issued. Those who have not already opted into this method of receiving payment, but would like to do so, were encouraged to contact the Director of Finance.
- **Budget Modifications.** The Finance Committee voted to recommend two budget modifications to the Board in November, which were approved at the Special Board Meeting. The committee also discussed the list of proposed budget modifications that are on the consent agenda at this meeting and voted to recommend Board acceptance of these modifications.
- **Anchorage Office Lease.** Staff worked with a broker and found an office space that meets the needs for a new office, with significant improvements from the current space. Upon the committee's request, staff submitted an "Intent-to-Occupy" Agreement, which is a non-binding agreement that expressed interest in the space and allowed the Council to receive a

lease for review. The lease was reviewed in detail by the Council's legal counsel Joe Levesque, staff, and the committee who voted to recommend the new office lease for Board approval. This item will be discussed in detail during executive session.

- **Compensation Study RFP.** With committee support, staff will soon be putting out a request for proposals to potentially complete a new compensation study in FY2026.
- **IRS Update.** The organization encountered an issue with its payroll tax reporting due to an incorrect return filed by Paychex with the IRS. This issue is nearing a complete resolution. All 941 filings have been corrected and the funds have been properly recorded. The final step, submitting the 943X filing, has been completed, and PWSRCAC is now awaiting confirmation from the IRS that this issue is resolved.

Break: 9:45 a.m. – 10:00 a.m.

ALYESKA PRESENTATION ON CLOSEOUT OF RISK AND SAFETY CULTURE ASSESSMENT MANAGEMENT ACTION PLAN

Alyeska's Director of Operations, Klint VanWingerden, presented the company's closeout report on Alyeska's Management Action Plan (MAP) that addressed the issues in the Risk and Safety Culture Assessment Report by Billie Garde. Following the presentation, VanWingerden addressed questions from the Board. Garde was on videoconference for this presentation and participated in the discussion that followed.

Jim Herbert asked if snow removal staffing levels are reduced when it is a winter of little snow when a large snow removal crew is not needed, such as this season. VanWingerden explained that the supervisors are always cognizant of adequate staffing, and there are always other maintenance tasks that the snow removal crews can do when there is little snow. He stated they do ramp up for the historically peak seasons so they are in a good position to respond to the big snow events. He said he personally checks in with individuals on the crews from time to time to see how they are doing.

Steve Lewis pointed out the importance of Alyeska passing down its Process Safety Management (PSM) and Management of Change (MOC) plans to its contractors and their crews as it is critical for the entire effort and the MAP to be successful. He thanked Alyeska for their efforts to date.

Wayne Donaldson asked for more detail on the human factors program. VanWingerden stated that they were in the early stages of doing the assessment and developing that program. They need to understand the gaps so they can respond appropriately to what the need is.

Amanda Bauer asked about Alyeska's terms "closed" and "completed" with regard to audits in the MAP/PSM status. VanWingerden responded that when they perform those audits it is an audit of the current state of the system and incorporates the findings and the actions from all the previous audits so that is built into their system. When Alyeska does an audit, it is a look at the current system today, so any gaps or deficiencies that are identified in either the previous audit or new ones those are all captured and incorporated into the most current audit. VanWingerden clarified that by looking at the last audit and then the most current audit, it is a comprehensive view of where we are today.

Bauer asked generally about the status of cybersecurity protections to Alyeska's operations (in light of a cyberattack that hit Alaska Tanker Company in August 2024) and who audits and regulates those protections. VanWingerden responded that there are countermeasures in place to address whatever the threats of the day are, and Alyeska has a robust process in place to identify potential scenarios that could result in a bad day, similar to Alyeska's Process Hazard Analysis. They follow the same approach from a cyber risk standpoint (i.e., identifying where Alyeska's vulnerabilities are and making sure that they have appropriate countermeasures in place). When a high risk or an unacceptable risk is identified, those resources are put into action, and they address the threats immediately.

Dave Reilly of the Alaska Department of Homeland Security & Emergency Management (ADHSEM) added to the cybersecurity discussion and reported a new state agency – the Cyber Infrastructure Security Agency (CISA) - deals with cybersecurity breaches, such as the one that impacted Alaska Tanker Company. It also deals with hacks to the State side. CISA is in the process of completely rewriting the state's Strategic Cybersecurity Plan, which will include a response plan, and an intelligence and information-sharing plan that will be mandatory for all state agencies. It will be written in a way that it can go back into the infrastructure and private partners to help facilitate that. He noted that the federal agencies want to make it more regulatory, but Alaska is really trying to protect that private side and keep the federal regulations out as best they can.

Angela Totemoff commended Alyeska and PWSRCAC for the spirit of partnership in the way it addressed the issues in the Garde Report. She emphasized that this was the purpose for which the Council was formed (to advise Alyeska), and she commended Executive Director Schantz and President Archibald for their hard work. She said she was looking forward to seeing more cooperation and transparency with Alyeska moving forward.

Bob Shavelson asked if Alyeska had done anything internally to upgrade its systems and make any staffing changes. VanWingerden stated that the cybersecurity team is very smart, well apprised of what the current threats are, and they know the vulnerabilities with Alyeska's systems very well because they have implemented those controls that are protecting the system today. He emphasized that the partnership with ADHS&EM, Cybersecurity, FBI, local and other government law enforcement is key to staying apprised of what is happening in the world so the information can be shared across the industry. Those relationships are very important to Alyeska. He also added that from a personnel standpoint some members of the team have come and gone but the team has only grown in number.

Billie Garde (via videoconference) asked VanWingerden questions related to his last statement regarding personnel changes. She pointed out that she is very familiar with the cybersecurity team and apparently in the recent reorganization it eliminated the director of that team who is the only one that had attended the FBI Homeland Security and CIA trainings over numerous years. That team has now been split up and both parts of the team answer to people who she has been told have no experience with Homeland Security, IT, or cybersecurity. She said this information was current as of the previous week. She asked VanWingerden to clarify or correct the information he previously reported.

VanWingerden clarified that the headcount of the expert personnel within the team who actually implement the controls has only grown. He stated that he was aware of the organizational change that was made recently but he was not thinking about that when he made that comment. He

emphasized that the team structure, the expertise that is within those teams, and the individuals who are implementing the controls, is only getting stronger.

Executive Director Schantz thanked Alyeska for approaching the issues in the report seriously and for the positive efforts they put into the MAP to address the concerns.

Billie Garde questioned the application of the PSM standards and status of Alyeska's actual Quality Program. She noted, based on the different communications between PWSRCAC staff and Alyeska, that PWSRCAC staff understood from Alyeska's original comment that it was applying PSM standards across the whole terminal, which was not accurate; rather, Alyeska is applying it to the regulated areas and in some other areas. It was not clear to her what those other areas are. But in the absence of an area covered by PSM standards and looking at both the reduction in people and the reduction in scope which translated to a reduction in the commitments Alyeska made 30 years ago after the whistleblower issues in the late 1990s and 2000s, PWSRCAC was told that QA 36 was still the standard Alyeska was following. She said she went back and looked at the old revision of QA 36 and she did not see how that is possible, given the information that PWSRCAC has received. She asked VanWingerden what revision of QA 36 Alyeska is currently on, who is actually is running the Quality Program, and the number of resources available. She pointed out that she found a consistent concern a few years ago about the lack of resources available to the Quality Program, and that was noted in her report. She asked VanWingerden what had changed in that program that was not addressed in his power point presentation. She said she still believes the program is under resourced for the commitments Alyeska has made, but she would like to hear Alyeska's answer in terms of the resources available within the Quality Department and what the program is.

Garde emphasized that PWSRCAC has brought up these questions before and would bring them up again because, in her estimation, that is the missing piece of the reliance everybody can have on Alyeska's programs. If Alyeska does not have PSM across the site, then it has to be some version of a quality oversight.

VanWingerden did not have the information on hand at that time as to the specific questions from Garde because it is held in other Alyeska departments. Andres Morales asked Ms. Garde to put her specific questions in writing.

Garde said she still had questions but she echoed the gratitude that had been expressed to the company on how they responded to her report and how they have worked through the many issues that were raised.

In response to a question from Archibald about hiring qualified employees, VanWingerden reported it was harder than it was before but Alyeska still gets a lot of applicants and they have not had to hire personnel who are unfit for positions.

ALYESKA/SERVS ACTIVITY REPORT

Andres Morales, Alyeska's Emergency Preparedness and Response Director gave the Alyeska/SERVS activity report for the 4th quarter 2024, and a year-end wrap-up.

VMT Operations:

- Operations: *(as of YE 2024)*

	<u>YE 2024</u>
○ Tankers Loaded	210
○ Tankers Escorted	215
○ Barrels Loaded	158,620,154

	<u>Since start up</u> (as of YE 2024)
○ Tankers Loaded	23,712
○ Tankers Escorted	15,039
○ Barrels Loaded	18,110,742,517

- Safety (TAPS): *(as of YE 2024)*

○ Days away from work cases	1
○ TAPS Combined Recordable Rate %	0.34

- Environment (Valdez): *(as of YE 2024)*

○ Spill Volume (Gallons)	0
○ Number of Spills	0

Fishing Vessel Availability by Port (4Q 2024):

<u>Port</u>	<u>Tier 1</u>	<u>Tier 2</u>
Valdez	27	31
Cordova	26 (+8 Rapid Resp.)	127
Whittier	7	17
Seward	0	27
Homer	0	43
Kodiak	0	43
Totals	68	272

2024 (4Q) Quarter Contingency Plan Activities:

- Completed PWS Tanker Exercise with Marathon on October 15-17, 2024.
- Received VMT PDPCP 5-year approval on November 6, 2024, and minor amendment approval on November 25, 2024; published on December 2, 2024.
- Received VMT ODPCP minor amendment approval for the Barge Allison Creek update on December 30, 2024; published January 7, 2025.

2024 (4Q) Training & Exercises:

- 10/1 Operational Readiness Exercise – Whittier.
- 10/12 Current Buster 8/Crucial Skimmer TF Training.
- 10/15 – 10/17 PSW Shippers Exercise.
- 10/21 Nearshore Training Exercise.
- 11/1 Escort Tug U and J Boom Exercise.
- 11/8 Escort Tug U and J Boom Exercise.
- 11/13 Rapid Response Exercise.

- 11/13 – 11/15 Wildlife Training – Homer.
- 11/17 Emergency Towing Exercise.
- 11/20 IMT Notification.
- 11/25 Unannounced QI Notification.
- 12/15 Current Buster 8/Crucial Skimmer TF Training.

2025 Major Maintenance.

- Tank 5 Internal API 653 Inspection.
- 48 inch ILI of Crude Oil Branch Lines to Tank 5.
- BWT Inspect West Manifold to B-header Termination Vault (879 ft.).
- Marine Structures Coating Repairs Berth 5.
- Reef Island Power Improvements.
- Berth 4 Foam System Transition.
- BWT DAF Cell 5 Inspection and Repair.
- External Coating of Tank 3 and 4 (VMT-Crude).
- 500-2 Refurbishment.
- Edison Chouest Contract Extension – extended to June 20, 2033.

In response to a request from Jim Herbert for more detail on the substitute fire suppression foam that Alyeska has selected, Morales did not have the details on hand at that time but committed to pass the request back to his team to provide it to the POVTS Committee subsequent to this meeting.

As to the 500-2 barge, Morales reported that the plan is to refurbish that vessel completely over the next couple of years and the work was currently out for bid.

Morales gave a brief overview of weather conditions, timing, and schedules that have to be met in order for the crews to be able to apply the external coatings to the crude Tanks 3 and 4.

EXTERNAL OPENING COMMENTS – TAPS SHIPPERS, OWNER COMPANIES, AND PILOTS

SOUTHWEST ALASKA PILOTS ASSOCIATION (SWAPA)

Capt. Ian Maury reported that SWAPA currently has 12 full pilots and they are the only pilots working the TAPS traffic in Prince William Sound. In addition, there are five deputy pilots, all of whom are working towards full pilot certification in the next three years, and seven trainees. This will put SWAPA up in personnel for the next three/four years. There were four retirements in 2024, so that puts their personnel numbers flat for 2025 but they are looking to increase those numbers as TAPS throughput is expected to increase and cruise ship traffic is expected to increase significantly in the Prince William Sound when the fully functioning dock opens in Whittier and Viking Cruises double its port calls into Seward.

He reported that a big concern for SWAPA is the non-functioning weather buoys and navigation lights. He reported that he had spoken to the Admiral of District 17 in December and it did get addressed in January. Her response was that USCG's focus was primarily on the new cutters that were coming into Alaska (i.e., not buoys and navigation aids). Maury urged everyone to exercise caution on the water and to stay on top of USCG as to the non-functioning weather buoy and navigation lights issues.

Dave Janka pointed out that if there is ever an incident and the SERVS fleet is called out, they are not as familiar operating in some of the areas where the navigation lights are not working, especially at night.

Jim Herbert asked if SWAPA would be willing to send a letter about the non-functioning navigation aids and the weather buoys to bolster the Council's ammunition about the importance of this equipment to navigation and safety. Maury stated that he would pass this request back to the current SWAPA administration.

He also added that the Marine Exchange has been tasked with taking over certain VHF stations and other things that USCG used to maintain that were falling into disrepair, and he has wondered if they might be brought in to help with the buoys.

A general discussion followed of SWAPA procedures when tankers are transiting or leaving the VMT dock in inclement weather.

Referring to the changing throughput projections and the changing ownerships in the industry and markets, Steve Lewis pointed out that Prince William Sound will see more foreign flagged vessels, and more vessels that have not been to Prince William Sound before and who have no local knowledge. That is of particular concern to the POVTS Committee.

Lewis added that SWAPA had provided input in the past on another POVTS project – Miscommunications in Maritime Contexts – and the committee appreciated the input SWAPA had given so far and welcomed the organization's continued contributions in the future.

Archibald expressed appreciation to Maury/SWAPA for the organization's insight and contributions to PWSRCAC's understanding of Prince William Sound's marine traffic operations.

[Remaining External Opening Comments of TAPS Shippers & Owner Companies would continue after External Opening Comments of Ex Officios]

Lunch Break: 12:05 p.m. – 1:00 p.m.

EXTERNAL OPENING COMMENTS – EX OFFICIOS

U.S. DEPT OF THE INTERIOR (DOI)

Lisa Fox from the Environmental Policy and Compliance Division of DOI, reported there were a few general items to report for DOI but no regional items of significance to Alaska to report.

A call for nominations for the four open seats (Commercial Fishing, Subsistence Use, Recreation and the At-Large seat) on the EVOS Public Advisory Committee was published in the Federal Register. She thanked Amanda Bauer for her past service as Chair of the EVOS Public Advisory Committee. She encouraged anyone interested in applying for one of the four open seats to contact Amanda Bauer or herself.

She announced that President Trump's nominee for Secretary of the Interior is the Governor of North Dakota, Doug Burgum. His confirmation hearing was held on January 16, and he was expected

to be confirmed. Walter Cruickshank is currently Acting Secretary of the Interior. He was formerly the Deputy Director of the Bureau of Ocean Energy Management (BOEM) nationally.

She briefly listed the various executive orders issued by the new Administration since January 20, which rolled back previous orders of the prior Biden Administration, none of which were specific to Prince William Sound or the TAPS operations.

She reported that to her knowledge there were no staffing changes planned for her office, which in general is tasked with providing guidance, oversight and support for all the NEPA environmental review processes in Alaska and oil spill response support. Those things do not change with the change in a federal administration. Her office's priorities are the same. She also estimated that staffing would probably remain the same under the new administration as well.

She thanked MSU Valdez and CDR Rousseau for being diligent in including resource concerns during the recent incident with the Cordova Provider. All of the federal and state stakeholder agencies were consulted, including U.S. Fish and Wildlife Service. She reported that the vessel was moved from the rocks, refloated at high tide that morning, and was now at the selected scuttle location.

UNITED STATES COAST GUARD (USCG)

CDR Rousseau began her report with an update on the scuttling of the barge Cordova Provider that occurred that morning in Prince William Sound. The barge broke away from its integrated tug on January 11, and it subsequently began to break up in the heavy weather and storm in Prince William Sound that came in not long after that. She expressed appreciation and kudos to the Alaska Dept. of Environmental Conservation (ADEC) and the Alaska Dept. of Natural Resources (ADNR) for their assistance in ensuring all the environmental considerations were in alignment with protocols, and she added that it was a good learning experience for all the responders. The final resting place of the vessel is approximately two nautical miles south of Axel Lind Island, which is not only the best and closest spot to ensure the safety of the crew but also the deepest spot within 100 nautical miles out in the Gulf of Alaska. Once MSU Valdez is given the exact coordinates, they will be passed up to District 17 in Juneau. The Coast Guard Waterways Office is responsible for communicating those coordinates and any other pertinent information to the Office of Coastal Surveys to update the charts. A Marine Safety Information Bulletin (MSIB) for mariners was issued. Unfortunately, the USCG's .gov delivery system which is the software that is normally used to send their MSIBs was not currently working, so the bulletin was sent to USCG's port partners in Prince William Sound. They are working to fix the .gov delivery system.

CDR Rousseau updated the Board on MSU Valdez's concern with the MSIB and the enforcement of a law that was published years ago for non-operating individuals, particularly on oil spill response vessels, like fishing vessels. This MSIB is of concern for MSU Valdez because it has the potential to impact mariners who would not otherwise need to be credentialed to do some oil spill response work on the waterways. MSU Valdez is working with District 17 to get guidance on that and to find out if there is something in the Valdez Captain of the Port "toolbox" to ensure that they are not holding the vessels of opportunity (VOOs) to an unreasonably strict standard that would then hamper MSU Valdez's efforts for oil spill cleanup in the event of some sort of catastrophe. Currently, there is not enough guidance on that yet, but CDR Rousseau was communicating the concerns of MSU Valdez and working with its other port partners to determine the extent of that impact so they, in turn, can communicate that to both District 17 and with USCG Headquarters.

CDR Rousseau also addressed some of the cybersecurity questions that were raised earlier in the meeting. She reported that Cybersecurity and Infrastructure Security Agency (CISA) is one of the main federal agencies that oversees cybersecurity. On January 17, 2025, USCG published a notice in the Federal Register inviting comments about new cybersecurity regulations USCG intends to publish by this summer. An MSIB has been issued about the new cybersecurity regulations, with links for the public to comment. These regulations provide a baseline of USCG requirements on domestic vessels and foreign flagged vessels and facilities currently regulated by USCG to protect the marine transportation system. The final rule is expected to be issued in July of this year. Some of the main highlights it includes are requirements for all cybersecurity incidents to be reported to the National Response Center, similar to an oil spill or a hazmat release; it will require additional cybersecurity training for personnel on ships and in facilities and for overseeing that training. It will stipulate the designation of a cybersecurity officer; it will also require a cybersecurity assessment within 24 months of the date of the final rule, as well as the development of a cybersecurity plan for USCG's approval in the future, with the inclusion of requirements for drills and exercises.

CDR Rousseau spoke of the specific cybersecurity incident that happened during the summer to Alaska Tanker Company and said that from a COTP perspective, she could not have asked for a better group of people to work with, pointing out that until this final rule comes out cybersecurity initiatives have been entirely voluntary across the United States (i.e., companies are not required currently to work with USCG or to do anything that requires USCG approval with many of those cybersecurity incidents). It has been one of USCG's concerns, but Alaska Tanker Company was forthright and proactive, and they even invited the USCG cyber protection teams from Headquarters to look at all their systems, and that was completely voluntary. It helped USCG learn things to bolster their cybersecurity protections in the future. She surmised that Alyeska and the Alaska Tanker Company are well ahead of their counterparts in other parts of the maritime industry in cybersecurity, and she praised others who have worked really hard on port cybersecurity since then, and she welcomed any other opportunities that PWSRCAC may see in the future to help raise awareness on cybersecurity and bring it to the forefront more than ever before.

In her final comments, CDR Rousseau emphasized the importance of the choice of words, both verbally and in reports, at the Council's meetings. She corrected a couple of statements she had heard in reports earlier that may have conveyed an inaccurate or an inadequate picture of what is going on, particularly with regard to USCG. One of those statements was in regard to the weather buoys and aids to navigation in general, to wit, that "USCG had decided to *extinguish* the aids to navigation in the darkest of times," or something along those lines. She pointed out that "extinguished" does not mean an intentional act by USCG. She stated emphatically that USCG does not turn out navigation lights. When a navigation aid is termed "extinguished," that is the result of some sort of failure on that aid to navigation. The same is true with NOAA; NOAA does not intentionally turn off the weather buoy sensor. She emphasized that word choice is important because it otherwise paints the picture that something was intentional and unduly puts the port at risk, and that is not the case.

The other comment she heard was that USCG was trying to enforce rules on vessels of opportunity (VOOs) that do not necessarily support oil spill response. She stated that is not an adequate picture either, as it looks like the USCG had some part in that decision. The VOO regulation is a requirement by law that Congress passed and USCG is required to enforce the laws they pass. Rousseau said MSU Valdez has full confidence that USCG Headquarters is working to rectify the interpretation of that law, and MSU Valdez has been working with Headquarters and with District 17 on how to

interpret that law and perhaps find a workaround so there is no diminishment of capability and capacity in the oil spill response regime in Prince William Sound. She emphasized that MSU Valdez had worked extensively with PWSRCAC and with Alyeska to determine those impacts and to communicate the needs of USCG and Prince William Sound. She did not want anyone to get the impression that anyone is okay with the diminishment of oil spill response capacity or capability in Prince William Sound. All of the port partners, including PWSRCAC, had done a lot of advocacy on the Hill and at District 17 to make this better for oil spill response in Prince William Sound. She pointed out that if MSU Valdez does have to implement the regulation, it will be out of their hands, but they will absolutely advocate for better representation and for a long implementation of the rule so that there is no diminishment of the oil spill response capability and capacity.

Following her report, CDR Rousseau fielded questions from the Board:

Jim Herbert asked whether the same rules that are coming out in this final rule are applicable to the foreign flagged vessels that are likely to be coming in and loading oil for shipment to Asia. CDR Rousseau stated that under the MSIB that was issued, the rules do not apply to foreign flagged vessels at the present time, and she explained the difference in treatment of domestic and foreign flagged vessels. Domestically, USCG can only control laws and regulations for U.S flagged vessels in the United States. That does not mean that there are no rules or regulations for foreign flagged vessels, but they are governed instead by international treaties that are worked on at the International Maritime Organization, which is a United Nations organization. Security would be discussed at these Conventions and then each one of those signatory countries, like the United States, goes back and says this is what we will enforce in the United States, but it is all done by group work with other countries. So, they will still be vetted like domestic vessels, but under different Conventions.

Herbert asked how the COTP is making decisions about closure conditions at Hinchinbrook Entrance without the Seal Rocks, Cape Cleare, and Cape Suckling buoys' information. CDR Rousseau explained that the buoy information is not the sole source on which they base the decision whether or not to close Hinchinbrook Entrance. The COTP can pull information from other sources to make those determinations, including other eyewitness information from other mariners, the National Weather Service, as well as applying "prudent seamanship" norms.

PWSRCAC's Joe Lally spoke of the increased risk of having the three buoys out of service at the same time, which sometimes requires the Port Etches tug to go out and do weather reports at Hinchinbrook Entrance. If the Entrance is closed with two tankers outbound, then the risk to those tugs and their crews that are escorting the outbound tankers goes up exponentially. He asked everyone who has an interest in resolving this situation at NOAA, NDBC, Alyeska/SERVS to request that the Alaska congressional delegation provide the resources and funding these entities need to get these buoys up and running again. He disagreed with the inference that the buoys were nice to have but not essential to safe operations. He emphasized that the escort system in Prince William Sound is reliant on the Seal Rocks buoy to determine Hinchinbrook Entrance open/closure conditions; if it is not working, with outbound laden oil tankers underway when Hinchinbrook Entrance is closed, then MSU Valdez has to search around for other sources which may also be down. If weather conditions preclude the Coast Guard from reopening the Entrance, the outbound tankers will be required to proceed to safe anchorage or conduct racetrack circles in Prince William Sound until the Entrance is re-opened. All of these operations increase the risk of an incident or accident.

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 September Board meeting.

- **Staffing.** The Central Region (Valdez office) is fully staffed, and employee retention has remained steady with 99% retention.
- **Spills responses.** There were no spills to report in the Central Region.
- **Prince William Sound Area Plan Updates.** In September 2024, ADEC joined with USCG and the U.S. Environmental Protection Agency (EPA) in a workshop aimed at moving the Prince William Sound C-Plan to the new Area Plan architecture. This will achieve uniformity with all areas within the country. The process is still ongoing. The anticipated completion will be sometime in March at which time the plan will go out for public comment along with a redline version of some of the changes that have been made.

The next Prince William Sound Area Committee meeting will be on April 9, 2025, in Valdez, and also virtually. Rodriguez expressed appreciation for the collaboration of PWSRCAC in the process, and specifically Jeremy Robida, on the Copper River Geographic Response Strategies (GRS) Project Subcommittee.

The Arctic and Western Alaska Area Plan is expected to go out for public comment early in February. New language regarding the Regional Stakeholder Committee (RSC) is expected to be included in the plan, and during the public comment period the new Liaison Officer and RSC member job aids will be highlighted. Rodriguez again acknowledged the involvement of PWSRCAC staff: Jeremy Robida, Linda Swiss, and Joe Lally.

- **Prince William Sound Tanker and Terminal Oversight.**
 - ADEC personnel have continued to complete tank vessel inspections for vessels that call at the VMT.
 - ADEC staff attended the Andeavor shipper exercise in October and is planning to attend the Polar Tankers Prince William Sound shipper's exercise in May.
 - Staff has been preparing for the anticipated upcoming submittals of new shippers' c-plans (i.e., Santos, TeeKay Shipping, and Repsol).
 - VMT Plan renewal was approved on November 6, 2024, and included the 2023 Article 4 regulatory updates as well as general updates. ADEC has received the informal review request from PWSRCAC. A decision is expected to be issued sometime in February.
 - The PPR Division initiated two regulatory updates to 18 AAC 75 Art. 1, and Art 4. Both are under legal review, then they will go out for public review.
 - The Prince William Sound Shippers' exercise will be held May 13-15, 2025, in Valdez.

Following Rodriguez' report, he answered questions and engaged in a general discussion with the Board on the following topics:

In response to a question about staffing in the Valdez office, Rodriguez reported there is a State On-Scene Coordinator who oversees all the activities of the four environmental protection specialists assigned to the office. There are also engineering staff (two in Wasilla, and one in Anchorage) who are assigned to the Valdez office, but they are not based in Valdez.

Regarding c-plans for the spot charters, Rodriguez stated that spot charters are required to have approved c-plans before they can enter Alaska waters, and in addition they have to have financial responsibility approvals.

Mako Haggerty inquired as to the status of the May 2022 Notice of Violations for the tank vent incident. Dylan Morrison of ADEC's Division of Air Quality stated that he could not discuss the status of an ongoing investigation, but he could state that ADEC is still working towards a resolution of those 22 violations that were identified.

NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION (NOAA)

Liza Sanden, Scientific Support Coordinator for Alaska, representing the Office of Response and Restoration gave some general comments for NOAA:

She announced that the Office of Response and Restoration has planned two upcoming trainings for spill responders: One is another training on shoreline cleanup and assessment techniques (SCAT courses), possibly in April. In 2024, there were responders from Alaska who participated, and they anticipate a similar number this year. In October 2025, NOAA will be hosting a Science of Oil Spills class in Alaska for Alaska responders. In addition, they have had ad hoc requests for trainings.

Sanden shared on behalf of LCDR Caroline Wilkinson from the Office of Coast Survey that both Valdez Harbor and possibly Valdez Glacier Lake were on the schedule for updated bathymetric surveys this upcoming summer. Areas of focus are landslide-generated tsunamis, which brings together multiple NOAA programs, whether its surveying Valdez Lake for a risk of a landslide-generated tsunami impacting that area or looking at what the response would actually involve for all the other programs.

Recapping services provided by NOAA's Office of Response and Restoration in 2024, and specifically the Emergency Response Division, Sanden reported there were 177 responses that the division supported across the country and 10 foreign countries; 27 of those were in Alaska, 27 also came from the state of Washington and then approximately 16 were from California, totaling over 40% in the Pacific states.

BUREAU OF LAND MANAGEMENT (BLM)

Reid Olson (via videoconference) reported that since the last Board meeting in the southern region of TAPS, BLM's activities have included:

- An evaluation of the October 3 Tiekell River combined resource exercises. Participants included Alyeska VMT and SERVS personnel.

- Also, on October 3, BLM conducted two containment site inspections south of Glennallen: containment site 11-6 (Little Tonsina River) and containment site 12-3C (Tiekel River). In December, BLM transmitted its VMT c-plan concurrence letter to Alyeska for the annual concurrence. BLM also attended the January 17 PWSRCAC Oil Spill Prevention and Response Committee meeting. BLM is also planning to attend the February 11 VMT Coordination Workgroup meeting.

Olson announced that Erica Reed is now the Acting BLM State Director.

With regard to the Alaskan Native utilization agreement, the third quarter of 2024 numbers reported for the established 20% Alaska Native employment goal included 25.4% for Alyeska; 24.6% for their designated and reporting contractors; and 25% for the combined TAPS workforce.

In response to a question from Jim Herbert about three contractors not in compliance with the Alaska Native hire requirements and how Alyeska deals with that non-compliance, Olson deferred to Alyeska for response because BLM can only report that which is officially released to them from Alyeska as overall compliance, and the fourth quarter data had not been released to date. However, Olson said it appeared Alyeska met its 20% overall compliance goal anyway and therefore was in compliance with BLM requirements under the terms of the TAPS grant and lease.

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

No report.

ALASKA DEPT. OF FISH & GAME (ADF&G)

Jonathan Kirsch, ADF&G's ex officio representative on the Council, was present virtually but had no updates/comments at that time.

ALASKA DEPT. OF NATURAL RESOURCES (ADNR)

Tony Strupulis pointed out that ADNR's jurisdiction was mainly on the pipeline itself and not a lot of regulatory authority over the Valdez Marine Terminal (VMT). Its regulatory authority ends at the pig receiver, and so the downstream activities past that point are not part of ADNR's purview.

He reported that his office was fully staffed for its TAPS positions. In the winter months ADNR does not do a lot of field work, but they are using this time to train on drones in order to use them for some field work during the summer and increase some of their efficiencies.

U.S. FOREST SERVICE (USFS)

No report.

OIL SPILL RECOVERY INSTITUTE (OSRI)

Scott Pegau gave a brief update on some of OSRI's projects that are ongoing and some they are exploring that may be of interest to PWSRCAC.

Ongoing projects:

- OSRI has a focus on subsistence foods and trying to improve knowledge about the effects of oil spills and oil on subsistence foods. OSRI currently has a contract out for the state of knowledge of baseline conditions of hydrocarbons in subsistence foods.

- OSRI has a contract that is looking at photo-enhanced toxicity, going beyond just exposure to raw oil, but what happens when it is exposed to light.
- OSRI is currently working with USCG to support development of mosaic-ing software for UAV imagery when there is no land in sight (e.g., how to mimic images of open ocean).

Projects they are considering in the future include:

- Seabird surveys, particularly around the Kayak Island area, trying to expand knowledge of the status of the current seabird usage.
- Recovery of a waste management calculator which was once developed for the Emergency Preparedness, Prevention & Response (EPP&R) Arctic Council. It calculates how much waste is expected to be generated during a spill response. OSRI is looking to expand that EPP&R project, which did a circumpolar oil spill response viability analysis, and use that analysis around the Alaska coast. EPP&R covered the United States' definition of Arctic, and OSRI is looking to bring that down into the Gulf of Alaska and run it down the rest of the coast. Pegau pointed out it is a neat product that's still under development.
- Development of a remote learning Science of Oil Spills course. Work on this is somewhat dependent on Pegau's available time, given the other ongoing projects. He hoped to finish it sometime soon.
- Development of a "gavage dummy" of a Mallard duck to be used in Wildlife Training. OSRI financed the design and 3D construction of a silicone prototype which will allow students to practice properly delivering a prescribed amount of saline into a bird's stomach via a tube to stabilize the bird during wildlife recovery and rehabilitation efforts. PWSRCAC Board member Jim Herbert and Barbara Callahan (Senior Director of Response & Preparedness Services at the International Bird Rescue) assisted with this project.
- A photo time series of Mearns Rock (as well as other locations in western Prince William Sound that already have a photo time series). The OSRI website has links where one can submit photos so OSRI can maintain these time series, many of which go back to 1989. OSRI is currently using some of these time series to look at the variability of the intertidal system in Prince William Sound.

ALASKA DIV. OF HOMELAND SECURITY & EMERGENCY MANAGEMENT (ADHS&EM)

Dave Reilly explained that ADHS&EM is part of the U.S. Department of Military & Veterans Affairs and is in the same building on Joint Base Elmendorf Richardson (JBER) as the National Guard and USCG, and it works closely with ADEC. In the event of an oil spill, ADHS&EM will support ADEC in the Unified Command through Alaska's Emergency Operations Center, where ADEC and USCG all have a seat at the table.

He expressed appreciation to Amanda Bauer for her questions on cybersecurity. He noted that the entire program has grown tremendously and it is no longer just malware and ransomware that they are dealing with. There are foreign actors trying to get into U.S. systems to disrupt and takeover U.S. infrastructure operations, such as energy and water systems, etc.

He reported that ADHS&EM responded to 13 State of Alaska declared disasters in 2024, three of which were elevated to federal disasters which brought in federal funds. There were also a couple of additional state-declared disasters from 2024 that could be declared federal disasters in 2025. The division also sent personnel to North Carolina, Florida, and Georgia to assist with all the hurricanes and tropical storms throughout the southeastern United States.

Upcoming events in 2025 are the Emergency Management Preparedness Conference in Anchorage, April 15-17; a rehearsal exercise with the Alaska Partnership for Infrastructure Protection (APIP), March 25-27, the scenario for which will be a 1964-type earthquake in January, specifically looking at what the private partnership can do to help with recovery. The scenarios will be the Port of Anchorage, Valdez, and Prince William Sound.

Reilly reported that before the 2018 earthquake, there were only one or two declared disasters a year. Since 2018, the numbers have significantly ramped up, and the 13 disasters declared in 2024 was a record-breaking total. He also added that the ADHS&EM office is fairly small with only 64 personnel total. He, as the State Lead Planner, is in charge of the statewide emergency operations plans, but when the State Emergency Operations Center is activated during a declared emergency, he has to assist in the Emergency Operations Center and his other duties take a back seat, which is causing staffing issues and disrupting his regular duties.

EXTERNAL COMMENTS – TAPS SHIPPERS, OWNER COMPANIES, AND PILOTS (Cont.)

ALASKA TANKER COMPANY (ATC)

Chris Merten gave a 2024 year-end review of ATC's statistics and operations and a look at 2025 fleet operations:

- ATC had a busy year with 61 total voyages, transporting 60 million bbl. of crude oil, of which 50 voyages were from the VMT, amounting to approximately 48 million bbl. There were zero work injuries, no losses of containment, and no spills to sea.
- The Alaska Frontier was reactivated. She entered the shipyard in Singapore on June 5, 2024, and after a lot of work and manhours and an investment of over \$30 million by ATC/OSG, she sailed from Singapore and will go into service in the Gulf of Mexico [America] on February 4, 2025. They will complete a few more upgrades before she goes on hire.
- Last fall, ATC started a lifecycle upgrade on the Alaska Explorer. This was the first time upgrades of the engines were done while a tanker was in service. ATC had just that day received ABS approval for commissioning their first lifecycle engine and they will continue with the other three engines.
- Coming in 2025, the Alaskan Explorer will go into shipyard in France for all her engine retrofits, and the Alaska Frontier will take her place.

Other company news was that OSG and ATC were purchased by Saltchuk, a Seattle-based transportation family of companies.

Merten reported that while he could not talk much about the cybersecurity incident that occurred at ATC in August 2024, he was able to divulge that it was a shoreside business network intrusion. ATC went through all the reporting requirements and nothing affected the ships from an operational technology standpoint.

Steve Lewis applauded ATC on its lifecycle upgrades and dual fueling capabilities on its engines. He asked Merten if he would arrange a presentation on these upgrades to the POVTS Committee at one of its future meetings.

POLAR TANKERS

Andrea West reported Polar Tankers successfully completed 101 loads in 2024 and transported 78.3 million bbl. of ANS crude. Two ships will be going to shipyard in 2025 for their regularly scheduled maintenance: the Polar Endeavour in late April, followed by the Polar Discovery in late July. In the fall, Polar will hold its bridge resource management classes.

In response to a question from Jim Herbert about the new shippers who will be joining the TAPS trade, West confirmed that they will be invited into the Response Planning Group (RPG) but the schedule of exercises is still up for discussion. They will be part of the Prince William Sound Tanker C-Plan. The RPG will figure out the exercise schedule once the new shippers have received their approvals from ADEC.

Steve Lewis extended the same invitation to West, in her capacity both as the representative of the RPG and of Polar Tankers, to make a presentation to the POVTS Committee on their future plans for meeting the IMO greenhouse gas emission reductions (GHE). She did not have information at that time but they were having discussions internally. She committed to keeping POVTS updated as they move forward on those discussions.

CROWLEY ALASKA TANKERS (CAT)

Ingo Rose reported the CAT fleet moved approximately 5.5 million bbl. of oil from the VMT in the 4Q 2024, and 1.5 million bbl. to date in 1Q 2025.

The Washington underwent her second special survey in Singapore in June and July 2024. She reentered service on August 8 and the turnaround was about 32 days. The California went into dry dock in September of last year. Her turn around was 36 days and she returned to service on November 20, arriving at Cape Hinchinbrook after a rather delayed ballast transit to Valdez due to weather.

Rose gave a brief update on the joint venture known as Fairwater. Crowley Maritime entered into an agreement with a consortium known as Seabulk, headquartered in Florida, to start a joint venture called Fairwater. Fairwater began operation on August 1, 2024. Since then both companies have contributed personnel and marine assets to Fairwater. Currently, there are five marine assets that have yet to make the transition and that includes the Washington and the California. Those two vessels will be the last two assets transitioning, currently queued up for late February and the first half of March, along with three more shore personnel transitioning on March 1.

Steve Lewis extended the same invitation to Crowley Alaska Tankers to make a presentation to the POVTS Committee on Fairwater's plans to meet the IMO regulation for greenhouse gas emissions.

HILCORP

Rob Kinnear reported that Hilcorp closed out 2024 having done a total of 51 voyages and 49 million bbl. from the VMT, loading a total of 48 million bbl. with the ATC vessels it has under charter (the Alaska Navigator and the Alaskan Legend), and one additional foreign flagged voyage last year in February, adding another 1 million bbl. The total volume carried from Valdez was down approximately 7 million bbl. compared to 2023.

In November 2024, Hilcorp completed an acquisition of ENI's interest on the North Slope, which includes the Nikaitchuq and Oooguruk fields adding approximately 6.5-7 million bbl. of additional oil for Hilcorp to carry out of Valdez in 2025. That will bring Hilcorp back to its 2003 levels.

Hilcorp had no shipyards in 2024 on the ATC vessels. The outlook for 2025 is that with the additional oil from the ENI acquisition they will probably need several more foreign flagged spot charters to accommodate that volume. The first one, the Sonangol Huila is scheduled arrive in Valdez to load cargo on January 25, and ADEC will be there when she arrives.

Lewis reiterated the same invitation he made to the other shippers that POVTS would be interested in what Hilcorp and/or its foreign flagged vessels are doing to further decarbonization of its vessels.

Jim Herbert asked if any of the foreign flagged charters would be new to Alaska waters and where they would be heading. Kinnear reported that only one charter was scheduled so far, a Stena-managed ship. She has not been to Alaska before but other Stena charters have. It will depend on the timing of when Hilcorp needs to load cargo which ship is chartered, and he did not know when or which vessels Hilcorp will be chartering beyond this current one which is destined for China.

Kinnear explained the vetting process that foreign flagged vessels go through for Hilcorp.

MARATHON PETROLEUM

No report.

Break: 2:58 p.m. – 3:10 p.m.

For the Good of the Order

Following the break, President Archibald announced that Item 4-5 Report Acceptance: 2024 Long Term Environmental Monitoring on this day's agenda will move to the following day. The following day's agenda will start at 8:15 a.m.

4-1 UPDATE ON REQUEST FOR INFORMAL REVIEW OF THE VMT C-PLAN

PWSRCAC Project Manager Linda Swiss and contractor Brett Tostevin presented an update on the renewal of the Valdez Marine Terminal Oil Discharge Prevention Contingency Plan (VMT C-Plan) which was approved by ADEC in conjunction with its Basis of Decision document on November 6, 2024. The renewal is effective November 6, 2024 until November 5, 2029. This is the first renewal since the new c-plan regulations were passed in 2023. There were five Conditions of Approval (COA) and 19 issues in the Basis of Decision document.

Swiss outlined each COA and recapped the 19 issues in the Basis of Decision, noting that the recent approval includes as COA #1 a required evaluation of the East Tank Farm Secondary Containment Area.

PWSRCAC'S concerns with the renewal and the COAs resulted in PWSRCAC's filing a Request for Informal Review as to COA #1 – the Prevention Plan's Secondary Liner Integrity Evaluations. The Request for Informal Review was made and accepted by ADEC's SPAR Director Teresa Melville on December 3, 2024. Director Melville has determined that the Request for Informal Review has merit under 18 AAC 15.185(b) and a decision on the request was expected by February 14, 2025.

A briefing sheet was included in the meeting notebook as Item 4-1.

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

CONSENT AGENDA

3-1, 3-2, 3-3

There were three items on the consent agenda (3-1, 3-2, 3-3):

- **3-1 DELEGATION OF AUTHORITY OF MULTIFUNCTIONAL COPIER/PRINTER LEASE AGREEMENTS**
Authorization for 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.
- **3-2 APPROVAL OF FY2025 BUDGET MODIFICATIONS**
Approval of the FY2025 budget modifications as listed on the sheet provided (under Item 3-2), with a total revised contingency in the amount of \$465,771.
- **3-3 APPROVAL OF TRANSCRIPTOMICS RESEARCH CONTRIBUTION TO THE USGS**
Approval of a transfer of \$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.

Bob Shavelson moved to approve the consent agenda as presented. Dave Janka seconded and the motion passed without objection.

4-3 REPORT ACCEPTANCE: ASSUMPTIONS & CALCULATIONS USED IN TANK VENT HEADSPACE REPORT

PWSRCAC Project Manager Sadie Blancaflor, along with contractor Bill Mott of Taku Engineering, presented an overview of the final report titled "2022 Tank Pressure/Vacuum Pallet Damage: Crude Oil Storage Tank Headspace Gas Assessment" which 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 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 (VMT) East Tank Farm crude oil storage tanks' headspaces calculated to be above the lower explosive limit.

A briefing sheet and a copy of the report were included in the meeting notebook under Item 4-3. Mott reviewed the report's analysis and conclusions with the Board. The Board was asked to accept the report as meeting the terms and conditions of the contract with Taku Engineering and for distribution to the public.

Amanda Bauer **moved 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, as meeting the terms and conditions of Contract number 5000 and for distribution to the public. Angela Totemoff **seconded** and **the motion passed** without objection.

EXECUTIVE SESSION

An executive session was scheduled on the agenda.

Ben Cutrell **moved to go into executive session** to discuss the following items:

- Approval of the Anchorage Office Lease and Relocation; and
- The Annual Review of the Executive Director’s job description and performance goals.

Angela Totemoff **seconded** and **the motion passed** without objection. Legal counsel Joe Levesque, Executive Director Donna Schantz, Director of Finance Ashee Hamilton, Director of Communications Brooke Taylor, Director of Programs Joe Lally, and Director of Administration Hans Odegard were asked to join the Board for the executive session.

RECESS

The open session recessed at 4:24 p.m. to reconvene the following day at 8:15 a.m.

Friday, January 24, 2025

CALL BACK TO ORDER

President Archibald called the meeting back to order at 8:15 a.m. on January 24, 2025. A roll call was taken. There were 14 Directors present at the time of the call back to order: Archibald, Bauer, Bender (via videoconference), Cutrell, Donaldson, Hasenbank, Herbert, Janka, Malchoff, Moore, Totemoff, Vigil (via videoconference), Williams, and Zinck. The following arrived shortly thereafter: Brittain and Crump (concurrently, 8:19 a.m.), Shavelson (8:20 a.m.), Haggerty (8:22 a.m.), and Beedle (8:42 a.m.).

REPORT ON EXECUTIVE SESSION

President Archibald reported that the Board had discussed the items as stated on the executive session agenda and was ready to take action:

- **4-4 APPROVAL OF ANCHORAGE OFFICE LEASE**

The Board was asked to authorize the Executive Director to sign a lease with Michael Investments, LLC, to relocate the Anchorage office location to the RAM Building at 2525 Gambell Street, Suite 305, Anchorage, AK 99503.

The current lease for the Anchorage Office at 3709 Spenard Road, Suite 100, Anchorage, is due to expire on June 30, 2025. Notice of lease termination or election to exercise the second one-year lease extension of the current lease has to be given by March 31, 2025, with the rate continuing at \$5,950.95 per month.

The proposed new lease has an initial term of 62 months, commencing May 1, 2025, and ending 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. Additional details of the lease terms and information were in the briefing sheet 4-4.

Michael Vigil **moved to 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 May 1, 2025, in a not-to-exceed amount of \$533,989 over the five-year term plus any pass-through costs, and to terminate PWSRCAC's current lease at 3709 Spenard Road, Suite 100, by the March 31, 2025 deadline. Michael Brittain **seconded** and **the motion passed** without objection.

- **ANNUAL REVIEW OF THE EXECUTIVE DIRECTOR'S JOB DESCRIPTION AND PERFORMANCE GOALS**

President Archibald reported that the Board reviewed and discussed the Executive Director's job description and performance goals in executive session. He reported that the Board was very pleased with Donna Schantz's performance. The Board would like to add an additional goal to her job description/performance goals relating to public relations:

Angela Totemoff **moved** and Ben Cutrell **seconded** to add a bullet point to the Executive Director's job description and performance goals under Public Relations, to wit: "Ensure the execution of the Strategic Outreach and Communications Plan."
The **motion passed** without objection.

OVERVIEW OF CERTIFICATE OF INSPECTION REQUIREMENTS FOR VESSELS OF OPPORTUNITY (VOOs)

PWSRCAC's Director of Programs, Joe Lally, updated the Board on the status of the USCG's potential implementation of vessel inspection requirements to the SERVS fleet of uninspected vessels (also known as vessels of opportunity) (350 total) that form the backbone of the oil spill response fleet in Prince William Sound that has been an ongoing critical concern of the Council for many years.

As explained by Lally, this regulatory issue last came to the forefront in 2019, when USCG was considering applying the Subchapter M, Towing Vessel inspection regulations to the SERVS uninspected response fleet because they tow boom and micro and mini barges during oil spill drills, exercises, and actual spills. These micro and mini barges play a major part in providing temporary storage during a response and they are specifically built with a capacity of less than 250 barrels based on USGS's regulatory definition of "oil in bulk."

PWSRCAC discussed this issue at length with USCG with a focus on the detrimental impacts the decision to apply USCG vessel inspection regulations to the SERVS uninspected fleet would have on the Prince William Sound oil spill prevention and response system.

Based on these discussions, USCG District 17 (D17) attended PWSRCAC's January 2020 Board meeting to announce and implement a D17 Marine Safety Information Bulletin (MSIB 01-20) that provided the exemptions needed to resolve this regulatory issue. At that time, PWSRCAC and all other involved parties believed that this issue was resolved permanently, but unfortunately it was not.

In 2022, legislative language that raised the issue of USCG applying vessel inspection regulations to the SERVS uninspected fleet was put into the 2023 National Defense Authorization Act and passed into law. The language stated “Not later than 180 days after the date of this Act, the Secretary shall review existing Coast Guard policies with respect to exceptions to the applicability of Subchapter M of Chapter I, of Title 46, Code of Federal Regulations for – (1) an oil spill response vessel, or a vessel of opportunity, while such a vessel is – (A) towing boom for oil spill response; or (B) participating in an oil spill response exercise; and (2) a fishing vessel while that vessel is operating as a vessel of opportunity.”

As a result of this language that passed as part of the 2023 NDAA, USCG Headquarters Office of Commercial Vessel Compliance (CG-CVC) drafted and implemented USCG-CVC Work Instruction (CVC-WI-032(I)) in June of 2023. This Work Instruction was deeply concerning to the Council as it appeared to walk back the exemptions that USCG D17’s MSIB 01-20 put in place in 2020.

This Work Instruction titled “U.S. Flagged Vessels Inspected Under Multiple Subchapters” (Multi-Service) now expanded the potential applicability of USCG inspection regulations for VOOs beyond just the Subchapter M towing vessel regulations. The Work Instruction now appeared to be applying other vessel inspection regulations like Subchapter I for cargo vessels, and Subchapter T for passenger vessels, and other regulations to the SERVS uninspected response vessel fleet. PWSRCAC continued to express its concerns with the potential adverse impacts the Work Instruction would have on the SERVS fleet.

In April 2024, a PWSRCAC Legislative Affairs Committee (LAC) team comprised of Board members and staff visited USCG D17 in Juneau where the implementation and potential impacts of USCG’s Work Instruction were discussed in depth. The 17th District Commander and her staff provided their perspective on the Work Instruction and said that the final decision would be made at the USCG Headquarters level, with regulatory authorities on the issue lying with CG-CVC (vessel inspections) and the Office of Marine Environmental Response (CG-MER) (oil spill response).

In early May 2024, the same PWSRCAC LAC team traveled to Washington, D.C., and met with the Alaska Delegation and their respective staffs. This VOO issue and the potential adverse impacts that USCG’s Work Instruction could have on the SERVS uninspected vessel response fleet was one of the main issues discussed. The main message from these meetings was that this issue could get fixed legislatively or USCG could fix it through revisions to the Work Instruction.

During the same visit, the PWSRCAC LAC team visited USCG Headquarters and met with multiple offices including CG-CVC and CG-MER, the offices that had primary oversight over the VOO issue. USCG’s Work Instruction was discussed at length and PWSRCAC raised several areas within the instruction that were unclear whether they applied to the SERVS uninspected fleet or not. The CG-CVC’s Office Chief asked PWSRCAC to send a letter requesting clarification on the issues raised during the meeting in an attempt to resolve this issue permanently.

PWSRCAC sent the letter requested by USCG-CVC on May 17, 2024.

The letter requested specific clarification to sections of the Work Instruction pertaining to the applicability of Subchapter M towing vessel inspection regulations to fishing vessels and VOOs towing oil spill response barges with a capacity of less than 250 barrels, the applicability of Subchapter I cargo vessel inspection regulations on fishing vessels and VOOs greater than 15 gross

tons, and requested a clear definition of “oil in bulk” as it would be applied to fishing vessels and VOOs towing oil spill response barges with a capacity of less than 250 barrels.

The primary request in the letter asked USCG whether this VOO issue could be administratively resolved by USCG to exempt the Alyeska/SERVS fishing vessel fleet or if a statutory change would be necessary to resolve it. A few days after the letter was sent, PWSRCAC received a response from USCG-CVC that they had received our letter and that they were working on it. Not long after PWSRCAC received that response from USCG, PWSRCAC received draft VOO legislation from Senator Sullivan’s staff requesting drafting assistance on the proposed language.

It was around this time that an industry/stakeholder workgroup formed, comprised of organizations with a vested interest in permanently resolving this VOO issue.

The workgroup was originally comprised of members from Alyeska/SERVS, PWSRCAC, the Response Planning Group, Alaska Chadux Network, and United Fishermen of Alaska, but over time grew to include members from Cook Inlet RCAC, Cook Inlet Spill Prevention and Response, Inc., Southeast Alaska Petroleum Response Organization, Washington State Maritime Cooperative, and American Waterway Operators. The members of this workgroup provided consensus-based input on the draft legislation, and it was sent in an October 4, 2024 letter to the Chairs and ranking members of the Senate Committee on Commerce, Science and Transportation and to the House Committee on Transportation and Infrastructure for their consideration.

USCG Headquarters also provided input on the draft legislation that the VOO Workgroup submitted which included requirements that would inevitably delay VOO’s supporting an oil spill response. After a period of back and forth, the version of the VOO legislation that came from the Senate included language that required the USCG Officer in Charge, Marine Inspection (OCMI) to approve VOOs prior to their use during an oil spill or during oil spill drills and exercises and other requirements that would delay their use during a response.

As a result, the VOO Workgroup requested that PWSRCAC’s Washington, D.C., legislative contingent advocate for not putting any VOO language into the USCGAA/NDAA, as they would rather have no VOO language included than have flawed language that would be more difficult to revise once passed into law. Around the same time (November 7, 2024), CG-CVC sent a response to PWSRCAC’s letter of May 17, 2024, that requested clarification on their Work Instruction. The CG-CVC letter was sent to the VOO Workgroup members, and it was determined that it did not clarify or address the issues in the Work Instruction that needed to be resolved in order to permanently address the VOO issue.

Since no VOO language was included in the NDAA bill that passed, the other option was for the VOO Workgroup to draft a letter to Senator Sullivan’s staff for the Senator to send the Commandant of the Coast Guard requesting USCG to delay implementation of their Work Instruction and engage with the oil spill response industry and stakeholders to develop a collaborative path forward. This letter was sent to Senator Sullivan’s staff on December 18, 2024.

The most recent update on this issue came from PWSRCAC’s Washington, D.C., legislative monitors who reported that it appears another USCG bill will be introduced in the near future which will fix this issue once and for all. A draft of that legislation is currently being circulated to the VOO Workgroup members for their input before moving it forward for consideration.

Lally emphasized that the bottom line regarding USCG's application of vessel inspection regulations to VOOs is that if this issue is not resolved correctly and permanently, it will require Alyeska/SERVS to build over 150 vessels that meet USCG inspection requirements. It will also require infrastructure to maintain and support those vessels and a new harbor in which to moor them all. There will also be significant administrative requirements with which to comply for the VOO crews, including mariner licensing and certification.

Lally added that to complicate things even further, USCG-CVC just implemented another MSIB (01-25), titled "Non-Operating Individual (NOI), Resumption of Enforcement of Merchant Mariner Credential (MMC) Requirements" that could potentially impact the SERVS oil spill prevention and response system and beyond, depending on how narrowly or broadly USCG applies those requirements. The MSIB states that "During the period of non-enforcement, USCG could not enforce the MMC requirement(s) on marine firefighters, spill response personnel, salvage personnel, and commercial divers and diving support personnel who are engaged or employed on board any vessel for the sole purpose of carrying out spill response activities, salvage, marine firefighting, or commercial diving business or functions."

Lally said PWSRCAC will continue to track MSIB (01-25) and work with CDR Rousseau as she works with her chain of command on policy guidance and will provide updates to the Board.

Lally thanked everyone who was involved in the discussions to date. He opened the floor to questions and was joined by the Council's consultants, C.J. Zane and Genevieve Cowan from Blank Rome, who were online to participate in the discussion.

In summarizing the current status, Lally pointed out there is currently no legislation to exempt the VOOs, and the guiding document is the Work Instruction that USCG issued. PWSRCAC and SERVS are trying to figure out whether that will be enforced or whether the previous "exemptions" will be put back in legislatively. Basically, without any further clarification, everyone finds themselves in regulatory limbo.

C.J. Zane (of Blank Rome) added that this boils down to is a two-prong approach, i.e., for PWSRCAC to work with Alaska's delegation, with Sen. Sullivan in the lead in the Senate as Chair of the Commerce, Science and Transportation Subcommittee, to get the exemption legislation over the finish line, while working simultaneously with Rep. Nick Begich in the House to slow down implementation of the Work Instruction, effectively keeping the current exemption in place until the Coast Guard bill legislation can pass.

Zane added that the MSIB (01-25) requiring MMCs for those non-operational back deck crew who are not engaged in the navigational operations of the vessel did not exist until January 2, 2025. The "exemption" or moratorium on enforcement of those requirements sunset at the end of 2024, and both pending Coast Guard bills in the House and Senate failed to get through and sunset before the legislation extending the moratorium could pass. Therefore, the extension of the moratorium failed too. Similar to the VOO issue, this leaves USCG saying, absent a moratorium on enforcement of the MMCs requirements in the law, USCG has to enforce the law. Zane believed there will be an effort to resolve it legislatively or see if USCG can resolve it administratively to operate in a way that does not cause thousands of mariners who were not required to have MMC documents to get them in a system that is already overburdened and slow in this regard.

President Archibald pointed out that this will potentially affect a huge number of people who are not on a marine crew but are doing a job on a vessel who will have to get MMC documents under MSIB 01-25 and this will be a huge issue for USCG. Lally agreed and it will all depend on how USCG decides to implement MSIB 01-25.

Mike Brittain pointed out that a towing endorsement credential is not the same as a master of towing credential which is a much more difficult process to complete and qualify for.

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

4-5 REPORT ACCEPTANCE: 2024 LONG-TERM ENVIRONMENTAL MONITORING

PWSRCAC's Dr. Danielle Verna and contractor Dr. Morgan Bender from Fjord and Fish Sciences presented the 2024 Summary Report and the 2024 Technical Supplement for the Council's Long Term Environmental Monitoring Program (LTEMP). The annual 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.

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

The Board was asked to accept all three reports. A briefing sheet with the reports attached was included in the meeting notebook under Item 4-5.

Dr. Bender reviewed and summarized the analysis and results with the Board.

- The hydrocarbon fingerprints in the 2024 samples vary by site with those near the Alyeska Marine Terminal (VMT) revealing Alaska North Slope crude oil. Other sites reveal mixed sources.
- Low potential environmental and toxicological risk is posed by hydrocarbons contributed by the VMT and tankers in 2024.
- Analysis of historical trends in hydrocarbon concentrations reveals generally low concentrations that spike locally after spill events.
- A pilot study found metals accumulating in Port Valdez sediments.

Dr. Bender commented that she would like to explore the metals data further as they did not find a lot of historical metals data from the Port Valdez area and at this point they need to figure out what to do with the information they have collected.

Moving forward, Dr. Bender suggested the Council consider doing the following:

- Expanding sampling efforts.
- Increasing the project visibility.

- Expand dissemination.
- Archive data and make it available for use by those outside of the Council.
- Evaluate specific aspects of LTEMP.
 - Changes in intertidal community.
 - Metals accumulation in sediments.

Dorothy Moore **moved to 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 Dr. 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. Michael Vigil **seconded** and the **motion passed** without objection.

Dr. Bender was commended for an excellent report.

4-6 PWSRCAC ANNUAL LONG RANGE PLAN AND REPORT ACCEPTANCE

Director of Administration Hans Odegard presented for Board approval an updated draft of PWSRCAC's proposed Five-Year Long Range Plan for Fiscal Years 2026-2030 as discussed at a Long Range Planning workshop the previous day. The Board was also asked to accept the Five-Year Long Range Planning and Annual Budget Development Improvement Report, generated by Professional Growth Systems (PGS) as fulfilling the terms of PGS' contract.

Odegard thanked everyone for their input. He emphasized the Board was only being asked to accept the PGS report as fulfilling the terms of PGS' contract with the Council. Acceptance of the PGS report does not imply approval of all the recommendations in the report. The next steps the Council would like to take, as discussed at the workshop, will be to meet with the LRP Committee, go through the report and the recommendations, and figure out which ones the Council wants to implement and/or develop a list of potential recommendations to bring back to the Board for further consideration. He emphasized that the Board was not being asked to approve all the recommendations, but to allow the LRP Committee to assess and propose the most suitable actions from the report's findings.

Odegard encouraged anyone who would like to be more involved in this process to contact him or Cathy Hart. He also added that there would be a Finance Committee meeting in early April, to review the proposed FY2026 budget which will be presented to the Board for adoption at its May meeting.

Aimee Williams **moved to:**

- **A. Approve** the Five-Year Long Range Plan for FY2026-2030, as developed and finalized for consideration at the January 22, 2025 Long Range Plan work session; and,
- **B. Accept** the “Five-Year Planning and Annual Budget Improvement” report, as presented by contractor Professional Growth Systems during the Long Range Plan work session prior to the January 2025 Board meeting.

Dorothy Moore **seconded** and the **motion passed** without objection.

Break: 9:50 a.m. – 10:00 a.m.

4-7 APPROVAL OF IRS FORM 990

Director of Finance Ashlee Hamilton presented PWSRCAC's IRS Form 990 for FY2024 for Board approval.

Hamilton pointed out some minor clerical changes that were made to the return after it was previously sent out to the Board for review. Those changes were as follows:

- Page 4, Schedule D, part 13. Changed "*thought*" to "*though*."
- Page 35, Changed the number of Board members on the Finance Committee from "4" to "5."
- Ashlee Hamilton's title to be updated prior to filing from Financial Manager to Director of Finance.
- Page 1 and Page 9, the amount of \$4,269 is moved to Page 29, line 2.d. on Schedule D, and the addition of "*prior year grant used to offset capital expenditures*" to provide further clarity on how the Form 990 reconciles with the audit.

Mako Haggerty **moved to authorize** the Executive Director to sign the IRS Form 990 on behalf of PWSRCAC and submit it to the IRS on or before May 15, 2025, with the corrections/additions/clarifications noted. Angela Totemoff **seconded** and **the motion passed** without objection.

DIRECTOR OF FINANCE'S REPORT TO THE BOARD

Director of Finance Ashlee Hamilton reported that the 2024 audit with Porter & Allison had been completed. The process went smoothly and the auditors expressed satisfaction with the Council's internal controls, reporting, and processes. As a result, PWSRCAC received a clean audit.

Following this Board meeting, Executive Director Schantz will sign the IRS Form 8879, allowing Porter & Allison to file the Council's 2024 Form 990 with the IRS electronically. A copy of the filing will be posted on PWSRCAC's website. Hamilton commented that Porter & Allison made the preparation of the Form 990 very easy as they obtained much of the information they needed from the Council's audited financial statements.

Hamilton reported that she is actively working to implement new budgeting software to streamline the Council's financial planning and reporting processes. The software will allow for better tracking of departmental budgets, provide more accurate forecasting, and enable easier comparison of actual expenditures against budgeted amounts. She expected this to be fully implemented by the end of 1Q 2025. Implementation of the new budgeting software had not met PWSRCAC's expectations to date, and the organization may be in the market for a different software solution. The situation is in limbo at this time.

Hamilton was pleased to report that the ACH payments implementation was successful. This initiative has improved efficiency in the handling of payments while reducing the need for paper checks and the associated manual efforts. She has seen a notable improvement in transaction speeds.

The lease for the new Anchorage office space was successfully negotiated and she thanked the Board for its support.

The copier contract was successfully negotiated with Konica Minolta, and the lease terms are favorable and align with PWSRCAC's goals of maintaining efficient and cost-effective office operations.

As reported earlier, Hamilton and the Finance Committee have been addressing some ongoing issues with the IRS regarding payroll taxes. She was happy to report that progress was being made with the IRS to clear up these issues and she hoped all issues would be resolved in the coming months.

In the coming months, her focus will be on full implementation of budgeting software and continuing to enhance PWSRCAC's financial reporting capabilities. In addition, she will work towards resolving the payroll tax issues with the IRS and ensure that the organization's systems and controls continue to support the organization's growth.

In response to a question from Mako Haggerty about the implementation of ACH payments, Hamilton said that it had been working well for those who opted in to the ACH payment system, even for vendors and contractors, as many have their banking information directly on their invoices.

EXECUTIVE DIRECTOR'S REPORT TO THE BOARD

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

- **New Staff Hire.** Schantz announced that the organization is now fully staffed with the recent hiring of Suparat Prasannet to the position of IT/Administrative Assistant in the Anchorage office. Total staff now consists of 17: eight staff in Anchorage and nine in Valdez.
- **Compensation Survey.** Since the last staff compensation survey was done in 2018, a number of staff positions and job duties were shuffled around which has caused the organization to get out of alignment with the current salary schedule. Schantz hoped to conduct a new compensation survey next fiscal year to determine an accurate salary schedule for the job duties and job descriptions that the organization has in place right now. PWSRCAC staff will issue an RFP and Schantz hoped to bring something through the Finance Committee to the Board soon.
- **Social Science Workshop.** A Social Science Workshop will take place in Anchorage on March 27, from 9:00 a.m. to 4:00 p.m., during the annual Subsistence Memorial Gathering hosted by the Chugach Regional Resources Commission. A goal of the project is to engage community members and obtain input on the social and economic changes since the Exxon Valdez oil spill (EVOS) and to share ideas on future social science research needs in the EVOS region. The workshop aims to foster relationship-building and collaborative research with Alaska Native Tribes and other partners in the EVOS region. Project Manager Dr. Danielle Verna has reached out to the Council's Alaska Native representatives on the Board to ask for their assistance in spreading the word in their communities. She asked all PWSRCAC's Board members to do the same. All PWSRCAC's Board, and SAC and IEC members are invited to this event. PWSRCAC has a limited amount of funding available for travel to the workshop if a volunteer lives outside the Anchorage area. Those interested were encouraged to contact Donna Schantz or Danielle Verna.

- **Status of recommendations in the Billie Garde Report.** Included with her written Executive Director's Report to the Board, Schantz provided a separate timeline on the status of the seven recommendations in the Billie Garde report as a tool for staff to track their closeout progress. The timeline will be updated as progress is made towards each recommendation's conclusion. She recapped briefly the status of each recommendation to date.
 - Recommendation 1 of 7. That PWSRCAC request Congress initiate a Government Accountability Office (GAO), review of regulatory oversight of the Valdez Marine Terminal. That review is underway. Last summer, the GAO told PWSRCAC they expected their report to be released early this year. That timing has slipped. They now expect it in the spring of this year. It is expected the report will include a number of findings that will need to be followed up on.
 - Recommendation 2 of 7. That PWSRCAC request the federal Occupational Safety and Health Administration (OSHA) conduct an independent Process Safety Management (PSM) audit at the VMT and look into the adequacy of Alyeska's Quality Assurance and Quality Control programs. As a result, OSHA issued a CASPA (Complaint Against the State Program Administration) against Alaska's OSHA (AKOSH) that the issue was outside of their Anchorage office's enforcement jurisdiction and that the jurisdictional limitation would have to be addressed before any of those inspections could take place. Shortly thereafter, AKOSH updated their whistleblower investigations manual to have it more closely align with the federal requirements. Recently OSHA informed PWSRCAC that their determination letter on the CASPA has been drafted, and they expect their final determination will be issued once their review is complete.
 - Recommendations 3 through 5, Recommendations 3, 4, and 5 were directed at Alyeska and those were: a review of their safety management systems, the deferred maintenance, and their training and how they have closed out their Management Action Plan.

Schantz expressed appreciation to Alyeska for taking the concerns in the Garde report seriously and for all of the actions they have taken to address those concerns and the improvements that they have put in place.

- Recommendations 6 and 7. The last two recommendations were internal to PWSRCAC and those included the recommendation to stand up a Human Factors Advisory Committee. This was mentioned earlier in this Board meeting, but the TOEM Committee said they would like to have more information to really understand what that recommendation means before they decide whether to take on that role. Schantz reported that PWSRCAC has been trying to get Billie Garde together with the TOEM Committee to help understand that recommendation, and she was hopeful that would happen in the coming months.

The last recommendation (#7) was for PWSRCAC to develop a protocol for handling future concerns that may come to it from Alyeska personnel. Sadie Blancaflor has drafted a protocol and it is awaiting Billie Garde's input before moving forward.

Schantz stated that she intended to keep this timeline updated going forward.

Schantz remarked how busy the next few months would be until the May Board meeting with staff working on the following:

- Gearing up the Legislative Affairs Committee for the State legislative session and preparing for the committee's legislative visits to Juneau and Washington, D.C.
- Preparing for the Special Board Meeting in March to conduct the Executive Director's evaluation and contract renewal.
- Building a draft budget for FY2026 for Board consideration and following up on the recommendations that came out of the Long Range Plan assessment.
- Reviewing and commenting on several new tanker and the shipper c-plans, including the Teekay c-plan which may include as many as 42 vessels. She urged anyone not already on the C-plan Project Team who could help, to join the team. She emphasized the major importance of the c-plan and permit reviews to the Council's mission, as it is one of the ways PWSRCAC can try to influence positive change on both the prevention and response sides.
- The public reception that the Council hosts each year with Alaska Tanker Company (ATC) and Hilcorp.
- Moving the Anchorage office.
- Moving forward on all projects and programs.

Schantz thanked the Board for its support and for the hard work of all the volunteers and for the efforts of staff.

PRESIDENT'S REPORT TO THE BOARD

President Archibald reported that staff followed up on Jim Herbert's suggestion earlier in the meeting and had sent out the Community Outreach Sub-Plan 2021 and the Strategic Communications and Outreach Plan 2023. He suggested the Board take a look at all of its outreach plans and come to an understanding of all it is trying to accomplish.

Bob Shavelson commented that he had read all of the plans and thought they were very good, but like any plan they have to be implemented. He also pointed out that in many instances the Council goes through a lot of effort, creates plans, and then they sit on the shelf, and if they do not come out regularly for the Board to assess its progress against those plans, then they are somewhat worthless. He suggested the Board come up with a matrix that outlines the communities the Council/staff are going to visit and the events they will attend and also a template of how the Council tells its story to the public, not just its mission. To him, the story is – Prince William Sound had this amazing spill, these people came together, they recognized that these are public resources that were damaged, and they needed to protect them for current and future generations. That's what PWSRCAC is doing, and that needs to be infused in everything it does. He would like to see a calendar and an actionable task list every year, and that task list should be revisited every year to

determine whether the organization made progress on those tasks so the Board knows it is actually doing what it said it was going to do.

Donna Schantz pointed out that when staff developed those plans, with assistance from a contractor, and presented them to the Board for initial approval, the Board delegated the review of updates to the IEC. She clarified staff do in fact annually create a calendar and plans around outreach work, including a list of targeted communities, as well as responding to specific requests from Board members as they occur. She noted that all costs have gone up and it is costly to do outreach in many ways, and perhaps it was time for the Board to discuss with IEC how best to allocate the IEC budget for outreach.

Archibald continued his President's Report with an emphasis on the changing and aging landscape that is all around us and specifically with regard to the VMT and the associated tankers. He commented that it is very clear today that we are surrounded by change. Everyone associated with this organization is getting older. The organization is aging and the reason for the Council's existence--the VMT and associated tankers--are all aging. The infrastructure that guides marine traffic in and out of the Port of Valdez and into and out of the Gulf of Alaska is aging. Federal and state agencies of jurisdiction and oversight are changing, as is their funding. The producers of oil on the North Slope have changed. Ownership of the TAPS pipeline and Alyeska has changed, thus so has the SERVS escort and response vessel system. Production of crude oil has changed from a high in 1988 of just a little over 2,000,000 bbl./day at a price of \$4.75/bbl. to a low of 392,000 bbl./day at a price of approximately \$80/bbl. That is a lot of change. The highest price ever paid for a barrel of Alaska crude (from his internet research) was \$125/bbl. and to a low of almost zero. The day before this Board meeting, production was 484,137 bbl./day @ \$76/bbl. The cost of production has varied also and the decisions that are made at the highest levels as to those costs affects the change of corporate investments and how much they want to spend.

He emphasized that responsibility for actions on these changes comes in many forms. Every entity mentioned bears the responsibility to ensure safe operations of the VMT and associated tankers. This was a commitment made by industry and regulators to the citizens of Alaska. It is the responsibility of government to fulfill regulations established in the Oil Pollution Act of 1990, and to maintain oversight, so complacency on the part of regulators never creeps back to the point that the environment, workers, towns, and citizens are put in harm's way. Industry's responsibility is to ensure that the aging VMT and the aging tanker fleet meet all applicable regulations, statutes, and best industrial and marine practices. Responsibility for safe operations is derived by making financial decisions to upgrade and replace as necessary any component of the system. It is the responsibility of this Council to fulfill the mission that guides us, with no compromise. That means striving to have leaders in relevant fields using best available technology and maintaining and improving the Council's input to ensure the safe operations of the VMT and associated tankers as long as oil flows through the pipeline.

He challenged everyone to think about the future and why they sit on this Board, as it is very apparent to him that change is coming. Alyeska, regulators, and the PWSRCAC must work together to ensure complacency is a word of the past.

CONSIDERATION OF CONSENT AGENDA ITEMS

(None.)

CLOSING COMMENTS

Dave Janka asked formally for staff to arrange a tour for the Council of the USCG Vessel Traffic Service in Valdez sometime during the May Board meeting timeframe.

ADJOURNMENT

There being no further business to come before the Board, and hearing no objections, **the meeting was adjourned** at approximately 11:12 a.m. on **a motion made** by Robert Beedle and **seconded** by Angela Totemoff and **passed** by general consent.

Secretary

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**Prince William Sound Regional Citizens' Advisory Council
Special Board of Directors Meeting Minutes
March 19, 2025**

Members Present: Robert Archibald, Amanda Bauer, Mike Bender (9:11 a.m.), Ben Cutrell, Wayne Donaldson, Mako Haggerty, Luke Hasenbank (9:09 a.m.), Jim Herbert, Dave Janka, Melvin Malchoff, Dorothy Moore, Bob Shavelson, Angela Totemoff, Aimee Williams, and Kirk Zinck (9:05 a.m.)

Members Absent: Robert Beedle, Michael Brittain, Nick Crump, Elijah Jackson, and Michael Vigil

Staff Present: Jennifer Fleming, Donna Schantz, John Guthrie, Hans Odegard, Joe Lally, Brooke Taylor, Ashlee Hamilton, Danielle Verna, Linda Swiss, Sadie Blancaflor

Others Present: Joe Levesque (Landye, Bennett, Blumstein, LLP), Ytamar Rodriguiz (ADEC), Breck Tostevin (Nielsen, Koch & Grannis PLCC)

Call to Order

President Archibald called the meeting to order at 9:00 a.m. A roll call was taken, and the following 12 members were present for the conduct of business: Archibald, Bauer, Cutrell, Donaldson, Haggerty, Herbert, Janka, Malchoff, Moore, Shavelson, Totemoff, and Williams.

Approve Agenda

Herbert moved to approve the agenda as presented. Totemoff seconded. Archibald asked for amendments/objections; hearing none, the agenda was approved.

Public & Opening Comments

Archibald asked for opening comments or comments from the public; there were none.

Approval of the Consent Agenda

There were five items included on the March 19, 2025 consent agenda:

FY2025 Budget Modifications

Approve the FY2025 budget modifications as listed on the provided sheet, with a total revised contingency in the amount of \$268,409.

Marine Bird Fall and Early Winter Surveys Contract Change Order

Authorize a FY2025 budget modification transferring \$1,300 from the contingency fund to project 9110 and authorize the Executive Director to carry out a corresponding change order to increase contract 9110.25.01 with the Prince William Sound Science Center in an amount not to exceed \$80,228.

Maintaining the Secondary Containment Liner Contract Change Order

Approve a FY2025 budget modification transferring \$7,000 from the contingency fund to project 6512, and authorize the Executive Director to carry out a corresponding change order to

increase contract 6512.24.01 with Dr. Craig Benson and Dr. Joe Scalia in an amount not to exceed \$45,000.

Air Quality Review of the VMT Contract Change Order

Authorize a FY2025 budget modification transferring \$20,000 from the contingency fund to project 5057 Air Quality, and authorize the Executive Director to carry out a corresponding change order to increase contract 5057.24.01 with Dr. Ranajit (Ron) Sahu in an amount not to exceed \$70,000.

Port Valdez Weather Buoys Contract Change Order

Authorize a FY2025 budget modification of \$5,000 from the contingency fund to project 6531 in the FY2025 budget and authorize the Executive Director to carry out a corresponding change order to increase contract 6531.25.01 with the Prince William Sound Science Center in an amount not to exceed \$38,500.

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

Consideration of Consent Agenda

None.

Executive Session

Janka moved to go into Executive Session to discuss ADEC's Response to PWSRCAC's Request for Informal Review and to deliver the Executive Director's annual evaluation. Totemoff seconded.

The Board entered executive session at 9:05 a.m. All Council staff members present, Joe Levesque, and Breck Tostevin joined the Board in executive session to discuss ADEC's response to PWSRCAC's request for informal review. Director of Finance, Ashlee Hamilton, was present for the executive director's evaluation discussion during executive session.

Kirk Zinck, Luke Hasenbank, and Mike Bender all joined the meeting during the executive session.

The executive session concluded at approximately 10:25 a.m.

Report on Executive Session:

Archibald reported that the Board discussed ADEC's Response to PWSRCAC's request for informal review, and the Executive Director's evaluation.

ADEC's Response to PWSRCAC's Request for Informal Review

Janka moved to direct staff to request an adjudicatory hearing pertaining to Condition of Approval #1 related to the inspection of the secondary containment liners as outlined in the recently approved Valdez Marine Terminal Oil Discharge Prevention and Contingency Plan; and to authorize a FY2025 budget modification of \$15,000 from the contingency fund to project

6510: State Contingency Plan Reviews, and to authorize a corresponding contract increase for selected contingency plan review contractors for an aggregate amount not to exceed \$95,000; and, to authorize a FY2025 budget modification of \$25,000 from the contingency fund to project 6512: Secondary Containment Systems at the VMT, and authorize a contract increase of \$16,800 for Dr. Benson and Dr. Scalia for a new not to exceed amount of \$61,800. Herbert seconded. Archibald asked for objection; hearing none, the motion was approved.

Executive Director Annual Evaluation

Archibald reported that the results of the Executive Director's evaluation survey were reviewed and discussed in executive session, and that Schantz received a very favorable evaluation. Bauer concurred adding the Board was very pleased with Schantz as its Executive Director.

Bauer moved to extend the Executive Directors contract for one year, and for the Finance Committee to amend the Executive Director's salary with a 2.5% increase to be included in the proposed FY2026 budget. Herbert seconded. Archibald asked for objection; hearing none, the action was approved.

Closing Comments

Archibald asked for closing comments. Shavelson noted a reading of Dick Reichman's play recounting the chronicle of the Exxon Valdez oil spill is playing tonight in Homer if anyone is in the vicinity.

Adjourn

Cutrell moved to adjourn. The meeting adjourned at 10:32 a.m.

Secretary



PWSRCAC
Acronym List
Updated December, 2023

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

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

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

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

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

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

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

Prince William Sound Regional Citizens' Advisory Council
Budget Status Report
As of March 25, 2025

	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	68,101.91	-	68,101.91	(13,101.91)	(23.82) %
In Kind Contributions	25,500.00	-	25,500.00	6,549.84	-	6,549.84	18,950.16	74.31 %
Miscellaneous Income	-	-	-	3,681.92	-	3,681.92	(3,681.92)	-
Book Royalties and Sales	-	-	-	10.59	-	10.59	(10.59)	-
Total Revenue	4,358,212.00	-	4,358,212.00	2,217,200.43	-	2,217,200.43	2,141,011.57	49.13 %
Functional Area								
Programs & Projects								
3100 - Public Information Program	7,897.00	-	7,897.00	297.00	-	297.00	7,600.00	96.24 %
3200 - Observer Newsletter	7,500.00	-	7,500.00	3,988.12	-	3,988.12	3,511.88	46.83 %
3300 - Annual Report	8,000.00	(1,986.66)	6,013.34	4,763.34	1,250.00	6,013.34	-	-
3410 - Fishing Vessel Program Comm Outreach	19,000.00	-	19,000.00	16,174.35	-	16,174.35	2,825.65	14.87 %
3500 - Community Outreach	60,060.00	-	60,060.00	27,673.37	(90.00)	27,583.37	32,476.63	54.07 %
3530 - Youth Involvement	73,243.00	-	73,243.00	27,381.00	10,000.00	37,381.00	35,862.00	48.96 %
3600 - Public Communications Program	4,599.00	-	4,599.00	674.00	-	674.00	3,925.00	85.34 %
3610 - Web Presence Best Available Technology	7,140.00	-	7,140.00	1,070.00	370.00	1,440.00	5,700.00	79.83 %
3810 - Illustrated Prevention & Response System	35,720.00	-	35,720.00	-	15,000.00	15,000.00	20,720.00	58.01 %
3903 - Internship	-	4,000.00	4,000.00	1,250.00	1,250.00	2,500.00	1,500.00	37.50 %
4000 - Program & Project Support	1,868,210.00	2,250.00	1,870,460.00	1,289,243.08	-	1,289,243.08	581,216.92	31.07 %
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	34,182.67	62,417.33	96,600.00	12,500.00	11.46 %
4410 - State Government Affairs	41,800.00	-	41,800.00	21,700.00	10,000.00	31,700.00	10,100.00	24.16 %
5000 - Terminal Operations Program	29,000.00	5,000.00	34,000.00	8,473.00	-	8,473.00	25,527.00	75.08 %
5051 - Water Quality Permit Review	23,800.00	-	23,800.00	-	23,800.00	23,800.00	-	-
5053 - VMT System Integrity and Safety Culture	25,000.00	3,840.00	28,840.00	28,130.25	-	28,130.25	709.75	2.46 %
5057 - Air Quality Review	37,437.50	25,012.50	62,450.00	17,050.00	15,962.50	33,012.50	29,437.50	47.14 %
5081 - Storage Tank Maintenance Review	38,000.00	-	38,000.00	7,062.00	25,611.00	32,673.00	5,327.00	14.02 %
5082 - Timeline of VMT Tank Repairs and Inspect	-	15,000.00	15,000.00	-	13,969.00	13,969.00	1,031.00	6.87 %
5591 - Crude Oil Piping Maintenance Review	51,744.00	(51,744.00)	-	-	-	-	-	-
5595 - Review of VMT Cathodic Protection System	34,000.00	-	34,000.00	-	-	-	34,000.00	100.00 %
5640 - Alaska North Slope Crude Oil Properties	5,000.00	1,000.00	6,000.00	-	6,000.00	6,000.00	-	-
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	15,000.00	95,000.00	26,927.00	-	26,927.00	68,073.00	71.66 %
6512 - Secondary Containment	38,000.00	32,000.00	70,000.00	38,000.00	-	38,000.00	32,000.00	45.71 %
6530 - Weather/Sea Currents	18,500.00	7,500.00	26,000.00	17,904.62	543.91	18,448.53	7,551.47	29.04 %
6531 - Port Valdez Weather Buoys	63,200.00	5,000.00	68,200.00	38,909.28	12,921.07	51,830.35	16,369.65	24.00 %
6536 - Analysis of Port Valdez Weather Buoys	22,806.00	(17,000.00)	5,806.00	5,806.00	-	5,806.00	-	-
6537 - Copper River Delta Weather Station	-	-	-	-	(14.46)	(14.46)	14.46	-
6540 - Copper River Delta/Flats GRS	25,000.00	-	25,000.00	3,500.00	21,500.00	25,000.00	-	-
6560 - Peer Listener Training	35,000.00	-	35,000.00	22,000.00	10,885.00	32,885.00	2,115.00	6.04 %

Prince William Sound Regional Citizens' Advisory Council
Budget Status Report
As of March 25, 2025

	Original Budget	Budget Modifications	Summary	Actual	Commitments	Total	Remaining Amount	Percentage Remaining
6575 - Comparison of Windy Application and Seal	35,000.00	-	35,000.00	-	-	-	35,000.00	100.00 %
7000 - Spill Response Operations Program	4,250.00	-	4,250.00	-	-	-	4,250.00	100.00 %
7520 - Preparedness Monitoring	42,300.00	-	42,300.00	10,624.82	-	10,624.82	31,675.18	74.88 %
8000 - Maritime Operations Program	17,000.00	-	17,000.00	7,434.64	-	7,434.64	9,565.36	56.27 %
8025 - Vessel Operator Tsunami Hazards Workshop	-	-	-	-	(54.06)	(54.06)	54.06	-
8250 - Assessing Non-Indigenous Species Biofoul	5,750.00	-	5,750.00	-	4,750.00	4,750.00	1,000.00	17.39 %
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 Program	18,700.00	-	18,700.00	16,984.42	-	16,984.42	1,715.58	9.17 %
9110 - PWS Marine Bird Winter Survey	95,598.00	1,300.00	96,898.00	77,598.00	18,000.00	95,598.00	1,300.00	1.34 %
9510 - Long-Term Environmental Monitoring	118,157.32	6,006.00	124,163.32	110,923.01	15.78	110,938.79	13,224.53	10.65 %
9520 - Marine Invasive Species	55,000.00	-	55,000.00	55,000.00	-	55,000.00	-	-
9521 - Marine Invasive Species Internship	6,500.00	(500.00)	6,000.00	2,090.18	1,200.00	3,290.18	2,709.82	45.16 %
9700 - Social Science Workshop	30,000.00	-	30,000.00	1,104.50	-	1,104.50	28,895.50	96.32 %
9850 - Transcriptomics	-	109,863.00	109,863.00	54,851.00	54,852.00	109,703.00	160.00	0.15 %
Total Programs & Projects	3,263,511.82	191,540.84	3,455,052.66	2,009,196.15	310,139.07	2,319,335.22	1,135,717.44	32.87 %
Board of Directors								
1350 - Information Technology - Volunteers	500.00	-	500.00	-	-	-	500.00	100.00 %
2100 - Board Administration	139,653.00	-	139,653.00	91,127.70	-	91,127.70	48,525.30	34.75 %
2150 - Board of Director Meetings	180,600.00	46,000.00	226,600.00	144,145.34	3,100.00	147,245.34	79,354.66	35.02 %
2200 - Executive Committee	3,000.00	-	3,000.00	-	-	-	3,000.00	100.00 %
2222 - Finance Committee	3,500.00	(1,805.35)	1,694.65	1,694.65	-	1,694.65	-	-
2700 - Legislative Affairs Committee (LAC)	18,675.00	-	18,675.00	3,839.62	-	3,839.62	14,835.38	79.44 %
Total Board of Directors	345,928.00	44,194.65	390,122.65	240,807.31	3,100.00	243,907.31	146,215.34	37.48 %
Committees & Committee Support								
2250 - Committee Support	214,867.00	-	214,867.00	131,774.64	(308.00)	131,466.64	83,400.36	38.81 %
2300 - Oil Spill Prevention & Response (OSPR)	15,000.00	(1,317.95)	13,682.05	7,033.80	-	7,033.80	6,648.25	48.59 %
2400 - Port Ops & Vessel Traffic System (POVTS)	8,000.00	(3,500.00)	4,500.00	-	-	-	4,500.00	100.00 %
2500 - Scientific Advisory Committee (SAC)	15,000.00	(6,500.00)	8,500.00	1,808.38	-	1,808.38	6,691.62	78.72 %
2600 - Terminal Ops & Envrn Monitoring (TOEM)	11,500.00	(3,276.20)	8,223.80	696.50	-	696.50	7,527.30	91.53 %
2800 - Information & Education Committee (IEC)	11,000.00	(4,500.00)	6,500.00	-	-	-	6,500.00	100.00 %
Total Committees & Committee Support	275,367.00	(19,094.15)	256,272.85	141,313.32	(308.00)	141,005.32	115,267.53	44.98 %
General & Administrative								
1000 - General & Administrative	494,003.00	4,800.00	498,803.00	298,393.06	(3,995.25)	294,397.81	204,405.19	40.98 %
1050 - General & Administrative - Anchorage	219,806.00	18,000.00	237,806.00	90,978.76	5,457.50	96,436.26	141,369.74	59.45 %
1100 - General & Administrative -	182,768.00	-	182,768.00	119,721.59	-	119,721.59	63,046.41	34.50 %

Prince William Sound Regional Citizens' Advisory Council
Budget Status Report
As of March 25, 2025

	Original Budget	Budget Modifications	Summary	Actual	Commitments	Total	Remaining Amount	Percentage Remaining
Valdez								
1300 - Information Technology	118,538.00	1,000.00	119,538.00	69,395.30	-	69,395.30	50,142.70	41.95 %
Total General & Administrative	<u>1,015,115.00</u>	<u>23,800.00</u>	<u>1,038,915.00</u>	<u>578,488.71</u>	<u>1,462.25</u>	<u>579,950.96</u>	<u>458,964.04</u>	<u>44.18 %</u>
Total Expenses	<u>4,899,921.82</u>	<u>240,441.34</u>	<u>5,140,363.16</u>	<u>2,969,805.49</u>	<u>314,393.32</u>	<u>3,284,198.81</u>	<u>1,856,164.35</u>	<u>36.11 %</u>
Contingency	<u>75,000.00</u>	<u>120,109.00</u>	<u>195,109.00</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>195,109.00</u>	<u>100.00 %</u>
Increase (Decrease) in Net Assets	<u>(616,709.82)</u>	<u>(360,550.34)</u>	<u>(977,260.16)</u>	<u>(752,605.06)</u>	<u>(314,393.32)</u>	<u>(1,066,998.38)</u>	<u>89,738.22</u>	<u>(9.18) %</u>

PWSRCAC Director Attendance Record

May 2025

(Attendance recorded through March 19, 2025 Special Board Meeting)

Board Member <i>(date appointed)</i>	Overall Attendance <i># attended / # missed</i>	Last 3 Mtgs.* <i># attended / # missed</i>	Term Expires
Archibald, Robert <i>(May 2015)</i>	56/1	3/0	5/25
Bauer, Amanda <i>(May 2012)</i>	71/1	3/0	5/25
Beedle, Robert <i>(May 2013)</i>	63/5	2/1	5/26
Bender, Mike <i>(Sept. 2015)</i>	47/9	3/0	5/26
Brittain, Mike <i>(May. 2023)</i>	7/14	1/2	5/25
Crump, Nick <i>(May. 2021)</i>	17/8	1/2	5/25
Cutrell, Ben <i>(Jan. 2020)</i>	31/1	3/0	5/26
Donaldson, Wayne <i>(Jan. 2015)</i>	56/2	3/0	5/25
Haggarty, Mako <i>(May 2015)</i>	46/9	3/0	5/25
Hasenbank, Luke <i>(May 2016)</i>	40/13	2/1	5/26
Herbert, Jim <i>(January 2023)</i>	14/0	3/0	5/25
Jackson, Elijah <i>(May 2021)</i>	11/13	0/3	5/25
Janka, David <i>(January 2023)</i>	14/0	3/0	5/26
Malchoff, Melvin <i>(Sept. 2016)</i>	35/15	3/0	5/26
Moore, Dorothy <i>(Jan. 2007)</i>	96/2	3/0	5/26
Shavelson, Bob <i>(Sept. 2014)</i>	61/9	3/0	5/26
Totemoff, Angela <i>(May 2021)</i>	20/5	2/1	5/25
Vigil, Michael <i>(Sept. 2015)</i>	44/11	2/1	5/26
Williams, Aimee <i>(May 2022)</i>	17/4	2/1	5/26
Kirk Zinck <i>(May 2019)</i>	34/3	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)	28/0	3/0	5/26
Amanda Bauer (Director) (Vice Chair)	40/6	3/0	5/26
Max Mitchell	7/1	2/1	5/27
Gordon Terpening	18/1	3/0	5/27

Oil Spill Prevention and Response (OSPR)			
Committee Member	Overall	Last 3 mtgs	Term Expires
Robert Beedle (Director)	44/17	2/1	5/27
Mike Bender (Director)	34/16	3/0	5/26
Dave Goldstein	84/22	2/1	5/26
Jim Herbert (Chair) (Director)	63/0	3/0	5/27
Matt Melton	9/1	3/0	5/27
Tim Robertson	6/1	2/1	5/26
Gordon Scott	72/81	1/2	5/27

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)			
<i>Committee Member</i>	<i>Overall P/A</i>	<i>Last 3 mtgs P/A</i>	<i>Term Expires</i>
Sarah Allan (Chair)	100/10	3/0	5/26
Wei Cheng (Vice Chair)	71/6	3/0	5/25
Wayne Donaldson (Director)	85/10	2/1	5/25
Roger Green	161/27	1/2	5/25
Davin Holen	75/11	1/2	5/26
John Kennish	159/14	3/0	5/25
Dorothy Moore (Director)	142/15	3/0	5/25
Scott Pegau	3/0	3/0	5/25

Information & Education Committee (IEC)			
<i>Committee Member</i>	<i>Overall P/A</i>	<i>Last 3 mtgs P/A</i>	<i>Term Expires</i>
Trent Dodson (Chair)	42/30	2/1	5/25
Jane Eisemann	90/17	1/2	5/25
Cathy Hart (Vice Chair)	86/23	3/0	5/25
Andrea Korbe	38/32	1/2	5/25
Ruth E. Knight	90/10	3/0	5/26
Kate Morse	66/33	3/0	5/26
Aimee Williams	16/7	3/0	5/26
Amanda Glazier	3/2	1/2	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

Prince William Sound Regional Citizens' Advisory Council Strategic Plan

This Plan is intended to summarize the Board's priorities for organizational goals and direction. Board, staff, and committee members are to refer to this Plan to help guide decision-making and project development.

Vision

Establish PWSRCAC as a premier advisory group, 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

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

Core Values

Advocacy: Provide a voice for citizens in the region impacted by the Exxon Valdez oil spill.

Stewardship: Promote and protect the people, environment, and communities of our region

Partnership: Collaborate with partners, volunteers, and stakeholders; facilitate open communications; and respectfully invite diverse perspectives

Accountability: To seek and verify information, promote scientific integrity, and encourage transparency

People: Recognize volunteers and staff as the most important assets of our organization

Excellence: Demonstrate organizational excellence and commit to continuous improvement

Core Functions, Goals, and Strategies

Maintain Compliance with OPA 90 and Alyeska Contractual Requirements

- ☐ ⁽¹⁾ Obtain annual recertification and funding
- ☐ ⁽²⁾ Maintain regional balance
- ☐ ⁽³⁾ Link projects and programs to OPA 90 and Alyeska contract

Prevent Oil Spills, Reduce Risks, Promote Response Readiness, and Facilitate Research

- ☐ ⁽⁴⁾ Combat complacency and reduce risk by means of observing, monitoring, informing, and advising
- ☐ ⁽⁵⁾ Monitor and advise on the condition and operation of the terminal, tankers, and spill prevention and response system
- ☐ ⁽⁶⁾ Monitor and advise on environmental indicators and reportable incidents
- ☐ ⁽⁷⁾ Monitor and advise on the development of, and compliance with, applicable laws and regulations
- ☐ ⁽⁸⁾ Advocate for funding and staffing of regulatory agencies to provide comprehensive oversight
- ☐ ⁽⁹⁾ Advocate for interagency coordination, and public transparency and participation within the regulatory framework
- ☐ ⁽¹⁰⁾ Advocate for continuous improvement to the environmental safety of marine terminal operations and oil transportation
- ☐ ⁽¹¹⁾ Promote and facilitate effective research for scientific, operational, and technical excellence
- ☐ ⁽¹²⁾ Promote risk reduction measures, best available technologies, and best practices for oil spill prevention and response.

Develop and Maintain Effective External and Internal Communication

- ☐ ⁽¹³⁾ Maintain and improve relationships and information sharing with key partners
- ☐ ⁽¹⁴⁾ Engage and educate the public, partners, and member entities
- ☐ ⁽¹⁵⁾ Advocate for timely and responsive information from Alyeska
- ☐ ⁽¹⁶⁾ Ensure availability of PWSRCAC information
- ☐ ⁽¹⁷⁾ Foster public awareness, responsibility, and citizen participation in our work

Achieve Organizational Excellence

- ☐ ⁽¹⁸⁾ Recruit and develop knowledgeable and committed volunteers and staff
- ☐ ⁽¹⁹⁾ Improve efficiency of internal processes, including introducing new technology
- ☐ ⁽²⁰⁾ Improve systems that preserve documentation and institutional knowledge
- ☐ ⁽²¹⁾ Be a model for citizen oversight
- ☐ ⁽²²⁾ Assess and improve the Long Range Planning process
- ☐ ⁽²³⁾ Demonstrate fiscal responsibility

PWSRCAC BOARD AND EXECUTIVE COMMITTEE ACTIONS

Meeting Date Action Item



PRINCE WILLIAM SOUND
REGIONAL CITIZENS' ADVISORY COUNCIL

Board	3/19/2025	FY2025 Budget Modifications: The Board approved the FY2025 budget modifications as listed on the provided sheet, with a total revised contingency in the amount of \$268,409. Are these modifications in place?	File Code (if any)	Responsible Hamilton	Disposition Done
Board	3/19/2025	Marine Bird Fall and Early Winter Surveys Contract Change Order: The Board authorized a FY2025 budget modification transferring \$1,300 from the contingency fund to project 9110 and authorize the Executive Director to carry out a corresponding change order to increase contract 9110.25.01 with the Prince William Sound Science Center in an amount not to exceed \$80,228. Are these steps in place?	File Code (if any)	Responsible Verna	Disposition Pending
Board	3/19/2025	Maintaining the Secondary Containment Liner Contract Change Order: The Board approved a FY2025 budget modification transferring \$7,000 from the contingency fund to project 6512, and authorize the Executive Director to carry out a corresponding change order to increase contract 6512.24.01 with Dr. Craig Benson and Dr. Joe Scalia in an amount not to exceed \$45,000. Are these steps in place?	File Code (if any)	Responsible Blandaflor	Disposition Pending
Board	3/19/2025	Air Quality Review of the VMT Contract Change Order: The Board authorized a FY2025 budget modification transferring \$20,000 from the contingency fund to project 5057 Air Quality, and authorize the Executive Director to carry out a corresponding change order to increase contract 5057.24.01 with Dr. Ranajit (Ron) Sahu in an amount not to exceed \$70,000. Are these steps in place?	File Code (if any)	Responsible Blancaflor	Disposition Pending
Board	3/19/2025	Port Valdez Weather Buoys Contract Change Order: The Board authorized a FY2025 budget modification of \$5,000 from the contingency fund to project 6531 in the FY2025 budget and authorize the Executive Director to carry out a corresponding change order to increase contract 6531.25.01 with the Prince William Sound Science Center in an amount not to exceed \$38,500. Are these steps in place?	File Code (if any)	Responsible Guthrie	Disposition Pending
Board	3/19/2025	ADEC's Response to PWSRCAC's Request for Informal Review: The Board directed staff to request an adjudicatory hearing pertaining to Condition of Approval #1 related to the inspection of the secondary containment liners as outlined in the recently approved Valdez Marine Terminal Oil Discharge Prevention and Contingency Plan; and to authorize a FY2025 budget modification of \$15,000 from the contingency fund to project 6510: State Contingency Plan Reviews, and to authorize a corresponding contract increase for selected contingency plan review contractors for an aggregate amount not to exceed \$95,000; and, to authorize a FY2025 budget modification of \$25,000 from the contingency fund to project 6512: Secondary Containment Systems at the VMT, and authorize a contract increase of \$16,800 for Dr. Benson and Dr. Scalia for new not to exceed amount of \$61,800. Are these steps in place?	File Code (if any)	Responsible Swiss/Blancaf	Disposition Pending

PWSRCAC BOARD AND EXECUTIVE COMMITTEE ACTIONS

Meeting Date Action Item



PRINCE WILLIAM SOUND
REGIONAL CITIZENS' ADVISORY COUNCIL

Board	3/19/2025	Executive Director Annual Evaluation: The Board extended the Executive Directors contract for one year, and for the Finance Committee to amend the Executive Director's salary with a 2.5% increase to be included in the proposed FY2026 budget. Are these steps in place?	File Code (if any)	Responsible Hamilton/Sch	Disposition Pending	
Board	1/25/2025	DELEGATION OF AUTHORITY OF MULTIFUNCTIONAL COPIER/PRINTER LEASE AGREEMENTS: The Board authorized 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. Is this contract in place?	File Code (if any)	Responsible Odegard	Disposition Done	
Board	1/25/2025	APPROVAL OF FY2025 BUDGET MODIFICATIONS: The Board approved the proposed FY2025 budget modifications as listed on the sheet provided (under Item 3-2), with a total revised contingency in the amount of \$465,771. Are these modifications in place?	File Code (if any)	Responsible Hamilton	Disposition Done	
Board	1/25/2025	APPROVAL OF TRANSCRIPTOMICS RESEARCH CONTRIBUTION TO THE USGS: The Board approved a transfer of \$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. Is the research contribution in place?	File Code (if any)	Responsible Verna	Disposition Done	
Board	1/25/2025	REPORT ACCEPTANCE: ASSUMPTIONS & CALCULATIONS USED IN TANK VENT HEADSPACE REPORT: The Board accepted 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. Is this report in place?	File Code (if any)	500.431.241201.TakuCalcHeadspac	Responsible Blancaflor	Disposition Done
Board	1/25/2025	APPROVAL OF ANCHORAGE OFFICE LEASE AND RELOCATION: The Board authorized 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 May 1, 2025, in a not-to-exceed amount of \$533,989 over the five-year term plus any pass-through costs, and to terminate PWSRCAC's current lease at 3709 Spenard Road, Suite 100, by the March 31, 2025 deadline. Is this lease in place?	File Code (if any)	Responsible Odegard	Disposition Done	
Board	1/25/2025	ANNUAL REVIEW OF THE EXECUTIVE DIRECTOR'S JOB DESCRIPTION AND PERFORMANCE GOALS: The Board approved the addition of a bullet point to the Executive Director's job description and performance goals under Public Relations, to wit: “Ensure the execution of the Strategic Outreach and Communications Plan”. Is this amendment in place?	File Code (if any)	Responsible Archibald	Disposition Done	

PWSRCAC BOARD AND EXECUTIVE COMMITTEE ACTIONS

Meeting Date Action Item



PRINCE WILLIAM SOUND
REGIONAL CITIZENS' ADVISORY COUNCIL

Board	1/25/2025	REPORT ACCEPTANCE: 2024 LONG-TERM ENVIRONMENTAL MONITORING: The Board accepted 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. Is the report in place?	File Code (if any)	951.431.241201.FFSltmpSummary; 951.431.241201.FFSltmpTechSup; 951.431.250101.FFSltmpMinerals	Responsible Verna	Disposition Done
Board	1/25/2025	PWSRCAC ANNUAL LONG RANGE PLAN AND REPORT ACCEPTANCE: The Board approved the Five Year Long Range Plan for FY2026-2030, as developed and finalized for consideration at the January 22, 2025 Long Range Plan work session, and accepted the "Five Year Planning and Annual Budget Improvement" report, as presented by contractor Professional Growth Systems during the Long Range Plan work session prior to the January 2025 Board meeting. Are these reports in place?	File Code (if any)	100.431.250110.PGSlrpReview; 210.101.250124.FiveYearLRP	Responsible Odegard	Disposition Done
Board	1/25/2025	APPROVAL OF IRS FORM 990: The Board authorized the Executive Director to sign the IRS Form 990 on behalf of PWSRCAC and submit it to the IRS on or before May 15, 2025, with the corrections/additions/clarifications noted. Is the 990 in place?	File Code (if any)		Responsible Hamilton	Disposition Done
XCOM	1/15/2025	Report Acceptance – Miscommunication in Maritime Contexts Phase 2 Report: The Executive Committee accepted the report titled "Exploring Miscommunication at Sea: Causes and Contributing Factors" by Dr. Nicole Ziegler as meeting phase two of contract 8520.23.01, and allow Dr. Ziegler to seek professional publication of the paper. Is this paper in place?	File Code (if any)	852.431.240831.MiscomsPhase2	Responsible Guthrie	Disposition Done
XCOM	1/15/2025	Report Acceptance – Miscommunication in Maritime Contexts Final Report: The Executive Committee accepted the report titled "Miscommunication in Maritime Contexts: Insights from Phase 1 and Phase 2" by Dr. Nicole Ziegler as meeting the final deliverable of contract 8520.23.01 and allow Dr. Ziegler to seek professional publication of the paper. Is this paper in place?	File Code (if any)	852.431.241121.MiscomsInsight	Responsible Guthrie	Disposition Done
XCOM	1/15/2025	Contract Approval: Miscommunication in Maritime Contexts: The Executive Committee authorized a sole source contract with Dr. Ziegler of Sky Island Language Learning Research in an amount not to exceed \$50,000 for Phase 3 of Project 8520 – Miscommunication in Maritime Contexts. Is this contract in place?	File Code (if any)		Responsible Guthrie	Disposition Done
XCOM	1/15/2025	Agenda for Upcoming PWSRCAC Board Meeting: The Executive Committee approved the agenda for the PWSRCAC Board meeting, January 23-24, 2025. Has the agenda been distributed?	File Code (if any)	210.001.250125.JanAgenda	Responsible Fleming	Disposition Done

PWSRCAC BOARD AND EXECUTIVE COMMITTEE ACTIONS

Meeting Date Action Item



PRINCE WILLIAM SOUND
REGIONAL CITIZENS' ADVISORY COUNCIL

XCOM	12/18/2024	Federal Government Affairs Monitoring Contract Approval: The Executive Committee approved a six-month contract extension with Blank Rome Government Relations, LLC for Federal legislative monitoring under project 4400 Federal Government Affairs in an amount not to exceed \$22,500. Is this contract extension in place?	File Code (if any)	Responsible Lally	Disposition Done
XCOM	12/18/2024	Scientific Advisory Committee Appointment: The Executive Committee appointed W. Scott Pegau to the Scientific Advisory Committee with a term set to expire at the May 2025 annual Board meeting. Is this appointment in place?	File Code (if any)	Responsible Willahan	Disposition Done
XCOM	12/18/2024	Budget Modification to fund deferred 3903 Internship project: The Executive Committee approved a budget modification from the contingency fund to project 3903 – Internship for FY2025 in the amount of \$4,000. Is this budget modification in place?	File Code (if any)	Responsible Draper-Reich	Disposition Done
XCOM	12/18/2024	Executive Director FY2024 Evaluation Process: The Executive Committee approved forwarding Totemoffs suggested revision to the Executive Director's performance goals to the Board for their consideration at the January 2025 Board meeting. Has the suggestion been forwarded to the Board?	File Code (if any)	Responsible Archibald	Disposition Done
Board	11/26/2024	Approval of FY2024 Audit: The Board accepted the June 30, 2024 audited financial statements and audit report. Is this report in place?	File Code (if any)	Responsible Hamilton	Disposition Done
Board	11/26/2024	Request for informal Review on the VMT C-Plan: 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?	File Code (if any)	651.105.241126.ADECInformIRvw Responsible Swiss/Robida	Disposition Done
Board	11/26/2024	Contract Approval: 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?	File Code (if any)	Responsible Lally	Disposition Done

PWSRCAC BOARD AND EXECUTIVE COMMITTEE ACTIONS

Meeting Date Action Item



PRINCE WILLIAM SOUND
REGIONAL CITIZENS' ADVISORY COUNCIL

Board	11/26/2024	Tsunami Workshop Summary Report: 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?	File Code (if any)	802.104.241126.TsuWkshopRpt	Responsible Guthrie	Disposition Done
Board	11/26/2024	Board Policy Amendments: 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?	File Code (if any)		Responsible Odegard	Disposition Done
Board	11/26/2024	FY2026 Funds and Contract for Copper River Delta and Flats GRS: 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?	File Code (if any)		Responsible Robida	Disposition Done
Board	11/26/2024	Executive Director Holiday Bonus: The Board authorized a one-time 2024 holiday bonus for Executive Director Donna Schantz in the amount of \$600. Has the bonus been delivered?	File Code (if any)		Responsible Hamilton	Disposition Done
Board	9/19/2024	FY2025 LTEMP BUDGET MODIFICATION & CONTRACT CHANGE ORDER APPROVAL: 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?	File Code (if any)		Responsible Verna	Disposition Done
Board	9/19/2024	APPROVAL OF FY2025 BUDGET MODIFICATIONS: 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?	File Code (if any)		Responsible Hamilton	Disposition Done
Board	9/19/2024	REPORT ACCEPTANCE: MARINE BIRD HOTSPOTS IN PRINCE WILLIAM SOUND: 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?	File Code (if any)	900.431.240701.PWSSCBirdHotSpot	Responsible Verna	Disposition Done

PWSRCAC BOARD AND EXECUTIVE COMMITTEE ACTIONS

Meeting Date Action Item



PRINCE WILLIAM SOUND
REGIONAL CITIZENS' ADVISORY COUNCIL

Board	9/19/2024	REPORT ACCEPTANCE: PORT VALDEZ WEATHER BUOY DATA ANALYSIS 2019-2023: 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?	File Code (if any) 653.431.240901.PtVdzWxBuoyData	Responsible Robertson	Disposition Done
Board	9/19/2024	REPORT ACCEPTANCE: NON-INDIGENOUS MARINE SPECIES IN PRINCE WILLIAM SOUND: 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?	File Code (if any) 952.104.240919.NISreport	Responsible Verna	Disposition Done
Board	9/19/2024	PWSRCAC LONG RANGE PLANNING: 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?	File Code (if any)	Responsible Odegard	Disposition Done
XCOM	9/10/2024	Information & Education Committee Appointment: 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?	File Code (if any)	Responsible Willahan	Disposition Done
XCOM	9/10/2024	Alyeska/SERVS Contracted FV Fleet Representative Meeting Report: 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?	File Code (if any) 703.105.240913.FVRepMeeting	Responsible Robida	Disposition Done
XCOM	9/10/2024	Out-of-State Travel to Pacific Marine Expo: 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?	File Code (if any)	Responsible Willahan	Disposition Done
XCOM	9/10/2024	Approval of International Travel to Attend PWSRCAC Volunteer Events: 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?	File Code (if any)	Responsible Willahan	Disposition Done

PWSRCAC BOARD AND EXECUTIVE COMMITTEE ACTIONS

Meeting Date Action Item



PRINCE WILLIAM SOUND
REGIONAL CITIZENS' ADVISORY COUNCIL

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?	File Code (if any) 210.001.240919.SeptAgenda	Responsible Fleming	Disposition Done
XCOM	7/18/2024	Approval of Professional Agreement for Legal Services: 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)	File Code (if any)	Responsible Odegard	Disposition Done
XCOM	7/18/2024	Approval of Advisory Letters to the TAPS Shippers: 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?	File Code (if any) 900.105.240719.RPGwhalespeed	Responsible Verna	Disposition Done
XCOM	7/18/2024	Approval of Advisory Letters to NOAA: 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?	File Code (if any) 900.105.240718.NOAAwhalespeed	Responsible Verna	Disposition Done
XCOM	7/18/2024	Approval of Contract Increase for Secondary Containment Liner Testing: 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?	File Code (if any)	Responsible Blancaflor	Disposition Done
XCOM	7/18/2024	Approval of Storage Tank 7 & 94 Maintenance Review Report: 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?	File Code (if any) 500.431.240501.TakuTanks7and94 and 500.105.240718. APSCTaku94and7	Responsible Blancaflor	Disposition Done
XCOM	7/18/2024	Approval of Storage Tank 2 Inspection Report: 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?	File Code (if any) 500.431.240501.TakuTank2OOS	Responsible Blancaflor	Disposition Done

PWSRCAC BOARD AND EXECUTIVE COMMITTEE ACTIONS

Meeting Date Action Item



PRINCE WILLIAM SOUND
REGIONAL CITIZENS' ADVISORY COUNCIL

XCOM	7/18/2024	Amicus Curiae Brief Budget Increase: 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.	File Code (if any)	Responsible Schantz	Disposition Pending
XCOM	7/18/2024	Approval of In-State Travel: 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?	File Code (if any)	Responsible Fleming	Disposition Done
Board	5/2/2024	PWSRCAC DIRECTOR APPOINTMENTS: 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?	File Code (if any)	Responsible Fleming	Disposition Done
Board	5/2/2024	APPROVAL OF FY2025 BUDGET: 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?	File Code (if any)	Responsible Hamilton	Disposition Done
Board	5/2/2024	APPROVAL OF RESOLUTION DESIGNATING PWSRCAC CHECK SIGNERS: 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	APPROVAL OF FY2025 CONTINGENCY PLAN CONTRACTOR POOL: 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 (project 6510). Are these contracts in place?	File Code (if any)	Responsible Swiss	Disposition Done
Board	5/2/2024	MARINE BIRD FALL AND EARLY WINTER SURVEYS CONTRACT AUTHORIZATION: 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

PWSRCAC BOARD AND EXECUTIVE COMMITTEE ACTIONS

Meeting Date Action Item



PRINCE WILLIAM SOUND
REGIONAL CITIZENS' ADVISORY COUNCIL

Board	5/2/2024	APPROVAL OF PWSRCAC/ALYESKA CONTRACT COMPLIANCE VERIFICATION REPORT: The Board accepted the PWSRCAC/Alyeska Annual Contract Compliance Verification Report. Is this report in place?	File Code (if any)	100.109.240429.ContrComplRpt	Responsible Hamilton	Disposition Done
Board	5/2/2024	APPROVAL FOR ANCHORAGE OFFICE LEASE EXTENSION: 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	APPROVAL OF FY2024 BUDGET MODIFICATIONS: 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	ELECTION OF OFFICERS AND MEMBERS-AT-LARGE: 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
Board	5/2/2024	REPORT ACCEPTANCE: 2023 DRILL MONITORING ANNUAL REPORT: The Board accepted the 2023 Annual Drill Monitoring Report for distribution to the public. Is this report in place?	File Code (if any)	752.431.240101.DrillMon2023	Responsible Robertson	Disposition Done
Board	5/2/2024	APPROVAL OF COUNCIL'S ONE-PAGE STRATEGIC PLAN: The Board adopted and approved the one-page strategic plan as developed by the Strategic Planning Committee. Is this plan in place?	File Code (if any)		Responsible Lally	Disposition Done
Board	5/2/2024	TECHNICAL COMMITTEE MEMBER APPOINTMENTS: 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?	File Code (if any)		Responsible Vanderburg/	Disposition Done

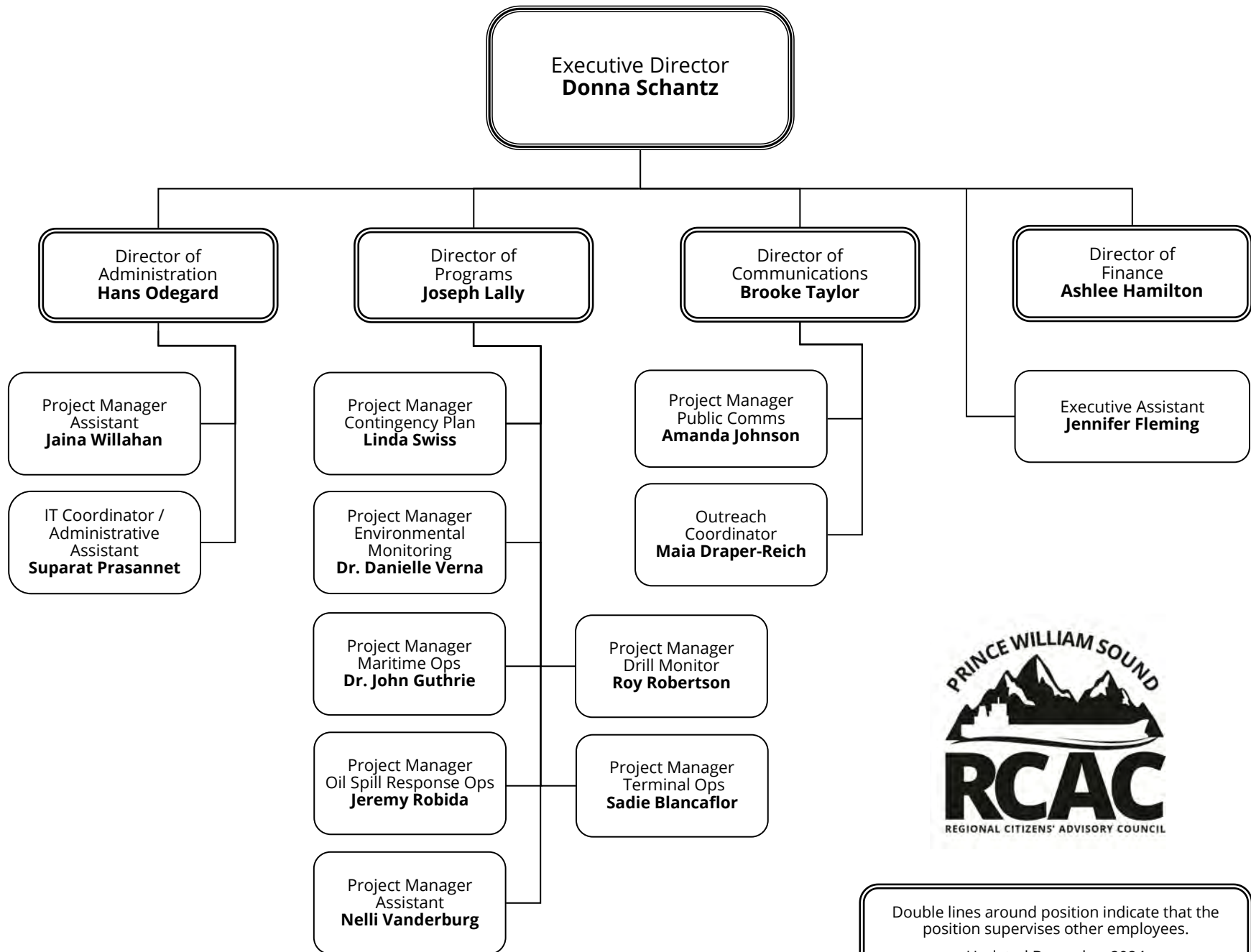
PWSRCAC BOARD AND EXECUTIVE COMMITTEE ACTIONS

Meeting Date Action Item



PRINCE WILLIAM SOUND
REGIONAL CITIZENS' ADVISORY COUNCIL

Board	5/2/2024	RESOLUTION REQUESTING A VOLUNTARY VESSEL SPEED REDUCTION BY TAPS TANKERS: 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?	File Code (if any) See 4/23/24 XCOM action.	Responsible Verna	Disposition Done
Board	5/2/2024	ANNUAL BOARD SUBCOMMITTEE APPOINTMENTS: 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?	File Code (if any)	Responsible Fleming	Disposition Done
Board	5/2/2024	FY2025 LTEMP CONTRACT AUTHORIZATION: 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?	File Code (if any)	Responsible Verna	Disposition Done



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

Updated December 2024

Consent Item Briefing for PWSRCAC Board of Directors – May 2025
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ACTION ITEM

Sponsor: Ashlee Hamilton, Director of Finance
Project number and name or topic: 1000 - General Administration
Financial Management

1. **Description of agenda item:** Staff is requesting that the Board of Directors adopt resolutions updating the persons authorized to sign checks and transact other business on the organization's account at First National Bank Alaska (FNBA). Staff is requesting that the Board of Directors pass bank-provided resolutions to update PWSRCAC's signature cards with FNBA. Those authorized to sign checks on behalf of PWSRCAC will include the Board Officers (president, vice president, secretary, and treasurer), the Executive Director (Donna Schantz), the Director of Administration (Hans Odegard), the Director of Programs (Joe Lally), the Director of Communications (Brooke Taylor), and one to two other Board members who reside in the Anchorage area. Having Board members who reside in the Anchorage area authorized to sign checks is helpful in order to obtain signatures in a timely manner and to save costs, as this reduces the need to mail checks outside of the Anchorage area to obtain signatures. The resolution will also provide for the Director of Finance to receive bank information, but not approve any transactions.
2. **Why is this item important to PWSRCAC:** Bank authorizations need to reflect current Board members and staff. To maintain adequate internal controls, we require that checks written on the main checking account have two signatures and if the amount of the check is \$15,000 or more, one of those signers must be a Board member.
3. **Action Requested of the Board of Directors:** Adopt 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.
4. **Alternatives:** None proposed.
5. **Attachments:** None.

Consent Agenda Briefing for PWSRCAC Board of Directors – May 2025

ACTION ITEM

Sponsor: Linda Swiss and the Oil Spill
Prevention and Response Committee

Project number and name or topic: 6510 – Contingency Plan Reviews

1. **Description of agenda item:** In January 2010, the Board approved a process where contractors are selected to provide technical advice on contingency plan reviews every five years. The method involves a full competitive bid process through a Request for Qualifications (RFQ). An evaluation team made up of staff and volunteers review and rank submittals to the RFQ, and contractors are selected to provide expert advice. Each contractor verifies on an annual basis their availability to provide advice to the Council.

Since FY1998, work on projects related to oil spill prevention and response contingency plans (c-plans) has been managed using pre-qualified contractors. The primary project manager administers the contracts, and the c-plan project team discusses specific activities and makes recommendations for action to be taken. Pre-identifying technical experts/contractors for use in PWSRCAC's review of c-plans and various issues associated with the plans is a timesaving and cost-effective process.

Pre-qualified contractors for Project 6510 – Contingency Plan Reviews were selected and approved in 2023, to provide services for five years. These contractors include:

- (1) Nuka Research and Planning, LLC.
- (2) Attorney Breck Tostevin

2. **Why is this item important to PWSRCAC:** The tanker and terminal c-plan approval process includes important actions that could potentially impact every member organization, as c-plans outline response and prevention activities that a spiller will be required to undertake to protect our region's shorelines, resources, and communities in the event of a spill. Review of c-plans is a major task for PWSRCAC as outlined in both the PWSRCAC/Alyeska contract and OPA 90. Having adequate expertise readily available to perform c-plan reviews and tasks related to the plans, a process that is often driven by external deadlines, is key to PWSRCAC fulfilling its c-plan review mission objectives. It is important to be prepared and to have the expertise and resources readily available to address issues as they arise.

The Tanker C-Plan was renewed in February 2022, and expires in 2027. The VMT C-Plan was renewed in November 2024, and expires in November 2029.

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

<u>Meeting</u>	<u>Date</u>	<u>Action</u>
Board	May 2017	Approved individual contracts with Brendan Environmental, E-Tech Environmental, Harvey Consulting, Nuka Research and Planning, Pegasus Environmental for

Approval of FY2026 Contingency Plan Contractor Pool 3-2

		professional services with the aggregate total not to exceed the amount approved for 651 Contingency Plan Review in the FY2018 budget, and delegate authority to the Executive Director to enter into individual contracts with selected consultants.
Board	Sept 2017	Approved individual contracts with Sharry Miller and 152 Degrees West Environmental Services with the aggregate total not to exceed the amount approved for 651 Contingency Plan Review in the FY2018 budget.
Board	May 2018	Approved individual contracts with Harvey Consulting, Integrity Environmental, Nuka Research and Planning, and Shannon & Wilson for professional services with the aggregate total not to exceed the amount approved for 651 Contingency Plan Review in the FY2019 budget, and delegate authority to the Executive Director to enter into individual contracts with selected consultants.
Board	May 2019	Approved individual contracts with Harvey Consulting, Integrity Environmental, Nuka Research and Planning, and Shannon & Wilson for professional services with the aggregate total not to exceed the amount approved for 651 Contingency Plan Review in the FY2020 budget, and delegate authority to the Executive Director to enter into individual contracts with selected consultants.
Board	May 2020	Approved individual contracts with, Integrity Environmental, Nuka Research and Planning, Polaris Applied Sciences, Shannon & Wilson, and 152 Degrees West Environmental Services for professional services with the aggregate total not to exceed the amount approved for 651 Contingency Plan Review in the FY2021 budget, and delegate authority to the Executive Director to enter into individual contracts with selected consultants. XCOM July 2020 Approved Attorney Breck Tostevin to the selected contingency plan contractor list, and delegate authority to the Executive Director to enter into individual contracts with the pre-approved selected consultants with the aggregate total not to exceed \$80,000.
Board	May 2021	Approved individual contracts with Attorney Breck Tostevin, Nuka Research and Planning, Polaris Applied Sciences, and Shannon & Wilson for professional services with the aggregate total not to exceed the amount approved for 651 Contingency Plan Review in the FY2023 budget, and delegate authority to the Executive Director to enter into individual contracts with selected consultants.
Board	May 2022	Approved individual contracts with Attorney Breck Tostevin, Nuka Research and Planning, and Polaris Applied Sciences for professional services with the aggregate total not to exceed the amount approved for 651 Contingency Plan Review in the FY2023 budget, and delegate authority to the Executive Director to enter into individual contracts with selected consultants.
Board	May 2023	Approved individual contracts with Nuka Research and Planning, LLC, and Attorney Breck Tostevin for professional services with the aggregate total not to exceed the amount approved for Project 651 Contingency Plan Review in the final FY2024 budget, and delegation of authority to the Executive Director to enter into individual contracts with selected consultants.
Board	Jan 2024	Delegation of 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.
Board	May 2024	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	March 2025	Authorize FY2025 budget modification of \$15,000 to project 6510 and authorize corresponding contract increase for selected contingency plan review contractors for an aggregate amount not to exceed \$95,000.

4. **Summary of policy, issues, support, or opposition:** Over the years, Board members have expressed some concern regarding PWSRCAC's use of pre-qualified experts/consultants. The OSPR Committee addressed this process in an effort to improve it

Approval of FY2026 Contingency Plan Contractor Pool 3-2

and made the following recommendation, which was approved by the Board at the January 2010 meeting:

Process for Contingency Plan Contractor Selection: Advertise Request for Qualifications (RFQ) for contingency plan contractor technical support every five (5) years. Selected contractors will be included on a list of qualified contingency plan contractors and will be valid for a five-year term. Interested contractors are welcome to submit qualifications at any time to be considered for inclusion on the list of qualified contractors. The list of qualified contingency plan contractors will be submitted to the Board for approval at the next Board meeting following OSPR Committee recommendation. An annual letter will be submitted to contractors on the list to confirm availability and any other changes.

The Board has recognized that the current RFQ method appears to be the most is the most time-efficient and cost-effective approach they have found for handling the c-plan review process and associated tasks.

5. **Committee Recommendation:** The OSPR Committee recommended the list of preselected contractors for FY2025 for Board approval.
6. **Relationship to LRP and Budget:** Project 6510 – Contingency Plan Reviews is in the proposed FY2026 budget in the amount of \$80,000.
7. **Action Requested of the Board of Directors:** Authorize individual contracts with Nuka Research and Planning, LLC. and Attorney Breck Tostevin for professional services with the aggregate total not to exceed the amount approved for 6510 - Contingency Plan Reviews in the final FY2026 budget, and delegate authority to the Executive Director to enter into individual contracts with the selected consultants.
8. **Attachments:** None.

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

Sponsor: Danielle Verna and the Scientific Advisory Committee

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

1. **Description of agenda item:** The Board is being asked to authorize contracts for the Long-Term Environmental Monitoring Program (LTEMP) summer 2025 field-sampling and laboratory work. Contracts for the Board's consideration include:

- Authorize individual contracts with Pace Analytical Services and Fjord & Fish Sciences with the aggregate total not to exceed the amount approved in the final FY2026 LTEMP budget (Project 9510) for contract expenses, and delegate authority to the Executive Director to enter into individual contracts with the aforementioned consultants.

These contract authorizations are contingent upon Board approval of the FY2026 budget, including funding for this project within the budget, at the May 2025 Board meeting.

Pace Analytical Services will provide the Council with analytical chemistry laboratory services for mussel and marine sediment samples. Fjord & Fish Sciences will report and interpret the analytical results of the 2025 LTEMP samples and participate in 2025 field work.

Some of the work under these contracts needs to begin in April 2025, prior to the start of FY2026, because of supply prerequisites and sampling timing. That early work may require a modification of the FY2025 budget.

Additional LTEMP costs, not described in this briefing, include other analytical lab costs, vessel and floatplane charters for field work, sample shipping costs, and minor equipment and supplies costs.

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:** LTEMP has been conducted by PWSRCAC since 1993, and many actions have been taken by the Board on this item since

FY2026 LTEMP Contract Authorization 3-3

that time. In the interest of providing recent action items taken by the Board on this item, the last five years of actions are presented below. All historic actions pertaining to LTEMP are available for review upon request by contacting Project Manager Danielle Verna.

<u>Meeting</u>	<u>Date</u>	<u>Action</u>
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 United States Geological Survey (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	5/5/2022	Authorized individual contracts with NewFields Environmental Forensics Practice and Oregon State University, with the aggregate total not to exceed the amount approved in the final FY2023 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, and authorized contract work to commence prior to the start of FY2023, as approximately \$10,000 of these funds will need to be expended in May and June 2022.
XCOM	9/15/2022	Accepted the reports titled “Long-Term Environmental Monitoring Program: 2021 Summary Report” and “Long-Term Environmental Monitoring Program: 2021 Technical Supplement” by Owl Ridge Natural Resource Consultants, dated May 2022, as meeting the terms of contract #951.22.06 and for public distribution.
Board	5/4/2023	Authorized 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 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.
Board	1/25/2024	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.
Board	5/2/2024	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.
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

FY2026 LTEMP Contract Authorization 3-3

Board	1/25/2025	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. Accepted 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.
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4. **Summary of policy, issues, support, or opposition:** None
5. **Committee Recommendation:** The Scientific Advisory Committee supports this project.
6. **Relationship to LRP and Budget:** Project 9510 – Long-Term Environmental Monitoring Project is in the proposed FY2026 budget in an amount of \$137,860.
7. **Action Requested of the Board of Directors:**
 - Authorize individual contracts with Pace Analytical Services and Fjord & Fish Sciences with the aggregate total not to exceed the amount approved in the final FY2026 LTEMP budget (Project 9510) for contract expenses, and delegate authority to the Executive Director to enter into individual contracts with the aforementioned consultants.
 - Authorize contract work to commence prior to the start of FY2026, as approximately \$20,000 of these funds will need to be expended in April and May 2025.

Note: This action is contingent upon approval of full funding of this project in the FY2026 budget.

8. **Alternatives:** None recommended.
9. **Attachments:** None.

Consent Agenda Briefing for PWSRCAC Board of Directors – May 2025

ACTION ITEM

Sponsor: Danielle Verna and the Scientific Advisory Committee

Project number and name or topic: 9110 - Prince William Sound Marine Bird Winter Survey

1. **Description of agenda item:** The Board is being asked to authorize a sole source contract with the Prince William Sound Science Center (PWSSC) in an amount not to exceed \$80,060 for project 9110 to conduct marine bird and mammal surveys in Prince William Sound during fall and early winter months (September and November 2025). Prior Council-sponsored surveys in late winter (March) have identified areas that may warrant additional protection in the event of a spill during that time period, however the marine bird community varies throughout the non-breeding season and community composition is distinct between fall, early winter, and late winter. This project will document density, species composition, and distribution of marine birds and mammals, and identify high use areas in and around the tanker escort lane. This is the second of four proposed years of surveys during fall and early winter.

This contract authorization is contingent upon Board approval of the FY2026 budget, which contains funding for this project, at the May 2025 Board meeting.

2. **Why is this item important to PWSRCAC:** This project will monitor habitat and densities of marine bird species that were impacted by the Exxon Valdez oil spill and would be impacted again in the event of another spill. The project identifies nearshore habitat important to marine bird survival that may warrant additional protection and can inform spill responders. These surveys take place in fall and early winter months, which have been identified as gaps in the available survey data for marine birds in Prince William Sound, particularly in and around the tanker escort lanes. The survey areas include Port Valdez, the Valdez Arm, Tatitlek Narrows, Port Fidalgo, Storey, Peak, and Naked Islands, Rocky Bay, Port Etches, Zaikof Bay, and mid-Sound west of Port Gravina. Data will be made publicly available via the Alaska Ocean Observing System data portal and NOAA's Environmental Response Management Application.

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

<u>Meeting</u>	<u>Date</u>	<u>Action</u>
Board	5/2/2024	Adopted the FY2025 budget as presented during the Budget Workshop on April 25, 2024. Funding was approved for the first year of surveys as part of the FY2025 budget.
Board	5/2/2024	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.

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

FY2026 Marine Bird Fall and Early Winter Surveys Contract Authorization 3-4

5. **Committee Recommendation:** The Scientific Advisory Committee supports this project.
6. **Relationship to LRP and Budget:** Project 9110 – Prince William Sound Marine Bird and Mammal Fall and Early Winter Survey is in the proposed FY2026 budget in an amount of \$80,060.
7. **Action Requested of the Board of Directors:** Authorize the Executive Director to enter into a sole source contract with the Prince William Sound Science Center to conduct project 9110 – Marine Bird Fall and Early Winter Surveys in 2024 in an amount not to exceed \$80,060.

Note: This action is contingent upon approval of full funding of this project in the FY2026 budget.

8. **Alternatives:** None recommended.
9. **Attachments:** None.

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

Sponsor: Joe Lally, Director of Programs

Project number and name or topic: Committee Member Appointments

1. **Description of agenda item:** This agenda item is to request that the Board support the volunteer membership of the committees by the appointment of renewals to a two-year term to the committees listed below. This agenda item is included on the consent agenda this year as there are no new appointees, just renewals.

Scientific Advisory Committee (SAC)

Wei Cheng	Renewal
John Kennish	Renewal
Dorothy Moore	Renewal
Roger Green	Renewal
Wayne Donaldson	Renewal
Scott Pegau	Renewal

Note: The committee consists of eight members including renewals.
Directors on SAC: Dorothy Moore, Wayne Donaldson

Terminal Operations and Environmental Monitoring Committee (TOEM)

Harold Blehm	Renewal
Mikkel Foltmar	Renewal
Steve Goudreau	Renewal
Tom Kuckertz	Renewal

Note: The committee consists of six members including renewals.
Directors on TOEM: Amanda Bauer

Oil Spill Prevention and Response Committee (OSPR)

Gordon Scott	Renewal
Matt Melton	Renewal

Note: The committee consists of eight members including renewals and new members.
Directors on OSPR: Robert Beedle, Mike Bender, Jim Herbert, Mike Brittain

Port Operations and Vessel Traffic Systems (POVTS)

Gordon Terpening	Renewal
Max Mitchell	Renewal

Note: The committee consists of four members including renewals.
Directors on POVTS: Amanda Bauer, Robert Archibald

Information and Education Committee (IEC)

Trent Dodson	Renewal
Jane Eisemann	Renewal
Cathy Hart	Renewal
Andrea Korbe	Renewal

Annual Technical Committee Member Appointments 3-5

Amanda Glazier

Renewal

Note: The committee consists of eight members including renewals.

Directors on IEC: Aimee Williams

2. **Why is this item important to PWSRCAC:** Maintaining a strong committee membership has been a high priority for PWSRCAC. The committees are an integral component of PWSRCAC's work and require strong volunteer membership.
3. **Summary of policy, issues, support or opposition:** Selection criteria for committee members per Board policy 507 includes: 1) experience or background in a technical field; 2) having a stake in safe oil transportation and/or terminal operations; 3) residents of the EVOS region given preference; 4) objectivity; and 5) special skills or expertise. Additionally, at least one Board member shall serve on each PWSRCAC standing committee.
4. **Committee Recommendation:** The Committees all endorse these renewals.
5. **Relationship to LRP and Budget:** Committee expenses tend to increase with the size of the committee but have always been an important part of the PWSRCAC budget. In the past, the Board supported limiting committee membership to eight volunteers plus Board members.
6. **Action Requested of the Board of Directors:** Appoint committee members to two-year terms on their respective committees.
7. **Alternatives:** None proposed.
8. **Attachments:** The meeting attendance for the last three years for all committee members is in section 2-4 of the meeting packet. Applications for new members (if applicable) are provided to Board members only [upon request](#). At the time this briefing sheet was prepared there were no new members seeking appointment.

Consent Agenda Briefing for PWSRCAC Board of Directors – May 2025

ACTION ITEM

Sponsor: Hans Odegard and Ashlee Hamilton

Project number and name or topic: Document Retention Procedure

1. **Description of agenda item:** Staff is seeking Board approval of revisions to the Council's document retention procedures. Originally adopted in 2012, the Council's document retention procedure was created to address the preservation of the organization's financial and corporate governance records. This procedure does not apply to project related reports, letters, and other reference materials; project related documentation are retained by the organization in perpetuity, mainly in the Council's document management system.

The retention schedule put in place back in 2012 is seen by staff as a bit too generous and harder to manage than necessary. Now that the Council's files have been modernized, staff recommends storing most documents digitally, with solid backup systems or cloud storage in place.

2. **Why is this item important to PWSRCAC:** Proper document retention is needed to ensure compliance with Internal Revenue Service (IRS) requirements, Alaska Statutes, and Alyeska contract requirements. PWSRCAC is required to provide information about its retention policy on its annual Form 990 filed with the IRS. In addition, a retention policy will help staff determine which records to keep and which records to destroy so that costs of handling and storage may be minimized. The procedure provides for exceptions in the case of litigation.

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

Meeting	Date	Action
Board	9/20/2012	Approved the adoption of the document retention procedure as presented.

4. **Summary of policy, issues, support, or opposition:** The Internal Revenue Service requires that financial and other records be retained for a minimum period of three years. The organization's auditor was consulted and the proposed policy amendments met or exceeded their recommendations regarding document retention timeframes. This policy identifies records that should be held permanently and those that may be destroyed after a period of time.

5. **Committee Recommendation:** The Finance Committee reviewed the amendments to the Council's Document Retention Procedure made by staff, and recommended staff make additional revisions ahead of sending the procedure to the Board for acceptance.

6. **Relationship to LRP and Budget:** Not applicable.

Approval of Amendments to Council's Document Retention Procedure 3-6

7. **Action Requested of the Board of Directors:** Approve the proposed revisions to the Council's document retention procedure as presented.
8. **Alternatives:** None recommended.
9. **Attachments:** Proposed revisions to the Council's document retention procedure.

Prince William Sound Regional Citizens' Advisory Council Document Retention Procedure

Purpose

The purposes of this document retention procedure are for the Prince William Sound Regional Citizens' Advisory Council (the "Organization") to enhance compliance with the applicable portions of the Sarbanes-Oxley Act and to promote the proper treatment of corporate records of the Organization.

Maintaining accurate and complete documentation is crucial for the smooth operation and compliance of the Prince William Sound Regional Citizens' Advisory Council (Council). This policy outlines our approach to document retention, helping ensure that we meet legal and regulatory obligations while adhering to best practices in document management.

The Council recognizes that certain documents are subject to specific regulatory requirements. For instance:

- **Financial and accounting documents** must generally be kept for at least seven years to comply with IRS guidelines and the Sarbanes-Oxley Act.
- **Employment and personnel files** are retained according to federal laws, such as those set by the Equal Employment Opportunity Commission (EEOC).
- **Insurance policies and claims documents** are kept for the time required by industry standards and applicable state regulations.
- **Organizational documents**, like Board meeting minutes and By-laws, are preserved permanently for legal and historical purposes.

While not every type of document is required to be kept for a specific period by law, the Council strives to maintain a consistent approach to retention. This ensures compliance with applicable regulations, provides clarity for future reference, and supports the long-term health of the organization.

General Guidelines

Documents Records should not be kept if they are no longer needed for the operation of the business or required by law. Any unnecessary **documents** records should be **properly disposed of** ~~eliminated from the files~~. Maintaining excessive paperwork incurs unnecessary costs, and poor document management can lead to unreasonable expenses. Additionally, keeping too many documents makes it harder to locate important files when needed. The **Council** ~~Organization~~ may periodically establish specific retention or destruction policies **for different categories of documents. These procedures aim** ~~or schedules for specific categories of records in order to ensure legal compliance, and also to accomplish other~~ achieve objectives such as **like** ~~preserving intellectual property and~~ **managing costs** ~~cost management~~. **Certain documents may require special consideration. Minimum retention periods apply, but final retention decisions should follow general guidelines, with the exception of litigation relevant documents and other**

legally significant factors. Several categories of documents that warrant special consideration are identified below. While minimum retention periods are established, the retention of the documents identified below and of documents not included in the identified categories should be determined primarily by the application of the general guidelines affecting document retention, as well as the exception for litigation relevant documents and any other pertinent factors.

Exception for Litigation Relevant Documents

The **Council** Organization expects all **Board members, volunteers** officers, directors, and employees to comply fully with any published document retention or destruction policies, procedures, and schedules. ~~provided that~~ **All Board members, volunteers** officers, directors, and employees should note the following general exception to any stated destruction schedule: If you believe, or the **Council** Organization informs you, that **Council** Organization documents are relevant to litigation, or potential litigation (i.e., a dispute that could result in litigation), then you must preserve those documents until it is determined that the records are no longer needed.

This that exception **overrides** supersedes any previously or subsequently established destruction schedule for those documents.

Minimum Retention Periods for Specific Categories of Documents

The table below outlines the **minimum retention periods**, calculated from the end of the relevant fiscal year, for specific categories of records. For clarity, the Council defines **"cloud storage"** as digital document storage solutions that are accessible online and supported by regular backups. At the drafting of this procedure, this includes, but is not limited to, the following platforms:

- **Microsoft Teams and SharePoint**, hosted on **Microsoft Azure**, which are used for collaborative file sharing and storage.
- **Sage Intacct**, our cloud-based accounting system hosted on **Amazon Web Services (AWS)**, which stores financial and transactional documents.
- Our **document management system (DMS)**, powered by **FileMaker** and backed up to **AWS**, which is used for the structured organization and secure storage of key documents.
- **On-premises server shares**, currently stored locally and backed up via **Barracuda Cloud Storage**. These systems are in the process of being migrated to Microsoft cloud storage infrastructure as of 2025.

To prevent accidental deletion of documents that must be retained, designated cloud storage locations should be clearly labeled, and access permissions should be set as needed. Where applicable, folders should be named in a way that indicates their retention requirements (e.g., 'DO NOT DELETE'), and system settings should be used to enforce retention policies.

Document Category	Description	Minimum Retention	Location	Justification
Organizational Documents	Articles of Incorporation, By-Laws, Alaska Department of Commerce Biennial Reports, IRS Form 1023 (original application for tax exempt status).	Permanent	Documents were stored in physical filing cabinets at the Anchorage office through 2020. Beginning in 2021, documents have been stored digitally in the Council's cloud storage environment.	Edit to move IRS 1023 to this section.
Accounting Documents	Accounts payables source documentation, bank statements, bank statement reconciliations, check copies, deposit slips, and cancelled checks and ACH payment records .	Seven years.	Anchorage office basement storage and Council's cloud storage when applicable.	Edit to add ACH payments.
Audit Records	Audit reports and audited financial statements. Auditor's correspondence with Finance Committee and Board of Directors.	Permanent	Anchorage office—Gregory's office: Anchorage office filing cabinets and in the Council's cloud storage.	Transition to digitization for more efficient and modern storage practices, and ease of use.
Board of Directors and Executive Committee Meeting Materials	Meeting agendas , minutes and other materials distributed to Board members and the Executive Committee.	Permanent	Anchorage office—basement storage: Valdez Office and the Council's Online document management system.	Transition to digitization for more efficient and modern storage practices, and ease of use, reflecting current practices.

Document Category	Description	Minimum Retention	Location	Justification
Budgets	Approved budgets and budget modifications.	Permanent	Anchorage office— Gregory's office and basement storage. Council's cloud storage.	Transition to digitization for more efficient and modern storage practices, and ease of use, reflecting current practices.
Contracts and other Legal Documents	Contracts, lease agreements, and other legal documents.	Permanent	Anchorage office— basement storage and reception area filing cabinets. Council's cloud storage.	Transition to digitization for more efficient and modern storage practices, and ease of use.
Employment and Personnel Records	Personnel files, recruitment records, and job announcements.	Seven years	Anchorage office— Gregory's office and basement storage. Anchorage office personnel filing cabinet.	
Workers Compensation Insurance Policies	Insurance policies and records, accident reports, and claims.	Permanent	Anchorage office— Gregory's office and basement storage. Council's cloud storage.	Transition to digitization for more efficient and modern storage practices, and ease of use.
Other Insurance Policies	Cybersecurity and liability, general liability, commercial, travel, accidental and other insurance policies and records, reports and claims.	Seven years	Council's cloud storage.	Transition to digitization for more efficient and modern storage practices, and ease of use.

Document Category	Description	Minimum Retention	Location	Justification
Budget Interim Financial Statements	Quarterly financial statements and budget comparisons.	Permanent Seven years	Council's cloud storage. Anchorage office— Gregory's office and basement storage.	Transition to digitization for more efficient and modern storage practices, and ease of use, reflecting current practices.
IRS Filings	Form 1023, Original application for tax exempt status. Form 990 information returns filed each year with the Internal Revenue Service. W-9 forms and 1099 forms.	Permanent Seven years	Anchorage office fireproof filing cabinet in the computer room and Council's cloud storage.	Form 1023 should be kept in perpetuity and is now listed under "Organizational Documents." Transition to digitization for more efficient and modern storage practices, and ease of use.
Payroll Records	Records for each pay period, employee payroll files, timecards, W-2 forms, and quarterly payroll tax reports filed with the Internal Revenue Service and the Alaska Department of Labor.	Seven years after employee's termination.	Anchorage office— Gregory's office and basement storage. Anchorage office personnel filing cabinet. Electronic after 2001 via the Council's HR and Payroll system.	Transition to digitization for more efficient and modern storage practices, and ease of use.
Press Releases/Public Filings	All press releases and publicly filed documents.	Permanent	Council's cloud storage and in the Council's online document management system. Copies of electronic versions are sufficient.	Transition to digitization for more efficient and modern storage practices, and ease of use, reflecting current practices.

Document Category	Description	Minimum Retention	Location	Justification
Solicitations	Requests for Proposals (RFP), Requests for Qualifications (RFQ), bid evaluation checklists and materials.	RFP's and RFQ's - Permanent. Evaluations, checklists and other materials - four years	Anchorage office – basement storage. Council's cloud storage.	Transition to digitization for more efficient and modern storage practices, and ease of use.
XCOM Materials	Meeting minutes and other materials distributed to XCOM members.	Permanent		Merged with Board category.

Approval of Federal Government Affairs Monitor Retainer 3-7

Briefing for PWSRCAC Board of Directors – May 2025

Sponsor: Joe Lally
Project number and name or topic: 4400 – Federal Government Affairs – Retainer Approval for Blank Rome Government Relations to Support Roy Jones

1. **Description of agenda item:** The Board is being asked to authorize an FY26 retainer agreement with Blank Rome Government Relations (BRGR) to work with Roy Jones as the Council's Federal Legislative Monitors through June 30, 2026. Besides working closely with Roy, BRGR will be providing input to the Legislative Affairs Committee (LAC) on issues related to our work. BRGR will also accompany LAC members and staff during the Spring 2026 Washington, D.C. legislative visit, as they have done in previous years.

The support from BRGR proposed in this briefing sheet is considered as part of the transitioning plan with Roy Jones and is necessary because Roy is no longer able provide the "boots on the ground" support in Washington, D.C., that he has provided to us for more than two decades. This transition process will likely be recommended until such time as Roy is no longer able to serve as the Council's primary Federal Monitor. Roy has said that he would like to stay involved in our work for as long as he is able and the consensus among the Legislative Affairs Committee is to keep Roy Jones involved for as long as possible.

2. **Why is this item important to PWSRCAC:** Many issues of vital importance to the Council and its mission are debated and decided in Washington, D.C. The Legislative Affairs Committee works to advance the PWSRCAC's federal legislative priorities that are consistent with our mission, OPA 90, and our contract with Alyeska Pipeline Service Company.

3. **Previous actions taken by the Board on this item:** None

4. **Summary of policy, issues, support, or opposition:** Something to note is that Roy Jones has not raised his rates in over 20 years. With this in mind, it is important to recognize that if we expect to maintain the same level of service that we have come to expect from Roy, it is going to cost significantly more.

5. **Committee Recommendation:** The Legislative Affairs Committee unanimously conveyed its support of the FY2026 retainer agreement with BRGR via poll on April 22.

6. **Relationship to LRP and Budget:** Project 4400 – Federal Government Affairs is in the proposed FY2026 budget and annual work plan in the amount of \$121,600.

7. **Action Requested of the Board of Directors:** Authorize a retainer agreement with Blank Rome Government Relations to assist PWSRCAC's Federal Legislative Monitor Roy Jones in the amount of \$57,000.

8. **Alternatives:** None recommended.

9. **Attachments:** None.

Consent Agenda Briefing for PWSRCAC Board of Directors – May 2025

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 during a recent budget review with project managers and management staff. The Finance Committee reviewed these modifications at their April 23 meeting and recommends approval. If the changes proposed in this briefing sheet are approved, the FY2025 contingency will be \$269,786.

2. **Why is this item important to PWSRCAC:** PWSRCAC's annual budget provides the organizations' 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:**

Meeting	Date	Action
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.
Board	3/19/2025	Approved the FY2025 budget modifications as listed on the provided sheet, with a total revised contingency in the amount of \$268,409.

4. **Committee Recommendation:** The Finance Committee reviewed the proposed FY2025 modifications at its April 23 Finance Committee meeting and recommends Board approval.

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 \$269,786.

6. **Alternatives:** None recommended.

7. **Attachments:** The list of proposed FY2025 budget modifications.

Proposed FY2025 Budget Modifications
May 2025

Task	Name	Budget Modifications	From Contingency	To Contingency	Notes
1350	Information Technology - Volunteers	Utility expense no longer needed for FY2025		\$ 500.00	
2300	Oil Spill Prevention & Response	Conference and travel funds no longer needed for FY2025		\$ 3,300.00	
2400	Port Ops & Vessel Traffic Systems	Conference and travel funds no longer needed for FY2025		\$ 2,250.00	
2500	Scientific Advisory Committee	Conference and travel funds no longer needed for FY2025		\$ 4,892.00	
2600	Terminal Ops & Environmental Monitoring	Conference and travel funds no longer needed for FY2025		\$ 3,550.00	
2800	Information and Education Committee	Conference and travel funds no longer needed for FY2025		\$ 5,700.00	
3100	Public Information Program	Conference and travel funds no longer needed for FY2025		\$ 5,600.00	
3200	Observer	Printng budget no longer needed for FY2025		\$ 1,000.00	
3410	Fishing Vessel Outreach Program	Travel funds no longer needed for FY2025		\$ 1,800.00	
3500	Community Outreach	Conference and travel funds no longer needed for FY2025		\$ 10,000.00	
3530	Youth Involvement	Contract funds no longer needed for FY2025		\$ 710.00	
3600	Public Communications Program	Travel funds no longer needed for FY2025		\$ 1,225.00	
3610	Web Presence Best Available Technology	Professional Services no longer needed for FY2025		\$ 2,350.00	
6575	Comparison of Windy Application and Seal	Contract funds no longer needed for FY2025 - PM will make buoy/forecast comparisons as they occur once the buoy is functional.		\$ 31,000.00	
7000	Spill Response Operations Program	Conference funds no longer needed for FY2025		\$ 800.00	
		Total to return to contingency		\$ 74,677.00	
		Current contingency		\$ 195,109.00	
		New contingency		\$ 269,786.00	

Briefing for PWSRCAC Board of Directors – May 2025

ACTION ITEM**Sponsor:** Board of Directors**Project number and name or topic:** Board of Directors 2025 Appointments

1. **Description of agenda item:** Several Directors' terms expire in May 2025. This briefing sheet outlines the nominations received from PWSRCAC member organizations.

Member Organization	Director with Term Expiring in 2025	Director Nominated by Member Organization
City of Homer	Robert Archibald	Robert Archibald
City of Kodiak	Wayne Donaldson	Wayne Donaldson
City of Seldovia	Kirk Zinck	Kirk Zinck
City of Seward	Mike Brittain	Mike Brittain
City of Valdez	Amanda Bauer	Amanda Bauer
Kenai Peninsula Borough	Mako Haggerty	Mako Haggerty
Kodiak Village Mayors Association	Elijah Jackson	Elijah Jackson
Prince William Sound Aquaculture Corporation	Nick Crump	Nick Crump
Oil Spill Region Recreational Coalition	Jim Herbert	Jim Herbert
Tatitlek Corporation & Tatitlek IRA Council	Angela Totemoff	Angela Totemoff

2. **Why is this item important to RCAC:** Two-year terms and regular confirmations of individuals on the Board of Directors are mandated by PWSRCAC Bylaws.
3. **Action Requested of the Board of Directors:** Confirm the two-year terms of the selected representatives for each of the member entities listed above, with a term set to expire at the May 2027 annual meeting.
4. **Attachments:** None.

REVISED BRIEFING

Report Acceptance Regarding the Secondary Containment Liner 4-2

Briefing for PWSRCAC Board of Directors – May 2025

ACTION ITEM

Sponsor: Sadie Blancaflor and the TOEM Committee

Project number and name or topic: 6512 – Maintaining the Secondary Containment Liner

1. **Description of agenda item:** This item provides the Board with 1) an update on the results from the Electrical Leak Location and Electrical Resistivity Tomography Pilot Study of the Secondary Containment System at the Valdez Marine Terminal West Tank Farm Conducted July 2024, 2) an overview of Alyeska's February 28, 2025 testing plan, titled "VMT- East Tank Farm Secondary Containment System Final Evaluation Method Selection," and 3) Dr. Benson (PWSRCAC's contractor) recommendations for Alyeska's testing plan.

Furthermore, the Board is being asked to accept the report titled "Review of Electrical Leak Location and Electrical Resistivity Tomography Pilot Study of the Secondary Containment System at the Valdez Marine Terminal West Tank Farm Conducted July 2024," by Dr. Joseph Scalia and Dr. Craig H. Benson.

2. **Why is this item important to PWSRCAC:** Secondary containment systems are required by state and federal regulation to hold oil in the event of a spill from a tank or pipe until the spill can be detected and cleaned up. The Alyeska Pipeline Service Company (APSC) Valdez Marine Terminal (VMT) utilizes 13 crude oil storage tanks located in their East Tank Farm to facilitate terminal operations.¹ The VMT also has a West Tank Farm that is not currently in use and has four out-of-service crude oil storage tanks. All the in-service and out-of-service crude oil tanks, as well as other storage tanks at the VMT are within secondary containment systems.

One of the major components of the secondary containment systems at the VMT's East Tank Farm is a special subsurface liner, called a catalytically blown asphalt (CBA) liner. The CBA liner was installed around 1976, when the terminal was constructed. The CBA liner is located under about five feet of earthen fill throughout each of the seven secondary containment areas (also referred to as "dike cells") in the East Tank Farm. There are two crude oil storage tanks per dike cell. Holes or cracks through the East Tank Farm's CBA liner have consistently been found when it is exposed (about 19% of the time it is uncovered) indicating that the liner and thereby, the secondary containment system may not hold spilled oil before it could be detected and cleaned up.

The area underlain by CBA liner is very large. The average containment area in each dike cell is about eight acres, and the total containment area in the East Tank Farm is about 57

¹ As of October 22, 2024, Tank 8 has been cleaned and isolated from the system, reducing the number of active tanks in the East Tank Farm from 14 to 13.

REVISED BRIEFING

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acres, the majority of which is underlain by CBA liner. CBA liner is installed underneath all the tanks as well as around the tank perimeters. Only a small percentage of the liner area has ever been uncovered and evaluated for damage.

For two decades the PWSRCAC has voiced concern to Alyeska, and state and federal regulators, regarding the ability of the CBA liner to meet regulatory standards and the risks that a compromised liner poses in the event of a spill from the crude oil storage tanks at the VMT. In the most recent development, a May 11, 2022 decision by the Alaska Department of Environmental Conservation (ADEC) – which was henceforth incorporated into the most recent 2024 VMT C-Plan Renewal -- required that Alyeska:

- Identify “preliminary” methods to evaluate the integrity of the CBA liner in the East Tank Farm by October 1, 2023
- Identify “final” evaluation methods by March 1, 2025

Alyeska has since completed a pilot test of the West Tank Farm using electrical leak Location (ELL), and that methodology was indicated to have some degree of effectiveness in detecting large liner defects. Alyeska selected ELL as their methodology in their February 28, 2025 plan for testing the East Tank Farm.

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

Meeting	Date	Action
XCOM	4/28/2022	Accepted the report titled “Utilizing Numerical Simulation to Estimate the Volume of Oil Leaked Through a Damaged Secondary Containment Liner” dated February 7, 2022 as final and for public distribution.
Board	1/26/2023	Accepted the report titled “Methodologies for Evaluating Defects in the Catalytically Blown Asphalt Liner in the Secondary Containment System at the Valdez Marine Terminal” by Dr. Craig H. Benson dated November 29, 2022, as meeting the terms and conditions of Contract 6512.22.02, with direction to staff to forward the report 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; and authorized staff to negotiate a contract change order, for contract #6512.22.02, with Dr. Craig H. Benson, adding \$7,900 for compensation to attend meetings with the Council, Alyeska, and state and federal regulators promoting the findings and recommendations of his November 29, 2022 report and extending the term of the contract to June 30, 2023.
XCOM	7/18/2024	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.
Board	11/24/2024	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.
Board	3/19/2025	Directed staff to request an adjudicatory hearing pertaining to Condition of Approval #1 related to the inspection of the secondary containment liners as outlined in the recently approved Valdez Marine Terminal Oil Discharge Prevention and Contingency Plan; and to authorize a FY2025 budget modification of \$15,000 from the contingency fund to project 6510: State Contingency Plan Reviews, and to

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Report Acceptance Regarding the Secondary Containment Liner 4-2

authorize a corresponding contract increase for selected contingency plan review contractors for an aggregate amount not to exceed \$95,000; and, to authorize a FY2025 budget modification of \$25,000 from the contingency fund to project 6512: Secondary Containment Systems at the VMT, and authorize a contract increase of \$16,800 for Dr. Benson and Dr. Scalia for new not to exceed amount of \$61,800.

4. **Summary of policy, issues, support, or opposition:** For at least the past three VMT contingency plan (C-Plan) renewals (going back to the 2008 renewal), the Council has submitted comments to Alyeska and ADEC with recommendations pertaining to the CBA liner and secondary containment systems. For the 2019 C-Plan renewal, the Council and Alyeska both filed “informal reviews” with ADEC regarding the secondary containment systems. Those two “informal reviews”, which is a formal way of working out disagreements about the C-Plan without going to court, were resolved when ADEC issued the aforementioned May 11, 2022 decision requiring Alyeska to identify final CBA liner evaluation methods for the East Tank Farm by March 1, 2025. This March 1, 2025 submission date was in turn incorporated into the most recent 2024 VMT C-Plan renewal, under Condition of Approval #1.

5. **Committee Recommendation:** At the March 7, 2025 TOEM Committee meeting, the TOEM Committee recommended Board acceptance of the report titled “Review of Electrical Leak Location and Electrical Resistivity Tomography Pilot Study of the Secondary Containment System at the VMT West Tank Farm Conducted July 2024” as meeting the terms and conditions of contract number 6512, and for distribution to the public.

6. **Relationship to LRP and Budget:** Work associated with this project was included in the FY2025 budget under contract 6512.24.01 in the amount of \$38,000.

7. **Action Requested of the Board of Directors:** Accept the report titled “Review of Electrical Leak Location and Electrical Resistivity Tomography Pilot Study of the Secondary Containment System at the Valdez Marine Terminal West Tank Farm Conducted July 2024,” by Dr. Joseph Scalia and Dr. Craig H. Benson. in fulfillment of contract 6512.24.01.

8. **Attachments:**

- A) Draft report titled “Review of Electrical Leak Location and Electrical Resistivity Tomography Pilot Study of the Secondary Containment System at the Valdez Marine Terminal West Tank Farm Conducted July 2024.”
- B) Alyeska’s February 28, 2025 testing plan, titled “VMT- East Tank Farm Secondary Containment System Final Evaluation Method Selection.”

DRAFT

**Review of Electrical Leak Location and Electrical Resistivity
Tomography Pilot Study of the Secondary Containment System at
the Valdez Marine Terminal West Tank Farm Conducted July 2024**

By

Joseph Scalia IV, PhD

Craig H. Benson, PhD, PE, NAE

22 January 2025

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

EXECUTIVE SUMMARY

This review provides an assessment of the report from a pilot study undertaken by Alyeska Pipeline Service Company in July 2024, to evaluate if electrical leak location (ELL) and/or electrical resistivity tomography (ERT) are feasible methods to evaluate the integrity of catalytically blown asphalt (CBA) liner of the secondary containment system (SCS) at the Valdez Marine Terminal (VMT) tank farm. The pilot study was conducted at the West Tank Farm.

Standard methods and equipment were used for the ELL and ERT testing. Results of the pilot study demonstrate that ELL was successful in detecting manufactured leaks (holes) in the CBA liner, whereas the ERT method was unsuccessful at detecting manufactured leaks during the pilot study. Both methods required excavation of a perimeter trench around the test area down to the CBA, and installation of a geomembrane rain flap to the CBA to achieve necessary electrical isolation.

Our recommended path forward is implementation of ELL over at least 20% of the buried CBA-lined area of the East Tank Farm, prioritizing areas that may have suffered damage from past oil spills. This recommendation differs from WSP's (Alyeska's contractor, formerly known as Golder Associates) recommendation to test 5% of the buried CBA-lined area combined with a visual inspection of 15% of the unburied area. Testing 20% of the buried CBA-lined area is necessary to (i) establish the frequency and size-range of defects in the CBA liner, (ii) establish a quantitative definition (minimum performance threshold) for the required condition that the secondary containment be "sufficiently impermeable," (iii) establish a methodology for calculating leakage (or equivalent permeability) of oil through the SCS, and (iv) ultimately determine if the current SCS meets the "sufficiently impermeable" requirement.

Additional laboratory testing is also needed to demonstrate that the liner will maintain effectiveness in containing oil over the necessary duration of performance for a liner thickness of 3/16 inches (0.1875 in).

ACRONYMS

APSC	Alyeska Pipeline Service Company
CBA	Catalytically Blown Asphalt
ELL	Electrical Leak Location
ERT	Electrical Resistivity Tomography
SCS	Secondary Containment System
VMT	Valdez Marine Terminal
WTF	West Tank Farm
WSP	Alyeska's contractor, formerly known as Golder Associates

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1. INTRODUCTION

Secondary containment systems (SCS) are used at the Valdez Marine Terminal (VMT) to prevent the release of oil to the environment should a leak or other spill occur from oil storage tanks at the terminal. Each SCS consists of an area surrounding a pair of tanks with a containment berm and/or wall around the perimeter and a catalytically blown asphalt (CBA) liner placed across the surface. As shown in Figure 1 the liner is underlain by a layer of gravel prepared from crushed rock and is overlain by a thin gravel bedding layer and a thick layer of cover soil comprised of gravel fill. The SCSs also contain XR-5 Geomembrane patch areas and have exposed XR-5 on sidewall slopes. The CBA layer was specified to be at least 5/16 inches according to the construction documentation for the VMT (Golder 2018). The SCSs at VMT were constructed in the 1970s, when lining technology was in its infancy.

The VMT SCS must be “sufficiently impermeable”¹ to protect groundwater from contamination and to contain a discharge or release until it can be detected and cleaned up. The impermeability of the SCS depends on the integrity of the CBA liner. As noted in Golder (2018) *“Based on laboratory permeability test results, the CBA lined SCS will meet the ‘sufficiently impermeable’ criteria as defined in the State of Alaska Administrative Code 18 AAC 75.990 (124) as long as there are no open perforations in the SCS [emphasis added].”* The effectiveness of any lining system is influenced by the number of leaks present in the liner. The term leak used in this report follows the definition adopted by the standardization body ASTM International, which defines “leak” as *“any unintended opening, perforation, breach, slit, tear, puncture, crack, or seam breach”* (ASTM 2021). Leak assessments are often made to determine the number, size, and location of defects. Data collected from the leak assessment are then compared to specifications for an acceptable liner, and repairs are made as needed. Most leak assessments are conducted immediately after construction of the lining system, although they can be conducted at any time.

Liners can be assessed by direct or indirect assessment methods. A direct assessment is made through visual inspection of a liner. For the SCS at the VMT, direct assessments of the CBA liner can only be conducted when the overlying material is removed (e.g., as reported in Golder 2015, 2016, 2017, 2018). Removal of existing material imposes risk, as equipment used to remove overlying soils

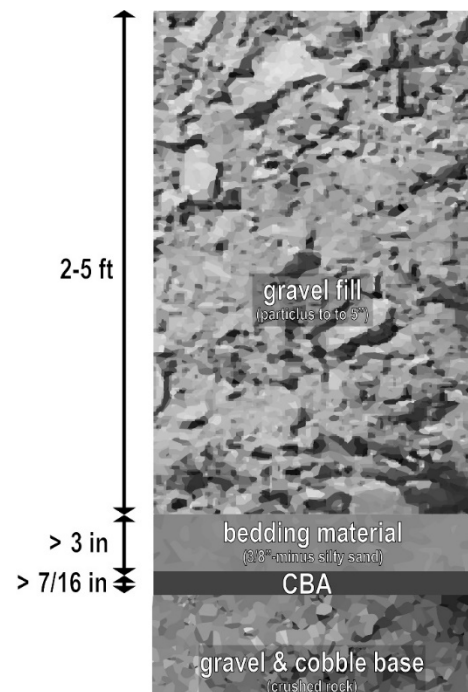


Figure 1. Schematic of the catalytically blown asphalt (CBA) portion of the secondary containment system (SCS) at the Valdez Marine Terminal (VMT).

¹ 18 AAC 75.990 (124) "sufficiently impermeable" means, for a secondary containment system, that its design and construction has the impermeability necessary to protect groundwater from contamination and to contain a discharge or release until it can be detected and cleaned up; for design purposes for tanks constructed after May 1992, "sufficiently impermeable" means using a layer of natural or manufactured material of sufficient thickness, density, and composition to produce a maximum permeability for the substance being contained of 1×10^{-6} cm per second at a maximum anticipated hydrostatic pressure, unless the department determines that an alternate design standard protects groundwater from contamination and contains a discharge or release until detection and cleanup.

can damage the liner, necessitating repairs and potentially creating ambiguity regarding whether a defect existed before or was caused by excavation. Direct assessment is also labor intensive. The East Tank Farm (ETF) is ~ 2,373,000 ft², but only ~ 23,000 ft² have been directly inspected visually (~ 1%). To provide a statistically significant assessment of CBA liner integrity, more than 20% of the CBA liner should be inspected (Benson 2022). Direct assessment of the exposed SCS liner is significantly easier because removal of overlying material is not required but does not reflect the condition of the buried CBA liner.

Indirect assessment consists of imposing a known condition above the liner and measuring response that is influenced by the presence of leaks in the liner. A key difference between indirect and direct methods is that the presence and characteristics of defects are inferred from an indirect method, rather than being observed directly. Thus, outcomes of indirect assessments inherently have ambiguity that is absent from direct assessments. This ambiguity is often addressed by coupling indirect and direct methods, using the indirect method to identify or locate defects followed by excavation, visual inspection, and repair.

Geophysical methods are the preferred method for assessing the integrity of the CBA liner in the SCS at the VMT (Benson 2022). These methods consist of applying an electrical or mechanical signal to the surface of the material overlying the liner and measuring the response to the signal. Benson (2022) identified Electrical Leak Location (ELL) surveys and Electrical Resistivity Tomography (ERT) as potential methods for use in assessing the integrity of the CBA liner in the East Tank Farm SCS at the VMT.

ELL surveys are the most common geophysical method used to evaluate the integrity of liners constructed with thin non-polar materials (e.g., geomembranes and CBA liners). A high voltage and low current DC power source is used to apply an electric field across the surface of the liner (Peggs 2007, Koerner et al. 2013, Calendine et al. 2018, Gilson-Beck 2019). When intact, the non-polar liner (such as a geomembrane or the CBA liner) acts as an insulator that prevents current flow. When a leak in the liner exists, current flows through the leak and into the adjacent soils. This current flow is recorded as a change in voltage between pairs of points measured across the ground surface. Surveys are conducted by walking in parallel lines across the surface of the liner, and mapping voltage looking for anomalies that indicate potential leaks. The surveyed area must be electrically isolated from the outside of the liner for ELL to work. The specific location and size of the leak is identified by removing the soils overlying the liner in the vicinity of the location where the survey identified the presence of a leak and performing a direct assessment. The leak is then repaired, and the area re-surveyed to ensure the leak was not obscuring the signature of nearby smaller leaks.

ERT is a more elaborate application of the principles used in ELL. An array of electrodes is deployed at the ground surface and a current is applied across every combination of electrode couples in the array. The voltage drop across each electrode couple is then measured. The array of voltage drops is then used to constrain a 2D inversion of Gauss' Law to obtain a cross-section of electrical resistivity over the area of assessment (Schmia et al. 1996, Zhou 2019).

A pilot study was undertaken by Alyeska Pipeline Service Company (APSC) on July 22-29, 2024, to evaluate if ELL and/or ERT surveys are feasible methods to evaluate the integrity of CBA component of the East Tank Farm SCS at the VMT (i.e., can one or both indirect assessment methods reliably

identify leaks.) If the pilot study is successful, ELL and/or ERT can be used to evaluate the presence and prevalence of leaks in the SCS over larger portions of the VMT East Tank Farm. The pilot study was completed on an approximate 15,000 ft² area of the cell containing Tanks 15 and 16 in the West Tank Farm (WTF). Figure 2 provides a photograph of the pilot study area, which is outlined by the electrical isolation trench. The WTF tanks have been drained and decommissioned, although cathodic/corrosion protection remains normally energized (APSC temporarily deenergized these systems during the pilot study) (ELL and ERT Survey at VMT SCS – July 2024, Pilot Study, West Tank Farm; WSP 2024a). The pilot study consisted of establishment and verification of electrical isolation, ELL testing, ERT testing, installation of three defects (a large gash, small gash, and knife slit), additional ELL testing of the defect area, and SCS repair. The results of the pilot study are reported in WSP (2024a). This report provides a review of the pilot study results, and recommendations for the path forward.



Figure 2. Photograph of pilot study test area (trimmed from WSP 2024a).

2. REVIEW OF PILOT TEST METHODS

The effectiveness of ELL and ERT depends on electrical isolation of the test area (open air and the CBA barrier layer serve as electrical insulators). Achieving electrical isolation was the most difficult aspect of the pilot study fieldwork. Prior to testing and isolation, a trench (moat) was excavated around the perimeter of the test area to the CBA (refer to Figure 2). Appreciable rainfall, which is common in the temperate rainforest climate in which Valdez is situated, necessitated the further installation of a rain flap consisting of a strip of non-conductive geomembrane (XR-5) bonded to the CBA surface (see Figure 3) using hot asphalt *"in accordance with Alyeska's CIVE-50 Catalytically Blown Asphalt (CBA), Hypalon, or XR-5 Liner Repair Procedure"* (WSP 2024a). The shape was chosen to achieve a 15,000 ft² test intended to *"optimize drainage and minimize other conflicts"* (WSP 2024a). The shape that was selected added complexity to trenching and the installation of the rain flap.



Figure 3. Photographs of installed rain flap (from WSP 2024a).

ELL surveying (shown in Figure 4a) was performed in general accordance with ASTM D7007-24, *Standard Practices for Electrical Locating Leaks in Geomembranes Covered with Water or Earthen Materials* (ASTM 2024) and ASTM D8265-23, *Standard Practices for Electrical Methods for Mapping Leaks in Installed Geomembranes* (ASTM 2023). These methods are appropriate for ELL testing and are widely used in practice. Equipment used for ELL surveys is described in WSP (2024a) and is typical and appropriate for the work conducted. Initial testing demonstrated the gravel cover over the CBA was electrically isolated via the isolation trench. The ELL survey was initially conducted using east-west transects, but both north-south and east-west transects were used to evaluate manufactured leaks.

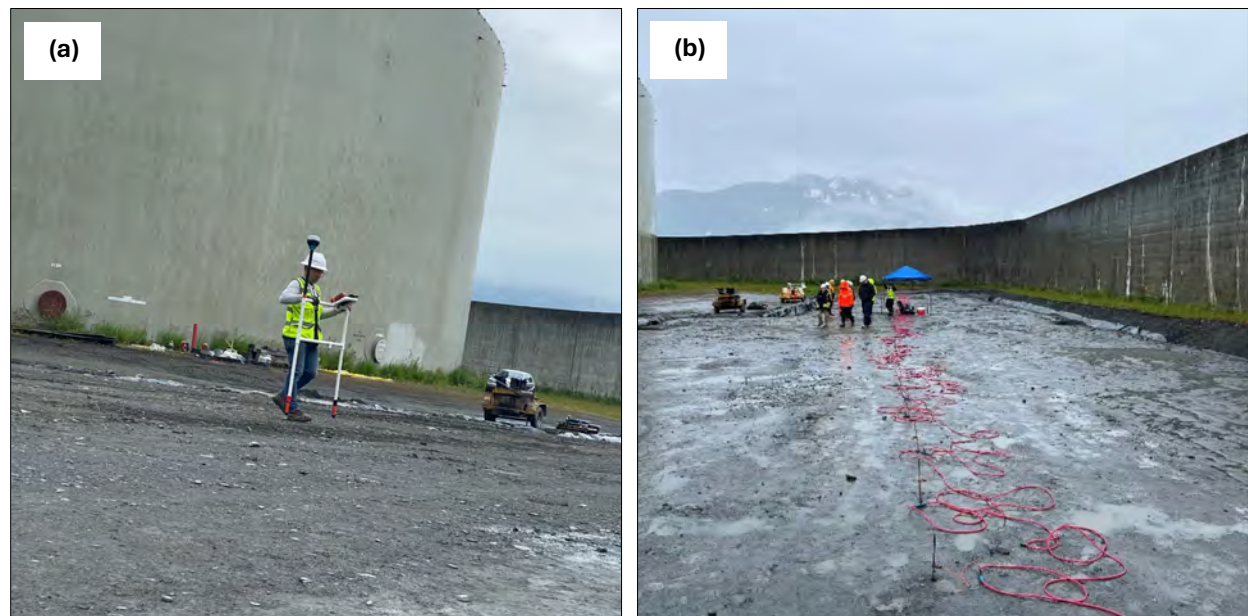


Figure 4. Photographs (a) electrical leak location survey and (b) electrical resistivity tomography (from WSP 2024a)

ERT (shown in Figure 4b) was performed along three approximately parallel transects running north-south in general accordance with ASTM D6431-18, *Standard Guide for Using Direct Current Resistivity Method for Subsurface Investigation* (ASTM 2018). Equipment used for ERT surveys is described in WSP (2024a) and is appropriate for the work conducted. Data were processed and the interpretation was conducted using industry standard commercial software.

After initial ELL and ERT surveys, four fully penetrating rips/cuts or holes were intentionally made (manufactured) in the CBA liner and re-buried. These defects are shown in Figure 5 and consisted of (1) a rip/cut 12-inch long with a ½-inch gap, (2) a rip/cut 6-in long without a gap, (3) a 1-in-diameter hole, and (4) a ½-inch-diameter hole.

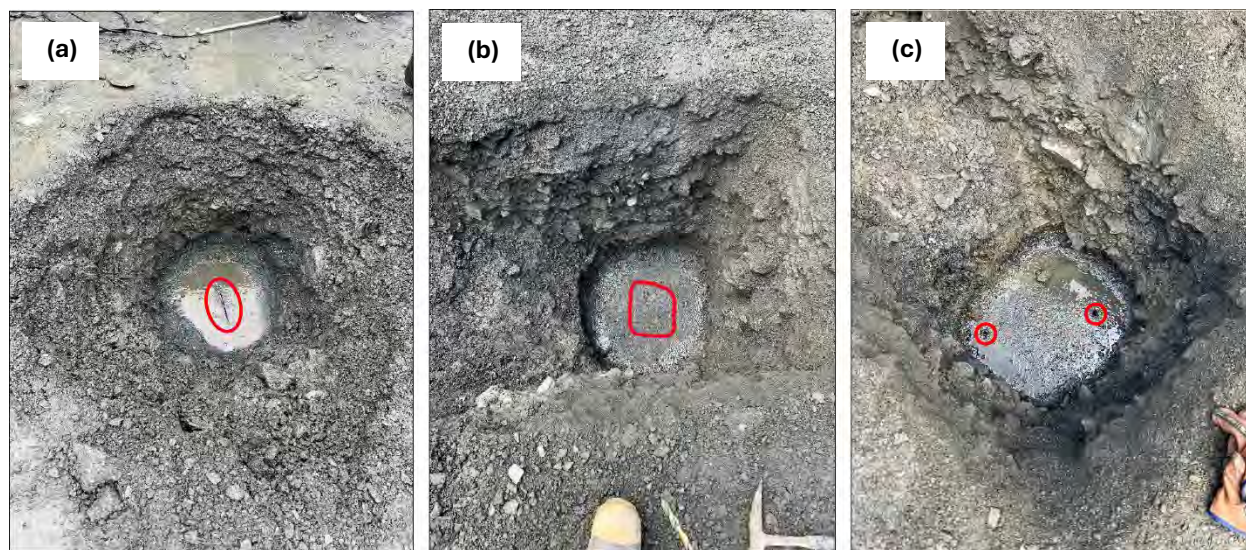


Figure 5. Photographs of manufactured defects: (a) a rip/cut 12-inch long with a ½-inch gap, (b) a rip/cut 6-in long without a gap, (c) a 1-in-diameter hole and a ½-inch-diameter hole (photos from WSP 2024a). Red oval in (a) outlines the rip/cut. Red outline in (b) outlines the rip/cut. Red circles in (c) outline the holes.

3. REVIEW OF PILOT STUDY FINDINGS

Key findings from the ELL and ERT pilot study reported in WSP (2024a) are summarized below in *italics*, followed by point-by-point comments.

1. ***ELL can effectively locate larger leaks in the CBA.*** *East-west ELL survey transects did not detect any potential leaks but also did not detect any of the manufactured leaks. North-south ELL survey transects were effective at locating the larger manufactured leaks. Therefore, future ELL survey transects should be run both parallel and perpendicular to one another (e.g., both north-south and east-west).*

We agree that based on the findings of this study, ELL has been demonstrated to provide a method for indirect assessment of leaks in the SCS for the VMT East Tank Farm.

WSP notes that north-south survey transects were effective at locating the larger manufactured leaks, whereas none of the manufactured leaks were identified along the east-west survey transects. This dependence of transect orientation (north-south vs. east-west) is not common and is likely due to subsurface features that exist in the West Tank Farm, such as metal pipes, storm drains, and structural elements associated with the tank farm. These features may act as preferential flow paths for current below the liner, affecting orientation of the applied electrical field and masking electrical anomalies from defects in the CBA. Similar subsurface features are likely to exist in the East Tank Farm.

Furthermore, even though identified manufactured leaks were only detected using ELL surveys along north-south transects, the pilot study should not be interpreted to indicate that pre-existing leaks (non-manufactured) leaks do not exist along the east-west transects (or elsewhere). North-south ELL survey transects were only conducted over a limited area around the manufactured defects (less than 1/3 of the total area). Consequently, pre-existing leaks may exist but were not found detected along the north-south transects.

2. *Based on the results of the pilot study, ERT does not appear to be effective in delineating leaks in the CBA.*

ERT surveys were only conducted in a north-south orientation and not in perpendicular orientations like the ELL surveys around the manufactured leaks. However, given the data were collected in the same orientation as ELL surveys that were successful in identifying the larger manufactured leaks, the likelihood of detecting leaks with additional perpendicular ERT transects is small. Therefore, we agree that ERT does not appear to be effective for delineating leaks in the CBA at the VMT.

3. *Effort was required to create an electrically isolating trench given the wet climate in Valdez.*

We agree with this conclusion but also note that the isolation trench was constructed successfully for the pilot test. Additionally, Alyeska and their contractor (WSP) now have a much better sense of the level of effort and timing needed to successfully construct an isolation trench for future testing.

4. REVIEW OF PILOT STUDY RECOMMENDATIONS

Recommendations from the ELL and ERT pilot study reported in WSP (2024a) are summarized in *italics* below, followed by point-by-point comments.

1. *Based on the results of the pilot study, future efforts to evaluate the integrity of the East Tank Farm CBA liner at the VMT should include ELL surveys, temporarily de-energizing cathodic protection systems, and isolating any known potentially conductive perforations (e.g., metal pipes, storm drain catch basins) where practical.*

We agree with this recommendation.

2. *ELL survey areas should be sized for each cell to include sufficient area to statistically calculate the estimated permeability of the SCS. WSP recommends a test area of 5% of the SCS (based on Pump*

Station 1, 3, 4, and 5 Liner Evaluation Method Recommendations; WSP 2024b; [this report was not made available for the authors' review]

We agree that the size of the ELL survey area should be selected for each cell so the evaluated area is sufficient to provide statistical confidence in the assessment. We disagree with the recommendation that 5% of the area should be tested. As described in Benson (2022), at least 20% of the CBA liner must be tested to adequately reduce uncertainty in the total number of defects determined from the survey. Additionally, assessments conducted on exposed CBA liner should not be extrapolated to represent conditions for buried CBA liner.

We disagree that the findings from the ELL surveys should be used to calculate an effective permeability of the SCS. Instead, we recommend that the findings be used to estimate a leakage rate (e.g., gallons per acre per day). Permeabilities are appropriate for porous media (e.g., soils), but are not appropriate for flow through defects in membrane-type liners such as the CBA liner.

We also agree with WSP (2024b) that the surveyed area should not include the isolation trench or a 5-ft-wide strip extending inward from the strip due to edge effects.

3. Where future ELL indicates potential defects/leaks, the locations should be marked and excavated for visual inspection. If leaks are discovered, they should be patched, backfilled, and the ELL survey rerun over the location to verify there are no additional leaks.

We agree with this recommendation.

5. RECOMMENDED PATH FORWARD

The pilot study demonstrated that ELL is effective at identifying larger leaks in the CBA liner in the SCS of the VMT. The following path forward is recommended to continue the evaluation of the SCS and to determine whether the SCS is "*sufficiently impermeable*."

1. ELL surveys should be implemented over at least 20% of the CBA-lined area of the East Tank Farm. This does not include SCS area with exposed geomembrane that can be directly inspected, as this is a different liner material. Testing should consider the lessons learned from the pilot study, including:
 - a. Use of similar methods and equipment as the pilot study (see WSP 2024a for specific testing details).
 - b. Implementation of a series of orthogonal ELL survey transects by a skilled implementation team.
 - c. The need for effective isolation of the test area.

The ELL surveys can then be used to establish the frequency and size range of defects in the total East Tank Farm CBA liner.

2. Establish a quantitative definition of "*sufficiently impermeable*" as it applies to the SCS of the VMT. If the SCS had been built after May 1992, the definition would be "*sufficiently*

impermeable" would be "using a layer of natural or manufactured material of sufficient thickness, density, and composition to produce a maximum permeability for the substance being contained of 1×10^{-6} cm per second at a maximum anticipated hydrostatic pressure, unless the department determines that an alternate design standard protects groundwater from contamination and contains a discharge or release until detection and cleanup."

[18 AAC 75.990 (124)] states that *"for a secondary containment system, that its design and construction has the impermeability necessary to protect groundwater from contamination and to contain a discharge or release until it can be detected and cleaned up."*

A definition in terms of a maximum allowable leakage rate per unit area (i.e., maximum allowable oil leakage per acre of SCS per day) is preferred over a maximum permeability because the release of oil would occur predominantly through discrete defects in the liner and not by flow (permeation) of oil through the CBA liner.

3. Establish a methodology for computing the leakage rate (or equivalent permeability) of oil through the SCS. There are numerous methodologies used in practice for calculating leakage of liquids through defects in geomembranes. Modification of current state-of-practice methods to compute the leakage of oil will likely be required because the existing methods were developed for computing leakage rates for water. Additional physical characterization of the materials above and below the CBA liner will likely be required as inputs for these calculations.
4. Use the extrapolated survey results in (1) and the methodology in (3) to compute a leakage rate (or effective permeability) of the SCS and compare to this leakage rate to quantitative definition of "sufficiently impermeable" identified in (2).

Finally, WSP (2024a) indicates that the CBA liner has a *"thickness ranging from 0.1875 to 1.625 inches."* This is a change from earlier reports, which state that *"According to the construction documentation for the VMT, the specified minimum CBA liner thickness was 5/16 inch (0.31 inches)"* (Golder 2018). A portion of the CBA liner was observed to be thin (i.e., approximately 0.1875 inches) during pilot testing. Previous laboratory testing reported and summarized in Golder (2018) was conducted on liner as thin as 0.31 inches. Consequently, additional laboratory testing is needed to demonstrate that the liner will be effective in containing oil over the anticipated necessary duration of performance at a thickness of 3/16 inches (0.1875 inches).

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February 28, 2025

Government Letter No. 60158
APSC File No. 8.02

State of Alaska
Department of Environmental Conservation
Division of Spill Prevention, Preparedness, & Response
213 Meals Ave., Ste. #17
P.O. Box 1709
Valdez, AK 99686

Attention: Anna Carey, Environmental Program Manager

Subject: **Valdez Marine Terminal (VMT) Oil Discharge Prevention and Contingency Plan; ADEC Plan No. 23-4057**

Re: **VMT East Tank Farm (ETF) Secondary Containment System: Final Evaluation Method Selection**

Dear Ms. Carey:

With this letter Alyeska Pipeline Service Co. (APSC) is providing the report on the Final Evaluation Method Selection as required by the informal review decision letter dated May 11, 2022, and the November 8, 2024, approval package. The enclosed report details the Scope, Pilot Testing, Method Selection, Schedule, and Communication Plan as proposed.

If there are any changes to this arrangement due to anticipated events you will be notified, and timely updates will be provided. If you have any questions or comments regarding this matter, please contact me at 907-834-6988 or direct all written correspondence to:

Allison Iversen
HSEC Director
Alyeska Pipeline Service Company
P O Box 196660, MS 502
Anchorage, Alaska 99519-6660

Sincerely,

A handwritten signature in black ink, appearing to read "Andres Morales".

for Andres Morales

Andres Morales
EP&R Director

AM/jm

Anna Carey, Environmental Program Manager
Final Evaluation Method Selection

Government Letter No. 60158
APSC File No. 8.02
February 28, 2025

cc: Electronically

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To: <i>Lindsey Vorachek 184557</i> Lindsey Vorachek, System Integrity Director Clint VanWingerden, Valdez Marine Terminal Director <i>184024</i>		Subject: VMT – East Tank Farm Secondary Containment System Final Evaluation Method Selection	
From: <i>Dustin Smith 184804</i> Dustin Smith, Systems Integrity		Date: 02/27/2025	File Number: SYIN-0225-006 Rev0

General

The ETF hosts fourteen (14) 510,000 bbl nominal capacity, in-service crude oil aboveground storage tanks, arranged in pairs, making seven independent containment cells. The secondary containment cells are generally comprised of surface lined dikes (XR-5 installed in 1992), concrete walls and a buried catalytically blown asphalt (CBA) liner on the floor of the cell. Each cell includes concrete pipe supports, fire suppression piping, catch basins and manholes that penetrate the liner. The XR-5 was sealed to the CBA and concrete structures upon installation. IWWs system modifications and repairs have replaced existing manholes and catch basins within the tank farm and were resealed to the existing CBA liner.

Scope

As required by the informal review decision letter dated May 11, 2022; Alyeska is required to propose a method to evaluate the condition of the buried VMT East Tank Farm (ETF) Secondary Containment System (SCS). Specifically, the evaluation shall determine the condition as it relates to 18 AAC 75.075(a)(2)(C), which states that the secondary containment liner shall consist of a material that is 'sufficiently impermeable', as defined by 18 AAC.75.990(124).

18 AAC 75.075: Secondary containment requirements for aboveground oil storage tanks.

(a) Onshore aboveground oil storage tanks must be located within a secondary containment area that has the capacity to hold the volume of the largest tank within the containment area, plus enough additional capacity to allow for local precipitation. Minimum secondary containment system requirements include

(2) with the exception of the area under a tank, components constructed of, or lined with, materials that are

(C) sufficiently impermeable

18 AAC 75.990: Definitions

(124) "sufficiently impermeable" means, for a secondary containment system, that its design and construction has the impermeability necessary to protect groundwater from contamination and to contain a discharge or release until it can be detected and cleaned up; for design purposes for tanks constructed after May 1992, "sufficiently impermeable" means using a layer of natural or manufactured material of sufficient thickness, density, and composition to produce a maximum permeability for the substance being contained of 1×10^{-6} cm per second at a maximum anticipated hydrostatic pressure, unless the department determines that an alternate design standard protects groundwater from contamination and contains a discharge or release until detection and cleanup;

Historical Evaluation and Testing

Historical examinations have exposed approximately 23,000 sq ft out of a total of approximately 1,532,697 sq ft (excluding area under tanks) of buried CBA liner. Examinations occurred in every one of the seven cells (roughly 1% has been exposed in these efforts). Most recently, 2014-2017 program upgrades to the IWWs manholes, catch basins, and piping inside containment cells provided opportunistic evaluations of approximately 14,200 sq ft of CBA liner.

Durability experiments have been conducted on samples removed from the existing CBA liner. Laboratory tests indicated the CBA to be adequately resistant to crude oil and capable of containing a crude oil spill until it can be cleaned up. Testing revealed that after CBA has degraded or softened enough to leak after extended contact with crude, the material will seal itself and re-harden, minimizing the leakage volume. The CBA liner has also demonstrated self-healing and sealing characteristics. Testing indicates that with a rock or cobble embedded through the CBA (two instances noted) the liner remains sufficiently impermeable.

Historical examinations of the line have occurred over a small percentage of the liner area. Most damage found within the CBA liner appears to be mechanical in nature, potentially resulting from prior exposure during excavation. Physical excavation of the CBA tends to cause damage to the lining system. In 2014-2017 program upgrades to the IWWS manholes, catch basins, and piping inside containment cells provided opportunistic evaluations examinations of the CBA liner. Testing at that time found the liner has remained flexible, pliable, well bonded to penetrating structures and collected water on surface during rain events.

Existing damage to the CBA liner was found to include; a 4,400 sq ft area of cracking (surface cracks with some fully penetrating cracks), two instances of a rock or cobble embedded through the full thickness of the liner, two isolated areas of small perforations, what appeared to be an unrepaired historical sample location, and seven areas of perforated liner.

Testing conducted in 2014-2017 found the average CBA liner permeability to be 6.48×10^{-9} cm/s. The overall permeability of the lining system will be largely determined by any defects or perforations that may be present.

Based on the configuration of the SCS, the area most susceptible to damage is where liner is exposed above grade. Alyeska conducts annual visual inspections to address the above grade containment. Damage to CBA is not expected unless in proximity of historical excavations. The most significant excavation to have occurred in ETF is attributed to the installation of XR-5 on the SCS side slopes.

Spills of significant size and/or duration to infiltrate down to the CBA liner have not occurred within the ETF SCS. Liner examinations conducted during the IWWS upgrades did not identify deleterious CBA conditions attributed to contamination from below the SCS.

Pilot Testing

In July of 2024, a pilot test was conducted in the West Tank Farm (WTF) to determine feasibility of using geoelectric/electrical leak location (GELL/ELL) and electrical resistivity tomography (ERT) to locate damage within the buried sections of the secondary containment system. The WTF SCS construction is similar to the ETF with a CBA floor and sidewalls consisting of geomembrane and concrete.

A test area of 17,141 ft² was constructed within the Tank 16/17 dike cell. To facilitate the ELL testing method, an isolation trench was excavated around the test area, and a 'rain flap' of XR-5 was bonded to the exposed CBA liner. The trench, in conjunction with the rain flap, provided electrical isolation across the trench throughout significant rainfall typical at the VMT.

Electrical Leakage Location (ELL)

ELL methods are an effective and proven quality assurance measure to locate leaks (where "leak" is defined by ASTM as any unintended opening, perforation, breach, slit, tear, puncture, crack, or seam breach). Such methods have been used successfully to locate leaks in electrically insulating geomembranes (includes bituminous membranes) installed in basins, ponds, tanks, ore and waste pads, and landfill cells. The principle behind this technique is to place a voltage across a sufficiently electrically insulating geomembrane and then locate areas where electrical current flows through leaks in the geomembrane. Other electrical leak paths such as piping penetrations, metal conduit, steel drains, concrete and other extraneous electrical paths should be electrically isolated to prevent masking of leak signals caused by electrical short-circuiting through those preferential electrical paths.

The ELL surveys were conducted along multiple parallel lines to create a roughly orthogonal grid of data which was used to contour data and identify potential leaks. The spacing of the dipole electrodes is based on the thickness of the soils or depth of fluid above the geomembrane (generally dipole spacing is approximately equal to cover thickness). The line spacing was nominally 3 feet with measurements recorded every 18 to 36 inches along survey lines.

Initial ELL surveys found the liner to be in sound condition and did not identify any leaks. To advance the pilot study, three locations were excavated, through-thickness defects manufactured in the CBA, backfilled, and resurveyed with ELL. One additional location of interest was excavated based on resurvey with the ELL however, no leaks or damage to the CBA was encountered.

Electrical Resistivity Tomography (ERT)

Electrical Resistivity Tomography (ERT) is an electrical method used to determine the lateral and vertical changes in electrical resistivity of subsurface materials. These changes may result from variations in lithology and mineralogy, water content, and pore-water chemistry. In the case of liner leak detection, fluid seeping through a defect/leak would be detected as an area of decreased resistivity/increased conductivity. The method involves transmitting an electric current into the ground between two current electrodes and measuring the voltage between two separate potential electrodes.

The ERT was conducted in various configurations using the same electrodes as the ELL survey. Both pre-defect and post-defect ERT tests were conducted to evaluate the method.

Pilot Test Results

- ERT was not effective in delineating or mapping vertical plumes or other leakage from defects in the CBA liner.
- Results suggest ELL can effectively locate significant defects/leaks in the CBA liner.
- Both source electrode geometry and receiver/jig survey electrode orientation must be carefully considered for the ELL method to successfully detect and locate potential defects/leaks in the CBA liner. ELL survey lines should be run both parallel and perpendicular to one another (e.g., both north-south and east-west orientations).
- For ELL to be successful in locating defects in the SCS, the soil above the liner must be electrically isolated from conductive penetrations and buried piping by trenching around a test area. VMT rainfall necessitated the use of pumps and XR-5 rain flaps to maintain isolation across the trench.
- Due to edge effects, the ELL survey will be less effective at the edge, adjacent to the isolation trench.
- If a defect/leak in the SCS is discovered, the defect should be repaired, the excavation backfilled, and the ELL survey rerun over the location to verify there are no additional defects/leaks.

Method Selection

To examine the SCS of the ETF, Alyeska has selected Electrical Leakage Location (ELL) coupled with Visual Inspection (VT) as the methods of evaluation. ELL was selected as the least invasive, non-destructive method that successfully located manufactured damage within the CBA liner during the WTF Pilot Test. The CBA subjected to VT will be limited to areas exposed to conduct the ELL survey or opportunistically, during other field work.

Other methods considered were Electrical Resistance Tomography (ERT), Hydraulic Assessment, and Ground Penetrating Radar (GPR). ERT was not found to be effective during the WTF pilot testing, and GPR data was described as “ambiguous and undefined” during evaluations of Pump Station liners in 2000. Hydraulic assessment was not considered due to its inability to define the location of defects, operation interference of flooding dike cells and magnitude of effort required to adequately complete the test.

Limitations:

The buried portion of the ETF SCS consists of several configurations including the CBA floor, XR-5 side slopes, various sealed penetrations through the liner, and historical liner repairs. ELL relies on electrical current passing through discrete points within the survey area to identify defects. Therefore, the designated survey areas must be

isolated from any potential interferences or other conductive appurtenances within the containment cell. These may include concrete pipe supports, piping penetrating the liner, tank foundations, concrete cell walls, etc. Any conductive liner penetrations, such as historical bentonite repairs, will be falsely identified as leaks by the ELL testing. Conductive penetrations within a test area must be excavated around to maintain electrical isolation.

As ELL evaluation cannot be conducted at conductive liner penetrations, and therefore cannot evaluate the bond between the existing liner and a conductive structure. These junctures will be examined visually when exposed. Historical reports consistently indicate the CBA has been found to be well-bonded to penetrating structures and thus is not a point of interest for this examination.

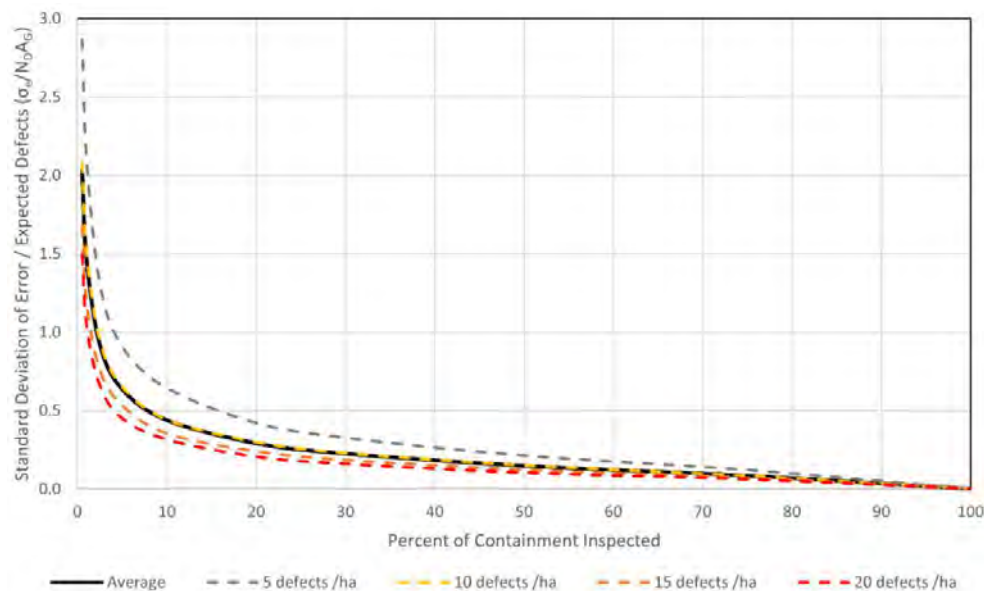
Scale of Evaluation:

To identify and locate defects, the evaluation will be performed on an area large enough to provide an accurate characterization of the condition of the liner. A probabilistic simulation was used to demonstrate the fraction of buried CBA liner to be evaluated to accurately characterize the liner system.

WSP conducted a statistical analysis for a generic secondary containment model, similar to the Monte Carlo analysis done on behalf the PWSRCAC by Dr. Benson in 2022 but differs as it is for a contiguous area. This is warranted for feasibility reasons as the cover soil must be isolated for an ELL survey. Comparing Dr. Benson's Model (2022) and the WSP Model (2024) at a defect density of 10 defects/ha, both reach a similar "Standard Deviation of Error/Expected Defects" ratio of approximately 0.6, corresponding to 10% (Benson) and 5% (WSP) inspection of liner area.

- Based on the statistical simulation, Alyeska will test at least 5% of the buried SCS within each dike cell with a combination of ELL and VT to provide a realistic estimate of permeability.

Figure 1 – Statistical Analysis (WSP, 2024)



Historical information suggests the CBA liner typically incurs substantially more damage by the excavation activity itself compared to existing damage found. As the replacement of the perimeter geomembrane with XR-5 represents the most extensive excavation to have occurred, some evaluation areas will be primarily focused on the XR-5 to CBA transition.

One evaluation area will be selected for each dike cell. Precise location and dimensions will be dependent on Process Hazards Analysis, avoiding operational upsets, and maintaining access for response to emergencies or abnormal conditions.

Table 1 – SCS Area

Cell No.	Total SCS Area ^A (ft ²)	Slope SCS Area (ft ²)	Buried Floor SCS Area ^B (ft ²)	Applicable SCS Area ^C (ft ²)	Evaluation Area ^D (ft ²)
1	406,250	100,460	305,790	206,038	10,302
2	363,710	38,140	325,570	225,818	11,291
3	361,910	41,460	320,450	220,698	11,035
4	374,440	38,910	335,530	235,778	11,789
5	378,200	40,660	337,540	237,788	11,889
6	389,210	82,240	306,970	207,218	10,361
7	392,040	92,930	299,110	199,358	9,968
Total	2,665,760	434,800	2,230,960	1,532,697	76,635

Notes:

- A) Area of tank farm cell
- B) Area of SCS excluding SCS slopes
- C) Area of SCS floor excluding tank and ring wall (252' diameter -> 99752 sq ft)
- D) 5% of Applicable SCS Area

Quality Assurance and Accuracy

The WTF Pilot Testing provides assurance that liner perforations can be located by ELL. The following measures will be implemented for quality assurance and accuracy.

- The ELL surveys will be conducted in both East-West and North-South orientations, which is normally not required per ASTM D7007 but noted to be critical in finding manufactured liner damage during the pilot testing.
- Leak indications noted by ELL will be excavated. Where buried liner damage is encountered, a post-repair ELL survey will be completed to verify no leaks exist in the proximity that could potentially be masked by a larger defect's electrical signature.
- To reduce interference from edge effects, ELL survey area trench perimeter will be expanded to include a 5-foot buffer between the isolation trench and area selected for evaluation.
- A visual inspection (VT) checklist will provide consistency across various inspectors and personnel performing VT of exposed CBA.

Data Analysis

Laboratory analysis indicates that intact CBA impermeability exceeds ADEC criteria for newly installed liner systems, and therefore overall dike cell permeability would be defined by the defects or perforations existing within the liner system if present.

In 18 AAC 75.990 Definitions (124), ADEC defines sufficiently impermeable for a secondary containment system as “a layer of natural or manufactured material of sufficient thickness, density, and composition to produce a

maximum permeability for the substance being contained of 1×10^{-6} cm per second at a maximum anticipated hydrostatic pressure”.

Following evaluation of each dike cell containment, the overall flow and “pseudo permeability” of each dike cell will be calculated and compared to the theoretical flow which would occur through a newly installed, soil lined SCS with a permeability 1×10^{-6} cm/s.

- A pseudo permeability of less than 1×10^{-6} cm/s would indicate a dike cell exceeds the ADEC criteria for both new and existing facilities. This is consistent with SCS liner evaluations conducted at various TAPS Pump Stations in 2000.
- Pseudo permeability greater than 1×10^{-6} cm/s may still satisfy ADEC requirements for tanks installed prior to 1992 in *“that its design and construction has the impermeability necessary to protect groundwater from contamination and to contain a discharge or release until it can be detected and cleaned up”*. These instances, if any, will be evaluated on a case-by-case basis and may require additional site evaluation, expanded ELL surveys, and laboratory testing.

Schedule

Alyeska will submit to SPAR a timeline outlining target dates for key deliverables and project milestones by April 1, 2025.

Communication Plan

An annual report would be provided to ADEC containing:

- Summary of evaluation areas covered that season.
- Summary of findings from ELL and VT inspections.
- Permeability analysis and calculations for the tested secondary containment cell.

References:

- Golder Associates, 1999. “Evaluation of Liner Seam and Perforation Leakage Rates in Secondary Containment Systems at TAPS Pump Stations, dated January 5, 1999.
- Golder Associates, 2000. “Field Investigation and Evaluation for Pump Station Tank Farm Liners”, October 2000.
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- Golder Associates, 2015. “Additional Liner Testing and Evaluation for Catalytically Blown Asphalt (CBA) Liner at the Valdez Marine Terminal”, dated June 27, 2016.
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- WSP, 2024, “Pump Station 1, 3, 4, and 5 Liner Evaluation Method Recommendations”, dated March 27, 2024
- WSP, 2024. “ELL and ERT Survey at VMT SCS – July 2024”, dated October 2, 2024.
- APSC, 2020. CP-35-2 Vol.1, Ed. 2, Revision 7 “Oil Discharge Prevention and Contingency Plan Regulatory Manual”, dated January 2022.
- APSC, 2022. OMS-3.16 Revision 22 “Tank Farm Operator Duties – Required Checks”, dated December 8, 2022.
- APSC, 2022. CIV-50 Rev 16 “Catalytically Blown Asphalt (CBA), Hypalon, or XR-5 Liner Repair Procedure”, dated May 24, 2022.

- *ASTM D6747*, "Standard Guide for Selection of Techniques for Electrical Detection of Potential Leak Paths in Geomembrane"
- *ASTM D7007*, "Electrical Methods for Locating Leaks in Geomembranes Covered with Water or Earthen Materials"
- *ASTM D8265*, "Standard Practice for Electrical Methods for Mapping Leaks in Installed Geomembranes"

--END--

Briefing for PWSRCAC Board of Directors – May 2025

ACTION ITEM

Sponsor: Danielle Verna and the Scientific Advisory Committee

Project number and name or topic: 9110 - Prince William Sound Marine Bird Fall and Early Winter Surveys

1. **Description of agenda item:** The Board is being asked to accept the report titled "Marine Bird Winter Surveys in Prince William Sound" by Dr. Mary Anne Bishop and Anne Schaefer of the Prince William Sound Science Center. In September and November 2024, staff from the Prince William Sound Science Center conducted surveys of marine birds in and around the Prince William Sound tanker escort zone and the Valdez Marine Terminal. This report describes the methods and findings of those surveys and recommendations for continued monitoring. This was the first of four proposed years of the surveys during fall and early winter. Dr. Bishop will provide a presentation on the report to the Board at this meeting and will be available to answer questions.

2. **Why is this item important to PWSRCAC:** These surveys of marine birds within Prince William Sound will help PWSRCAC fulfill two of its OPA 90 responsibilities. OPA 90 tasks the Council with monitoring "the environmental impacts of the operation of the terminal facilities and crude oil tankers" as well as "identifying highly sensitive areas which may require specific protective measures in the event of a spill in Prince William Sound." The timing and location of these surveys is valuable because they add depth to our understanding of bird populations, risks posed to birds from an oil spill, and where special monitoring or protection is needed. Additionally, these surveys provide baseline monitoring information that can be used to understand the environmental impacts of terminal and tanker operations on marine bird species. The results of the surveys will be made publicly available through the Alaska Ocean Observing System and NOAA's Environmental Response Management Application, and combined with other survey data, can help form models of bird distribution in Prince William Sound that will be useful for future monitoring and response in the event of an oil spill.

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

<u>Meeting</u>	<u>Date</u>	<u>Action</u>
Board	5/2/2024	Adopted the FY2025 budget as presented during the Budget Workshop on April 25, 2024. This project was approved as part of the FY2025 budget.
Board	5/2/2024	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.

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

5. **Committee Recommendation:** The Scientific Advisory Committee recommended the Board of Directors accept this report at its meeting on March 20, 2025.

6. **Relationship to LRP and Budget:** Work associated with this project was completed under project 9110.25.01 in an amount of \$78,928.
7. **Action Requested of the Board of Directors:** Accept the report titled "Marine Winter Bird Surveys in Prince William Sound" by the Prince William Sound Science Center, dated March 12, 2025, as meeting the terms and conditions of the contract and for distribution to the public.
8. **Alternatives:** None.
9. **Attachments:** Report titled "Marine Winter Bird Surveys in Prince William Sound" by Dr. Mary Anne Bishop and Anne Schaefer of the Prince William Sound Science Center.

Marine Bird Winter Surveys in Prince William Sound

March 12, 2025

MA Bishop and A Schaefer

Prince William Sound Science Center, PO Box 705, Cordova, AK

Contract 9110. 25. 01

The opinions expressed in this Prince William Sound Regional Citizens' Advisory Council commissioned report are not necessarily those of the Council.

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Acronym List

ERMA: Environmental Response Management Application, NOAA

ESI: Environmental Sensitivity Index, NOAA

EVOS: Exxon Valdez oil spill

EVOSTC: *Exxon Valdez* Oil Spill Trustee Council

GPS: Global positioning system

GWA: Gulf Watch Alaska, a survey program funded by EVOSTC

km: Kilometers

m: Meters

NOAA: National Oceanic and Atmospheric Administration

PWS: Prince William Sound

PWSRCAC: Prince William Sound Regional Citizens' Advisory Council

s: Second

USFWS: U.S. Fish and Wildlife Service

Executive Summary

Of the marine birds that overwinter in Prince William Sound (PWS), Alaska, nine species and one species group were initially injured by the 1989 Exxon Valdez oil spill (EVOS; *Exxon Valdez Oil Spill Trustee Council*, 2014). This Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) commissioned study, now in its fourth year, conducted marine bird and marine mammal surveys in and around the PWS tanker escort zone and the Alyeska Pipeline Service Company's Valdez Marine Terminal. Our study objective is to determine distribution and density of marine birds and mammals during the nonbreeding season in this under-surveyed area. Our surveys are designed to complement the *Exxon Valdez Oil Spill Trustee Council* (EVOSTC) funded Gulf Watch Alaska (GWA) surveys conducted from 2007-2022 by the PWS Science Center.

We conducted at-sea transect surveys between September 9–10, 2024 (fall), and November 11-14, 2024 (early winter), using the PWS Science Center's research motor vessel, the New Wave. Transects varied in length from 7.4 kilometers (km) (Rocky Bay) to 29.2 km (Port Valdez). For each transect we recorded all marine birds and marine mammals observed within a 300-meter (m) survey strip. In September, 1551 birds representing 26 species were counted across the 11 transects. Black-legged kittiwake (*Rissa tridactyla*) was the most abundant species (61.1% of observations), followed by glaucous-winged gull (*Larus glaucescens*, 17.8%) and marbled murrelet (*Brachyramphus marmoratus*, 5.4%). Beginning in November, we added a transect around the Knowles Head tanker anchorage. During November surveys, a total of 796 birds (28 species) were counted across the 12 transects. Pelagic cormorant (*Urile pelagicus*, 13.1%) was the most abundant species, followed by two waterfowl species, white-winged scoter (*Melanitta fusca*, 11.2 %) and common goldeneye (*Bucephala clangula* 9.9%). For both September and November surveys, observations of marine mammals were dominated by sea otter (*Enhydra lutris*).

The September and November 2024 results provide further support for special protection of the marine and nearshore waters around the head of Port Valdez as well as the bays and island coastlines around Hinchinbrook Entrance. These two areas host consistently high numbers of marine birds and marine mammals, including species that have yet to recover from the 1989 oil spill. Importantly, the head of Port Valdez is vulnerable to disturbance due to the proximity to human infrastructure, including the Valdez Marine Terminal, harbor, and fuel dock. Hinchinbrook Entrance is also particularly vulnerable to anthropogenic disturbance because it is where tankers enter and exit PWS and because of the importance of Porpoise Rocks to marine wildlife. Our surveys do not include all areas that potentially may be impacted by an oil spill, nor do they capture all the variations in marine bird phenology, species composition, and habitat use across the nonbreeding season. With that said, continued monitoring in and around the tanker escort lane is important for understanding marine bird and marine mammal vulnerability to environmental change and anthropogenic disturbance and could be used to update oil spill response planning tools and refine response efforts during the non-breeding season.

Introduction

In Alaska, and specifically Prince William Sound (PWS), most studies on marine birds have been conducted during the breeding season when birds congregate at or near colonies to nest and forage. However, breeding season dynamics are not representative of the community composition or spatial distribution during the fall and winter. The non-breeding season is a critical period of survival for marine birds overwintering at higher latitudes as food tends to be relatively scarce or inaccessible, the climate more extreme, light levels and day-length reduced, and water temperatures cooler.

From 2007-2022, as part of the *Exxon Valdez* Oil Spill Trustee Council (EVOSTC) funded Gulf Watch Alaska (GWA) program, personnel from the PWS Science Center conducted marine bird surveys in PWS during fall and winter (September – March). Results from 15 seasons of fall/winter surveys demonstrated seasonal differences for all 11 focal avian species groups, indicating movements into and out of PWS over the course of the non-breeding season (Schaefer and Bishop, 2023). For the most abundant marine bird species, including common murre (*Uria aalge*), marbled murrelet (*Brachyramphus marmoratus*), black-legged kittiwake (*Rissa tridactyla*), and large gulls (*Larus* spp.), consistent temporal and spatial patterns were documented (Zuur et al. 2012; Dawson et al. 2015; Stocking et al. 2018; Schaefer et al. 2020; Schaefer and Bishop 2023).

Nevertheless, many regions of PWS remain under-surveyed during winter, including the areas in and around the Alyeska Pipeline Service Company's Valdez Marine Terminal and the associated tanker escort zone. To address this information need, the Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) contracted with the PWS Science Center to conduct marine bird and marine mammal surveys in areas in and around the PWS tanker escort zone, Valdez Arm, and Port Valdez. From 2021-2023, fixed-transect surveys were conducted during late winter (March).

Beginning in 2024, the fixed-transect surveys were conducted during fall and early winter to address intra-seasonal differences within the nonbreeding season. This report describes the density, distribution, and community composition of marine birds and marine mammals during September and November 2024 fixed-transect surveys in and around the Valdez Marine Terminal and the PWS tanker escort zone. The report compares the September and November PWSRCAC transect results with seasonal patterns previously identified during the 15 years of EVOSTC GWA transects. Lastly, our report provides recommendations for prioritizing oil spill response efforts in and around the tanker escort during September and November.

Methods

At-sea marine bird and mammal transect surveys were conducted during daylight hours in September (fall) and November (early winter) and followed established U.S. Fish and Wildlife Service (USFWS) protocols (USFWS 2007). We repeated the same 11 fixed-transects

as the March 2023 surveys. Beginning with the November 2024 survey, we added a transect by Knowles Head (13.7 kilometer (km)) because of its proximity to a tanker anchorage (Figure 1). The Knowles Head transect area had previously been surveyed as part of the EVOSTC GWA program that ended in 2022.

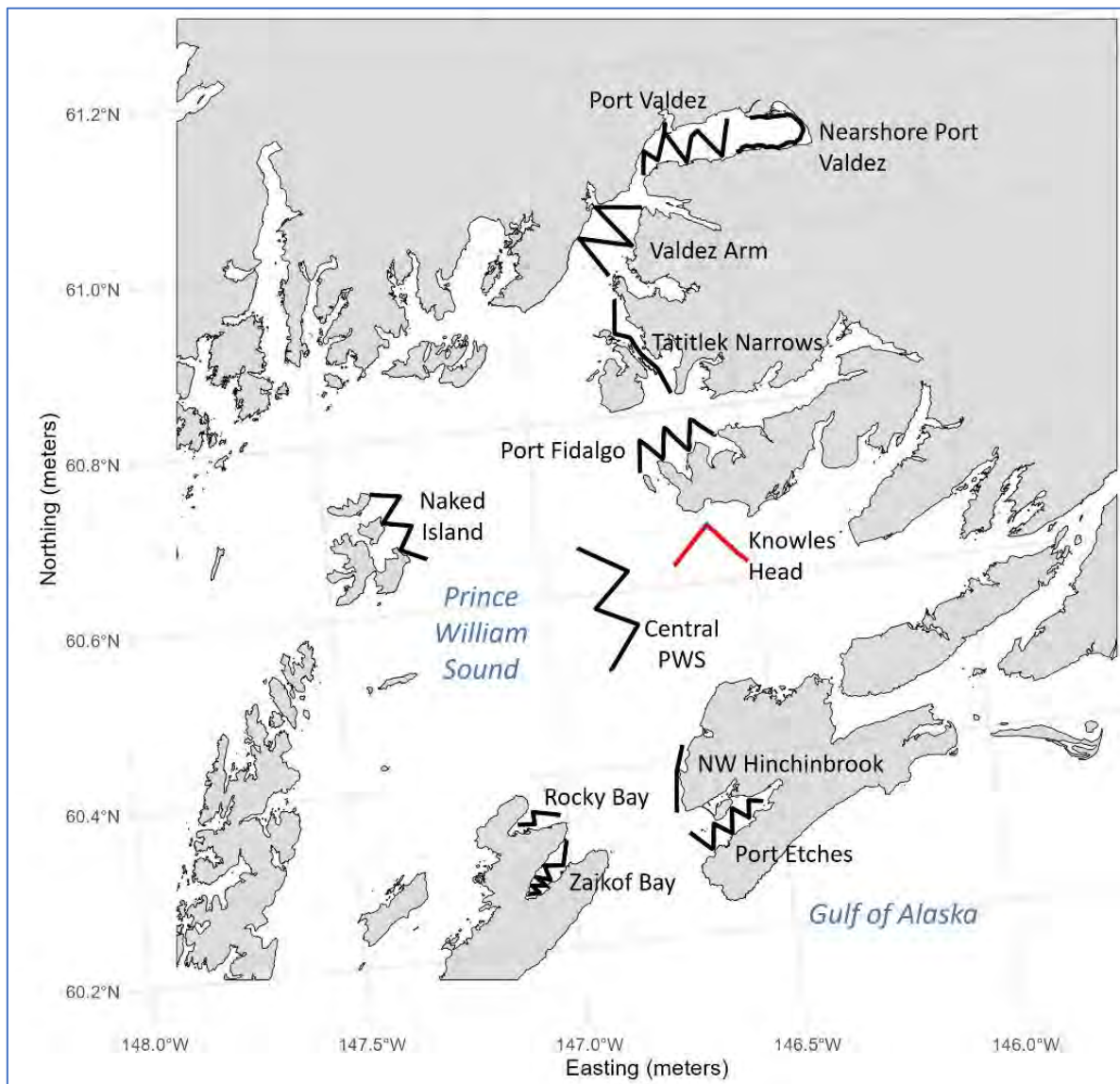


Figure 1. Map of marine bird and marine mammal transects in and around the tanker escort zone surveyed in PWS, September and November 2024. The Knowles Head transect (red) was added in November 2024 and was previously surveyed as part of the EVOSTC GWA program that ended in March 2022.

For the surveys, one observer using 10x binoculars recorded the number, species, and behavior of all marine birds and mammals occurring within a 300-meter (m) fixed-width strip (150-m both sides and ahead of boat) from an observation platform mounted on the New Wave, ~3 m above the water line. The survey vessel traveled at a constant speed between 5 and 10 knots. Marine mammals and forage flocks with >10 birds, were recorded out to 1 km. Observations were recorded into a laptop computer integrated with a global positioning system (GPS) using the program SeaLog (ABR, Inc). Location data (latitude, longitude) were automatically recorded at 15-second (s) intervals and for every entered observation. Additionally, sea state and weather conditions were tracked on-site by the observer.

Following the standard methods used for seabird survey data processing across the region, we divided each transect into 3-km segments and aggregated marine bird observations within each segment for summary. We grouped taxonomically similar species into 12 groups (Table 1) and calculated relative density (birds/km²) for each 3-km segment. We then averaged (\pm standard deviation) all segments for each transect. Data processing was performed using the program QA/QSea (ABR, Inc) and analyzed using the program R v. 4.4.1 (R Core Team, 2024). Marine mammals were not aggregated by 3-km segment, but are presented as total recorded along the transect and the total recorded beyond the survey strip out to 1-km.

Table 1. Taxonomically similar focal marine bird species combined for density analysis and mapping, PWS, Alaska.

Species group	Common Name(s)
Loons	Common, Pacific, Yellow-billed
Grebes	Horned, Red-necked
Cormorants	Double-crested, Pelagic
Deep Diving Ducks	Long-tailed Duck; Surf, White-winged, & Black Scoters
Inshore Ducks	Barrow's & Common Goldeneyes, Bufflehead, Harlequin Duck
Mergansers	Common, Red-breasted
Large Gulls	Glaucous-winged, American Herring, Glaucous
Small Gulls	Short-billed, Bonaparte
Kittiwakes	Black-legged
Murres	Common
Murrelets	Marbled
Guillemots	Pigeon

Results & Discussion

Marine bird and marine mammal transect surveys were conducted in and around the PWS tanker escort zone and Valdez Marine Terminal from September 9–10, 2024 (fall), and November 11–14, 2024 (early winter) (Figure 1). Overall, we surveyed 210 km in September (n = 11 transects) and 221 km in November (n = 12 transects; Table 2). Data from the 2024 survey will be uploaded to the Alaska Ocean Observing System data portal and will be available at <https://gulf-of-alaska.portal.aaos.org/#metadata/771492cd-94b6-47ab-952a-02b152a535cf/project/files> following proper data and metadata quality controls.

Marine Birds

In September 2024, we recorded 1551 birds representing 26 species within the 300-m survey strip across the 11 PWSRCAC transects (Table 3). Across all areas, the highest densities of marine birds occurred in Port Valdez, and at northern Montague Island's Rocky and Zaikof Bays (Table 2, Figure 2). Three of the recorded species - Bonaparte's gull *Chroicocephalus philadelphia*, red-necked phalarope *Phalaropus lobatus*, and parasitic jaeger *Stercorarius parasiticus* - breed locally but migrate south in fall and were not recorded on the subsequent November 2024 surveys.

On our September surveys, the black-legged kittiwake was the dominant species (61.1% of observations), followed by glaucous-winged gull (*Larus glaucescens*, 17.8%) and marbled murrelet (5.4%; Table 3). Distributions of both black-legged kittiwake and glaucous-winged gull were widespread, with each species occurring on all 11 transects (Figures A-8, A-9). Highest densities for kittiwake and glaucous-winged gull were recorded on the nearshore Port Valdez transect, located at the head of the bay (Table 2, Figure 2).

In November 2024, we recorded 796 birds representing 28 species on the 12 PWSRCAC transects (Table 3). The arrival of wintering birds including Pacific loons (*Gavia pacifica*), pelagic cormorants (*Urile pelagicus*), grebes, mergansers, inshore ducks, and deep diving ducks was evident (Table 3; Appendix A). In November, the most recorded species across all transects was the pelagic cormorant (13.1% of observations) followed by two waterfowl species, white-winged scoter (*Melanitta fusca*, 11.2 %) and common goldeneye (*Bucephala clangula*, 9.9%). Distribution of pelagic cormorants was widespread, occurring on all but the deep-water central PWS transect. Highest cormorant densities were recorded on the nearshore Port Valdez transect, located at the head of the bay (Table 2; Figure A-3). In contrast, both the white-winged scoter and common goldeneyes occurred on only 5 and 3 of the 12 transects, respectively. However, like the cormorants, the highest densities of common goldeneyes occurred on the nearshore Port Valdez transect, while for white-winged scoters highest densities were observed nearby on the Port Valdez zig zag transect (Figures A-4, A-5).

Table 2. Average (\pm SD) density of marine birds and marine mammals by survey month and transect. PWS, Alaska. Sep = September; Nov = November. * = Knowles Head transect added November 2024.

Transect Name	Km Length, (no. segments) Sep, Nov	X birds/km ² , (SD) Sep	X birds/km ² , (SD) Nov	Mammals, (w/in 1 km) Sep	Mammals, (w/in 1 km) Nov
Central	26.2 (8), 26.2 (8)	0.4 (0.6)	1.7 (1.6)	0 (0)	0 (0)
Port Etches	19.6 (6), 19.3 (6)	14.0 (5.3)	13.1 (7.8)	5 (37)	23 (85)
Port Fidalgo	24.0 (8), 23.8 (8)	5.2 (4.2)	5.0 (3.8)	2 (8)	6 (2)
Knowles Head*	0 (0), 13.7 (4)	-	13.5 (10.9)	-	5 (3)
Naked Island	18.6 (6), 18.0 (5)	16.3 (20.9)	4.0 (4.7)	1 (0)	0 (0)
NW Hinchinbrook	8.6 (2), 8.7 (2)	12.2 (15.7)	5.8 (5.0)	0 (0)	3 (6)
Id.					
Nearshore Port Valdez	18.3 (6), 18.4 (6)	151.6 (121.0)	40.5 (40.6)	44 (10)	16 (9)
Port Valdez	29.2 (10), 28.2 (9)	9.5 (8.9)	10.8 (23.0)	34 (19)	12 (4)
Rocky Bay	7.5 (2), 7.4 (2)	28.9 (0.5)	5.7 (1.7)	1 (2)	2 (1)
Tatitlek Narrows	15.4 (5), 15.4 (5)	12.1 (6.4)	10.8 (8.7)	13 (42)	12 (7)
Valdez Arm	25.7 (8), 25.7 (8)	3.6 (2.7)	1.3 (2.7)	10 (4)	2 (1)
Zaikof Bay	16.7 (6), 16.1 (5)	35.9 (20.6)	17.5 (8.9)	9 (12)	26 (7)

Among the 11 transects surveyed in September and November, the highest bird densities (birds/km²) during both surveys were recorded on the nearshore Port Valdez transect located at the head of that bay (September = 151.6 birds/km²; November = 40.5 birds/km²). The high densities recorded during September were due to high numbers of black-legged kittiwake and glaucous-winged gull. While not included in the survey count, almost 7500 glaucous-winged and unidentified gulls were also observed near this transect suggesting that either the gulls were staging for migration, or gulls were there to forage at the Solomon Gulch Fish Hatchery and/or around the outflow of the Lowe River. Zaikof Bay at Hinchinbrook Entrance had the second highest densities recorded during both September and November surveys. Densities on the four transects around Hinchinbrook Entrance were relatively high compared to other areas and ranged from 12.2 birds/km² along the northwest Hinchinbrook Island transect to 35.9 birds/km² at Zaikof Bay in September. Densities around Hinchinbrook Entrance transects during November were much lower and ranged from 5.7 birds/km² at Rocky Bay to 17.5 birds/km² at Zaikof Bay (Table 2, Figure 2).

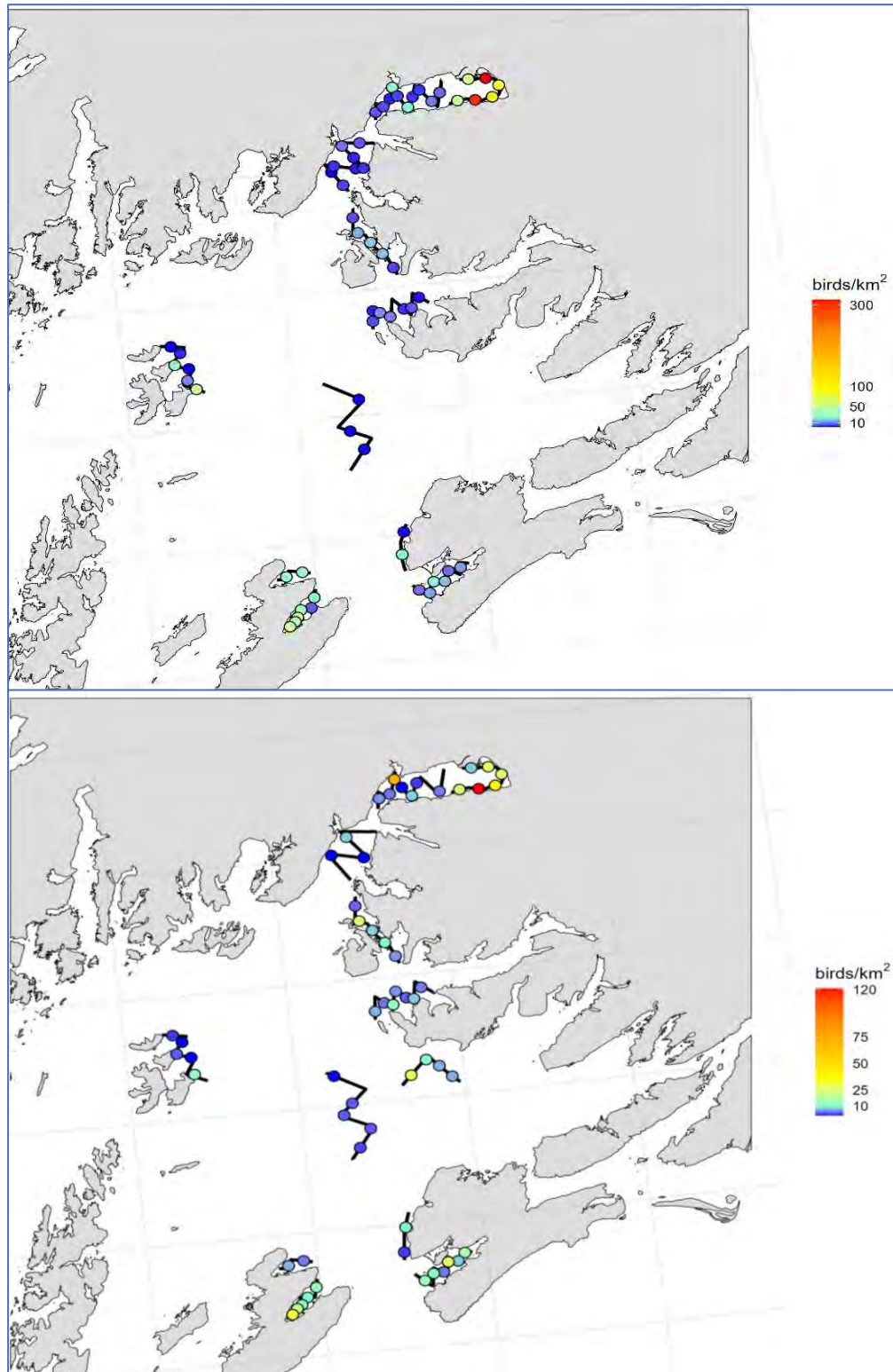


Figure 2. Density (birds/km²) and distribution of marine birds observed on fixed-transects during September (top) and November (bottom) 2024. Note that the scales are different for each map.

Table 3. Total number of birds observed by species on 300-m PWSRCAC transects. September (Sep) and November (Nov) 2024, PWS, Alaska. Please refer to Appendix A for density and distribution of each species group.

Common name	Scientific name	Count Sep	Count Nov
American Crow	<i>Corvus brachyrhynchos</i>	4	1
American Herring Gull	<i>Larus argentatus smithsonianus</i>	1	3
American Wigeon	<i>Mareca americana</i>	5	0
Ancient Murrelet	<i>Synthliboramphus antiquus</i>	2	0
Bald Eagle	<i>Haliaeetus leucocephalus</i>	1	2
Barrow's Goldeneye	<i>Bucephala islandica</i>	0	3
Black-legged Kittiwake	<i>Rissa tridactyla</i>	947	65
Black Oystercatcher	<i>Haematopus bachmani</i>	4	0
Black Scoter	<i>Melanitta americana</i>	0	1
Bonaparte's Gull	<i>Chroicocephalus philadelphia</i>	14	0
<i>Brachyramphus</i> Murrelet		3	4
Bufflehead	<i>Bucephala albeola</i>	0	13
Canada Goose	<i>Branta canadensis</i>	1	0
Common Goldeneye	<i>Bucephala clangula</i>	4	79
Common Merganser	<i>Mergus merganser</i>	0	20
Common Murre	<i>Uria aalge</i>	29	28
Double-crested Cormorant	<i>Nannopterum auritum</i>	7	6
Fork-tailed Storm-Petrel	<i>Hydrobates furcatus</i>	4	1
Glaucous-winged Gull	<i>Larus glaucescens</i>	276	76
Harlequin Duck	<i>Histrionicus histrionicus</i>	8	2
Horned Grebe	<i>Podiceps auritus</i>	7	21
Long-tailed Duck	<i>Clangula hyemalis</i>	0	7
Marbled Murrelet	<i>Brachyramphus marmoratus</i>	84	64
Northern Pintail	<i>Anas acuta</i>	0	2
Parasitic Jaeger	<i>Stercorarius parasiticus</i>	1	0
Pacific Loon	<i>Gavia pacifica</i>	3	33
Pelagic Cormorant	<i>Urile pelagicus</i>	25	104
Pigeon Guillemot	<i>Cephus columba</i>	6	4
Red-breasted Merganser	<i>Mergus serrator</i>	0	4
Red-necked Grebe	<i>Podiceps grisegena</i>	0	2
Red-necked Phalarope	<i>Phalaropus lobatus</i>	14	0
Rock Sandpiper	<i>Calidris ptilocnemis</i>	0	70
Short-billed Gull	<i>Larus brachyrhynchus</i>	45	56

Surf Scoter	<i>Melanitta perspicillata</i>	43	29
Unidentified Alcid		1	0
Unidentified Auklet		1	0
Unidentified Cormorant		1	1
Unidentified Goldeneye		0	3
Unidentified Large Gull		2	0
Unidentified Loon		1	1
Unidentified Merganser		0	1
Unidentified Scoter		4	0
White-winged Scoter	<i>Melanitta deglandi</i>	2	89
Yellow-billed Loon	<i>Gavia adamsii</i>	1	1
Grand Total		1551	796

Forage flocks were observed during both surveys with black-legged kittiwake the dominant species. During September 2024, we recorded two forage flocks including one at Naked Island (35 kittiwakes, 5 common murre) and one on the Port Valdez zigzag transect (46 kittiwakes). In November we recorded a small forage flock at Naked Island (10 kittiwakes, 1 glaucous-winged gull). There were no marine mammals associated with any of these forage flocks.

We compared species composition from the September and November 2024 PWSRCAC surveys to the previous 15 years of September-October and November-December GWA surveys. In fall, species composition was generally similar between the two datasets. Kittiwakes were consistently the most numerous on both PWSRCAC and GWA fall surveys. This was to be expected as there are at least 20 active kittiwake colonies in the Sound, including four colonies in Port Valdez (D. Irons, unpubl. data). The November drop in kittiwake numbers matched seasonal patterns previously observed as by early winter most kittiwake have departed for offshore wintering habitats (McKnight et al., 2011). Glaucous-winged gulls were among the most abundant species during both September and November GWA and PWSRCAC surveys. Glaucous-winged gulls have numerous colonies in PWS and the Copper River Delta (Seabirds.Net: North Pacific Seabird Portal), and are intimately connected with commercial fish processing activities. Although still numerous in PWS, the species begins to migrate as early as late August, and by the end of October many have migrated south to areas ranging from coastal southeast Alaska to northwestern Mexico (Hayward and Verbeek 2008).

Murres were remarkably less abundant in both the September and November PWSRCAC surveys compared with the historic GWA surveys (Figure 3). The reduced number of murres observed in fall and early-winter 2024 is likely due to lingering impacts of the Pacific Marine Heatwave. Throughout the Gulf of Alaska, this prolonged heatwave (2014-2016) led

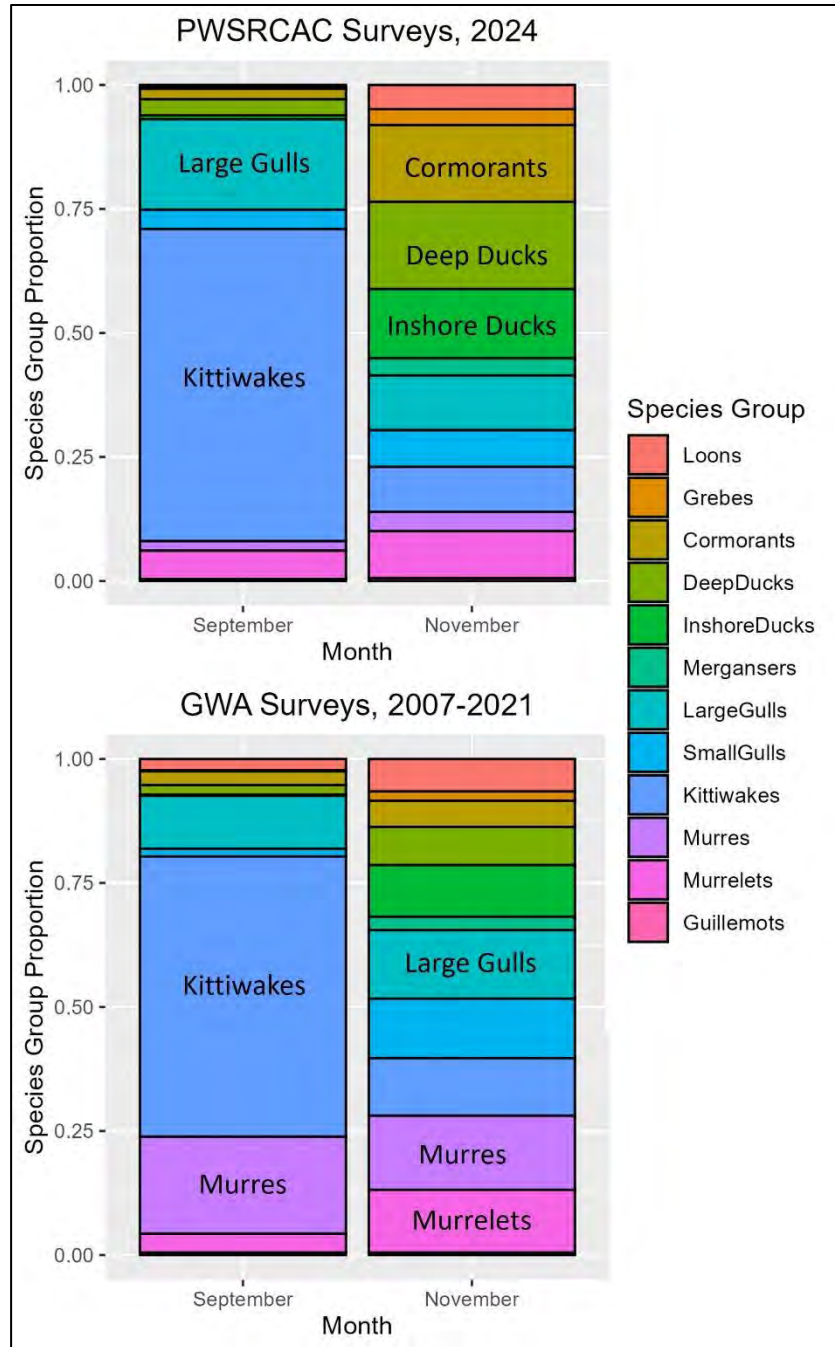


Figure 3. Marine bird species group composition in PWS by month and survey. Most abundant species groups are labeled. Top: PWSRCAC 2024 surveys. Bottom: 2007-2021 GWA surveys.

to mass mortality and reduced breeding success, or complete breeding failures, of common murre and the population has yet to recover (Piatt et al. 2020, Renner et al. 2024).

We found notable differences between the early winter PWSRCAC and GWA transects (Figure 3). In November 2024, cormorants, deep-diving ducks, and inshore ducks were the dominant species observed during surveys. In contrast, during the 15 years of GWA early winter surveys, the three most abundant species were murre, murrelets, and large gulls. We suggest these differences in species composition likely result from variations in migratory movements and the surveyed habitats. Both the deep-diving ducks and inshore ducks breed on inland lakes and wetlands, migrating to shallow coastal waters close to land for winter. The GWA surveys covered a much larger area of PWS, often in deeper, more pelagic waters, whereas the PWSRCAC surveys are more concentrated in bays and nearshore areas. In particular, Port Valdez, a bay never surveyed as part of the GWA surveys but with two transects as part of our PWSRCAC surveys, attracts large numbers of inshore ducks due to its extensive mudflats and shallow nearshore waters. Additionally, its harbor and the Valdez Marine Terminal provide numerous docks and structures that attract cormorants for roosting.

Marine Mammals

In addition to marine birds, we also recorded marine mammals within the 300-m strip during the surveys. When possible, we recorded marine mammal observations out to 1 km, however detectability varied by species as whales are much easier to observe at longer distances compared to sea otter (*Enhydra lutris*), harbor seal (*Phoca vitulina*), Steller sea lion (*Eumetopias jubatus*), or porpoises (*Phocoenoides dalli* or *Phocoena phocoena*). Observations recorded beyond the 300-m strip should be considered minimum counts for these species in these areas.

Sea otter was the most abundant marine mammal observed during both the fall and early winter surveys. Sea otters were recorded in small groups (range = 1-15 individuals) and were widespread, occurring on or near 8 of 11 September transects and 10 of 12 November transects. No sea otters were recorded during either survey at Naked Island and the offshore central PWS, nor were they observed on or near the northwest Hinchinbrook Island transect in September (Table 4, Figure B-2).

In September, we observed seven harbor seals, including three seals on or near the nearshore Port Valdez transect and three at Hinchinbrook Entrance (Port Etches n = 2; Zaikof Bay n = 1; Table 4, Figure B-4). In November, eight of the nine seals recorded were observed at Hinchinbrook Entrance (Zaikof Bay, n = 5; Port Etches n = 3; Figure B-4). No Dall's porpoise was observed on September surveys. In November, one pod of six Dall's porpoise was observed near the Tatitlek Narrows transect (Table 4, Figure B-5). We recorded Steller sea lions during both September (n = 24) and November surveys (n = 73; Table 4). Both months, sea lions were observed at Port Etches in Hinchinbrook Entrance

Table 4. Total number of marine mammals observed by species and number of marine mammals observed beyond the 300-m survey strip (denoted in parentheses) on PWSRCAC transects during September (Sep) and November (Nov) 2024. Only summaries for November 2024 include data from the Knowles Head transect. No harbor porpoise or killer whales were observed during either survey.

Common name	Scientific name	Count within 300-m (count beyond)	Count within 300-m (count beyond)
		Sep	Nov
Dall's Porpoise	<i>Phocoenoides dalli</i>		0 (6)
Harbor Seal	<i>Phoca vitulina</i>	2 (5)	7 (2)
Humpback Whale	<i>Megaptera novaengliae</i>		1 (1)
River Otter	<i>Lontra canadensis</i>		2
Sea Otter	<i>Enhydra lutris</i>	99 (123)	90 (50)
Steller Sea Lion	<i>Eumetopias jubatus</i>	18 (6)	7 (66)
Grand Total		119 (+134)	107 (+125)

and in Port Valdez. However, during November most sea lions were recorded at Port Etches (Figure B-3). Interestingly, we observed no killer whales (*Orcinus orca*) during either September or November surveys. Humpback whales (*Megaptera novaengliae*) were observed during November surveys, up around Tatitlek Narrows (n = 2; Figure B-1).

Conclusions and Recommendations

Black-legged kittiwake was the most abundant species on the September transects and were found on all transects. This was to be expected as there are four colonies in Port Valdez representing over 3,000 nesting pairs (D. Irons, unpubl. data). Compared with previous GWA surveys, the relatively smaller proportion of common murre and murrelets and relatively larger proportion of inshore and deep-diving ducks are likely because our previous GWA surveys transects covered a much larger area of the Sound and were often located in deeper, more pelagic waters compared to the nearshore, bay-centric PWSRCAC surveys.

During this first year of fall (September) and early winter (November) PWSRCAC surveys, we identified multiple areas of consistently high and low marine bird densities and other areas that warrant continued evaluation. Because marine bird density and distribution can vary widely across years, multiple years of surveys are necessary to understand natural variation. The highest densities of birds were recorded in bays and nearshore areas (e.g., head of Port Valdez, Zaikof Bay), while the lowest densities were recorded in exposed

and/or deep, offshore habitats (Valdez Arm and central PWS transects). These results are consistent with patterns observed during the GWA surveys that marine birds in PWS tend to prefer shallow and protected habitats that are closer to shore compared to deep, offshore habitats or exposed habitats (Dawson et al., 2015; Stocking et al., 2018; Schaefer et al., 2020; Schaefer and Bishop, 2023).

The September and November 2024 results provide further support for special protection of the marine and nearshore waters around the head of Port Valdez as well as the bays and island coastlines around Hinchinbrook Entrance. These two areas host consistently high numbers of marine birds and marine mammals, including species that have yet to recover from the 1989 Exxon Valdez oil spill. Importantly, the head of Port Valdez is vulnerable to disturbance because of the proximity to human infrastructure, including the Valdez Marine Terminal, harbor, and fuel dock. Hinchinbrook Entrance is particularly vulnerable to anthropogenic disturbance because it is where tankers enter and exit PWS and because of the importance of Porpoise Rocks to marine wildlife. Compared to other surveyed areas, Hinchinbrook Entrance also supports high numbers of marbled murrelets and pigeon guillemots (Figures A-11, A-12), two species that were injured by Exxon Valdez spill and whose populations have not yet recovered (EVOSTC 2014).

Our survey results can be used to update oil spill response planning tools and refine response efforts in and around the tanker escort lane during the non-breeding season. As with our March 2021-2023 PWSRCAC survey data we will submit the fall and early winter data for inclusion in National Oceanic and Atmospheric Administration (NOAA) Environmental Response Management Application (ERMA) annually. ERMA is an online tool to aid resource managers to make informed decisions for environmental response, damage assessment, and recovery/restoration. Our data could also be used to update the NOAA Environmental Sensitivity Index (ESI) maps, which are used by responders, managers, and planners to identify coastal resources at risk in the case of oil or chemical spills. Unfortunately, the ESI maps for PWS are over 20 years old and contain very limited winter bird and mammal information for many of the areas identified here or previously for prioritized protection (e.g., Zaikof Bay, Rocky Bay, Port Etches, northwestern Hinchinbrook Island coastline, Port Gravina, Port Fidalgo, Tatitlek Narrows, Port Valdez).

Our surveys do not include all areas that potentially may be impacted by an oil spill, nor do they capture all the variation in marine bird phenology, species composition, and habitat use across the nonbreeding season. With that said, continued monitoring in and around the tanker escort lane is important for understanding marine bird and marine mammal vulnerability to environmental change and anthropogenic disturbance and could be used to update oil spill response planning tools and refine response efforts during the non-breeding season.

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Appendix A. Marine bird density and distribution in Prince William Sound, Alaska, September and November 2024.

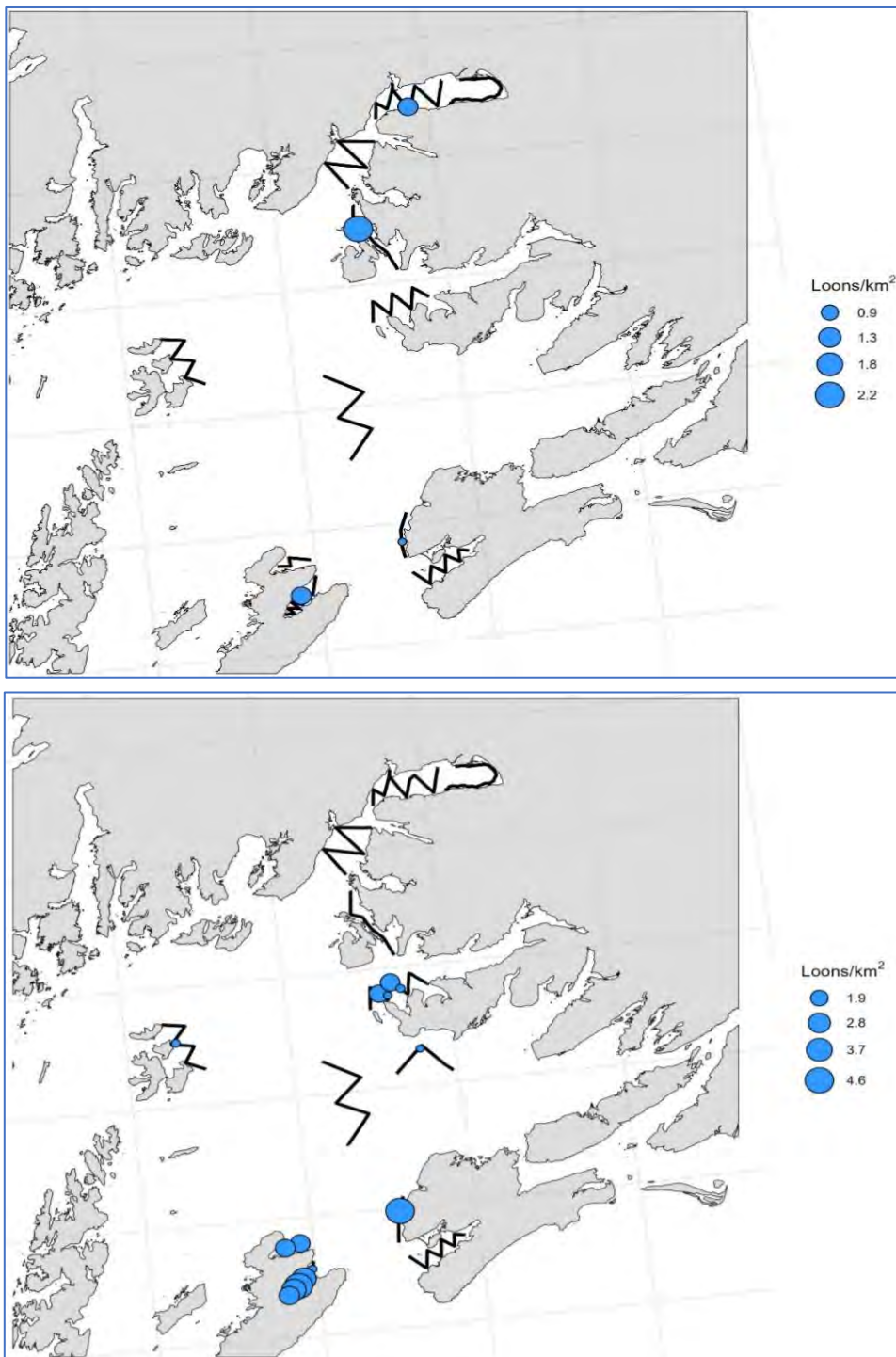


Figure A-1. Distribution of loons (common, Pacific, unidentified) by density (birds/km²) during September (top) and November (bottom) 2024 surveys.

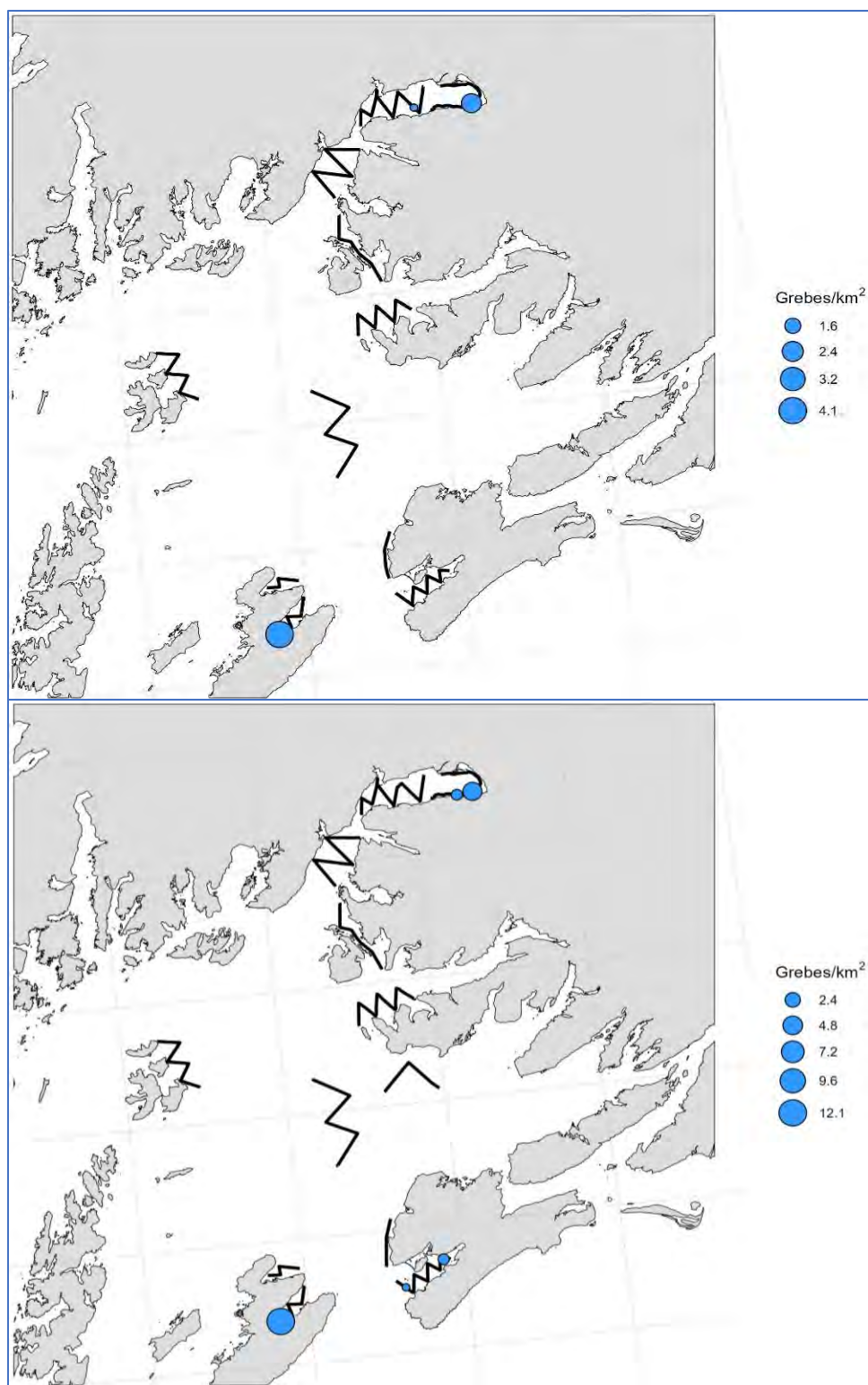


Figure A-2. Distribution of grebes (horned, red-necked, unidentified) by density (birds/km²) during September (top) and November (bottom) 2024 surveys.

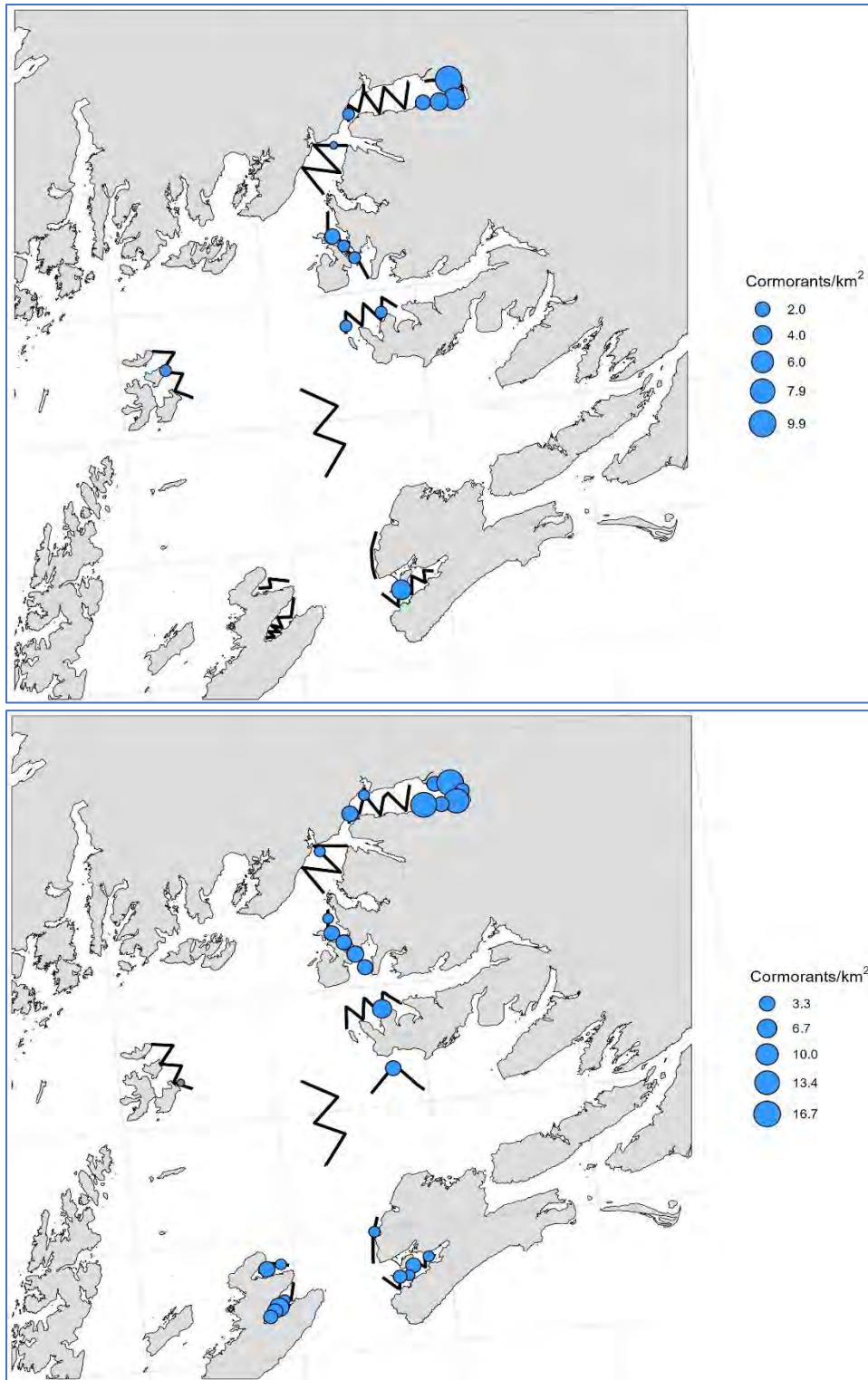


Figure A-3. Distribution of cormorants (double-crested, pelagic, unidentified) by density (birds/km²) during September (top) and November (bottom) 2024 surveys.

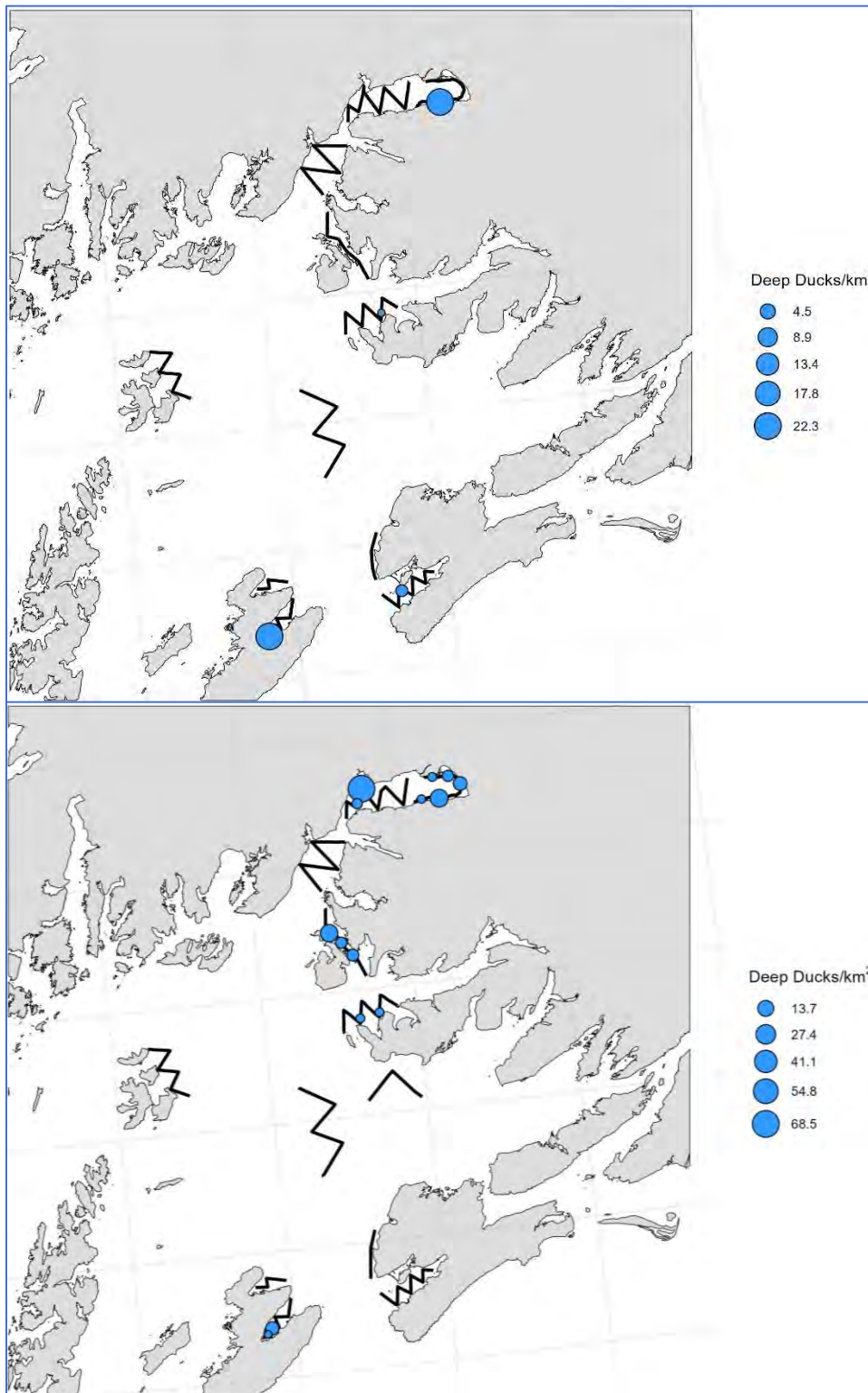


Figure A-4. Distribution of scoters (black, surf, white-winged, unidentified) by density (birds/km²; top) during September (top) and November (bottom) 2024 surveys.

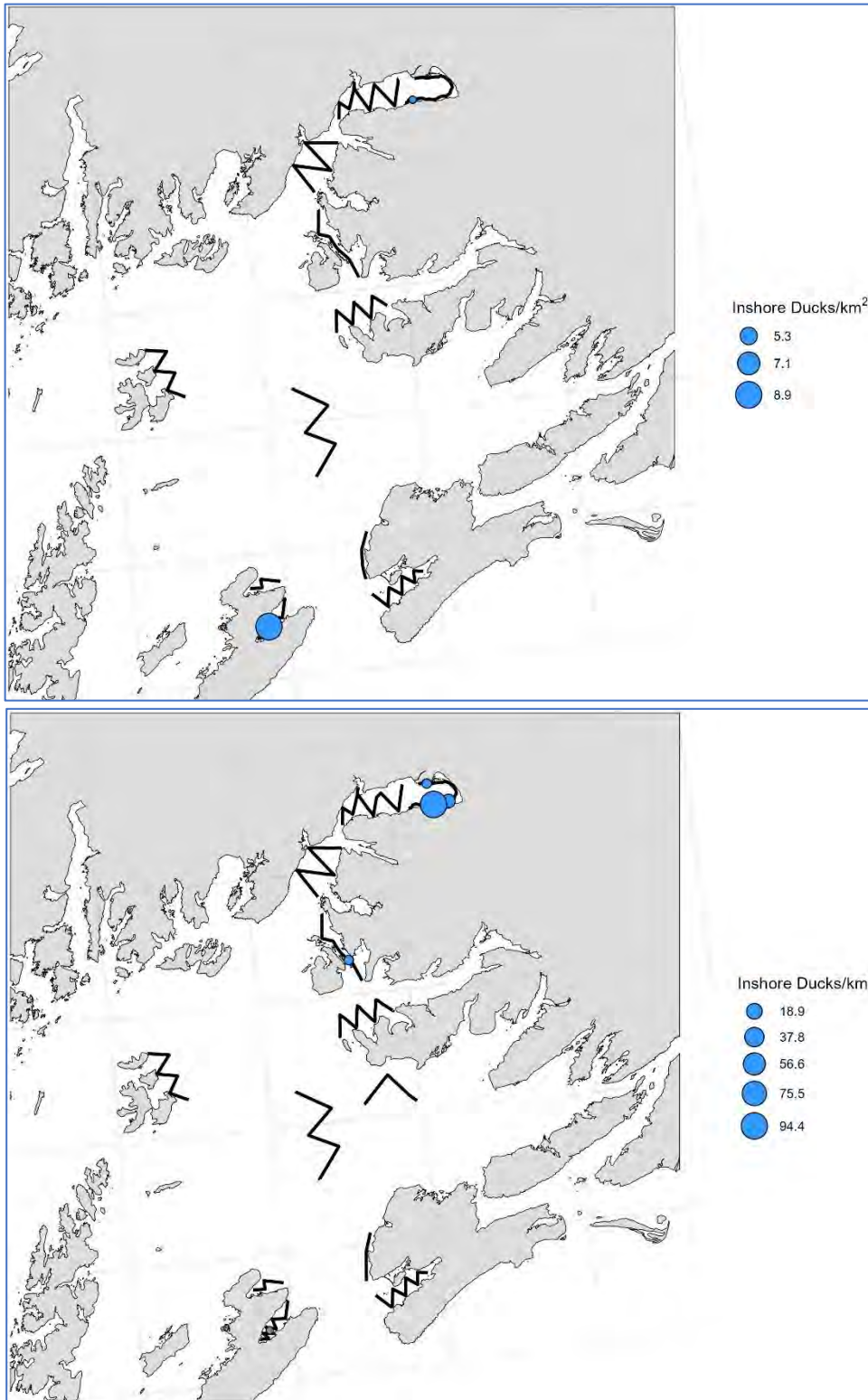


Figure A-5. Distribution of inshore ducks (Barrow's goldeneyes, common goldeneyes, unidentified goldeneyes, buffleheads) by density (birds/km²) during September (top) and November (bottom) 2024 surveys.

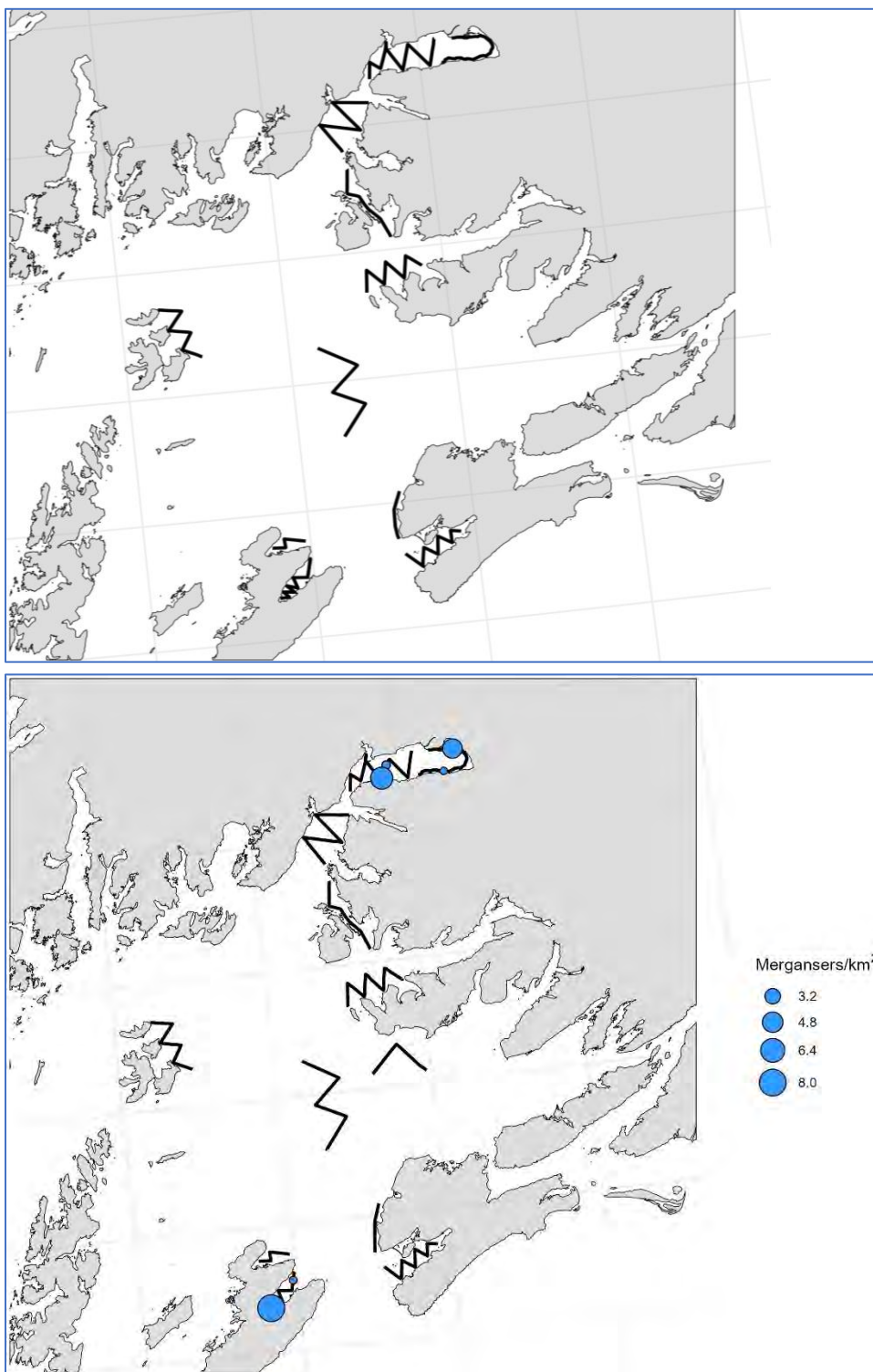


Figure A-6. Distribution of mergansers (common, red-breasted, unidentified) by density (birds/km²) during September (top) and November (bottom) 2024. Note, no mergansers were observed on transect during September 2024.

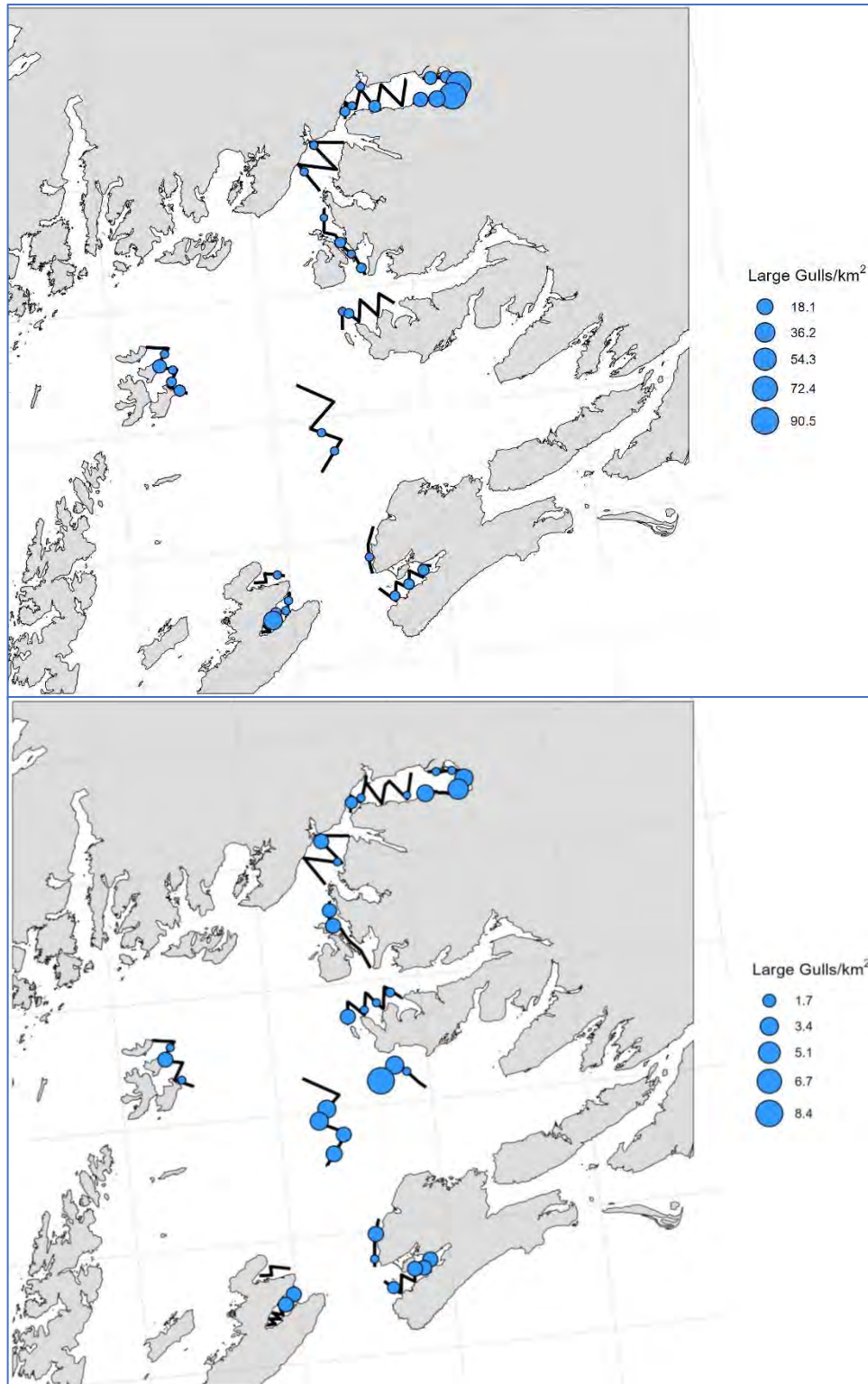


Figure A-7. Distribution of large gulls (glaucous-winged, herring, unidentified) by density (birds/km²) during September (top) and November (bottom) 2024.

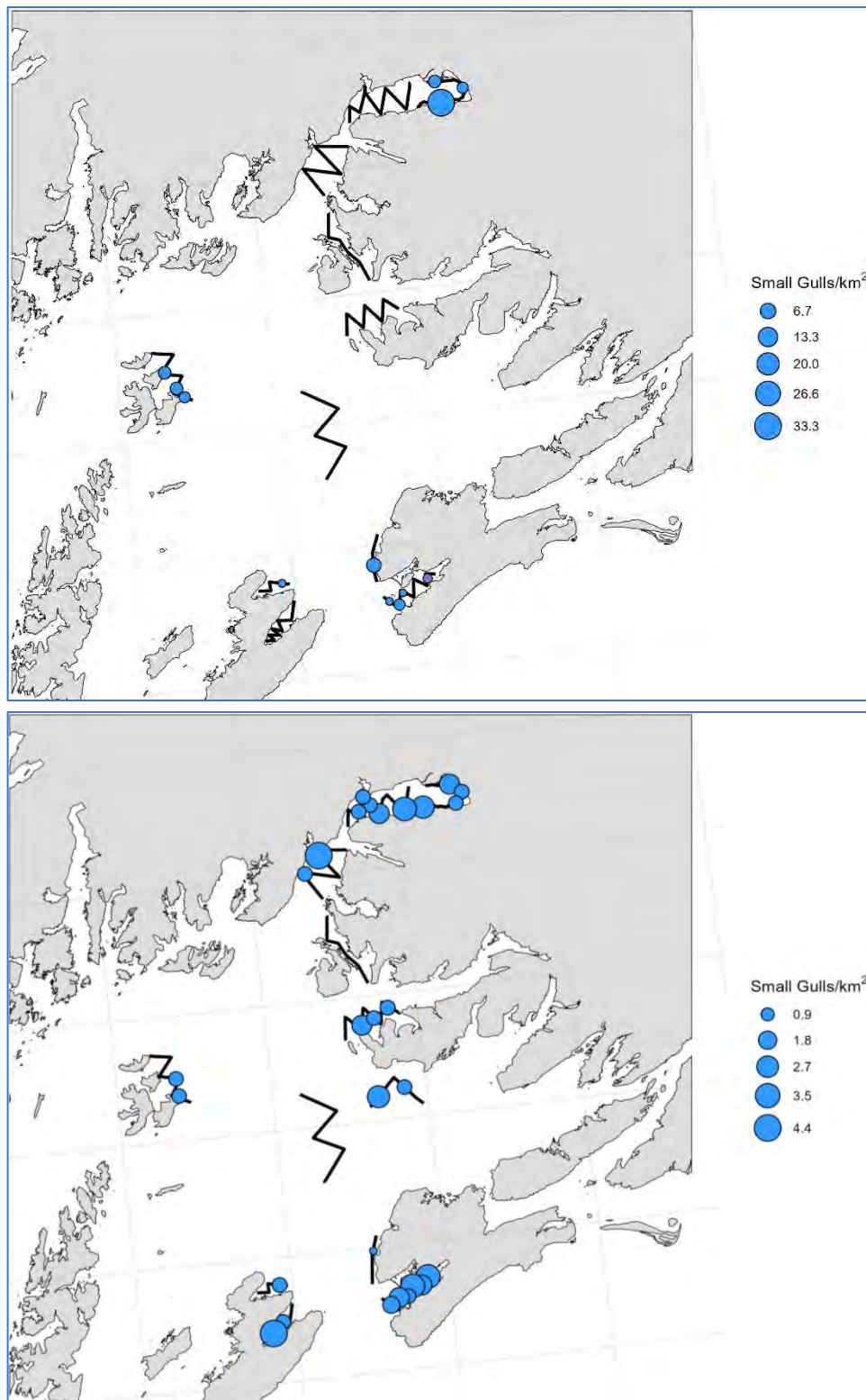


Figure A-8. Distribution of small gulls (short-billed, unidentified) by density (birds/km²) during September (top) and November (bottom) 2024 surveys.

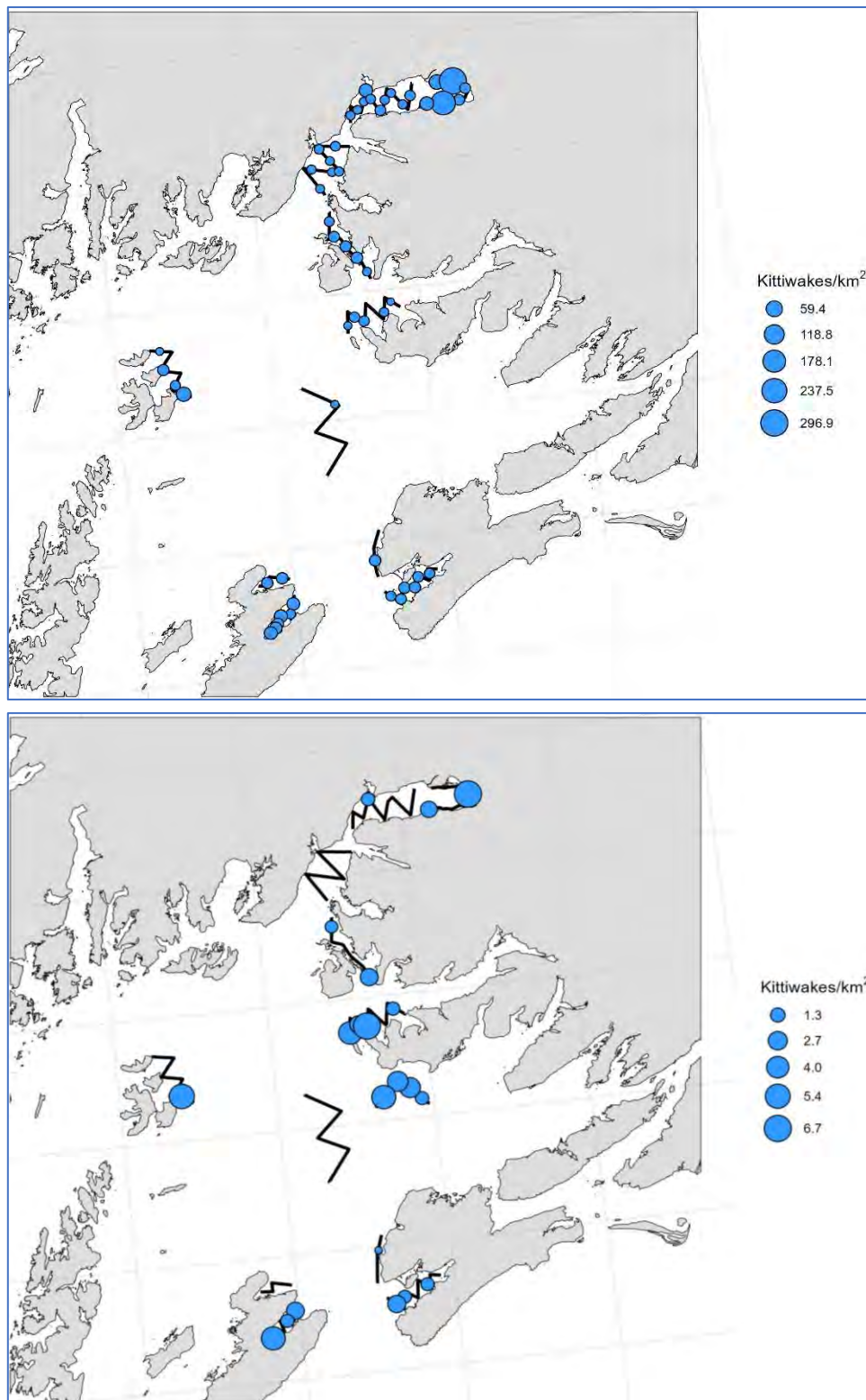


Figure A-9. Distribution of black-legged kittiwakes by density (birds/km²) during September (top) and November (bottom) 2024 surveys.

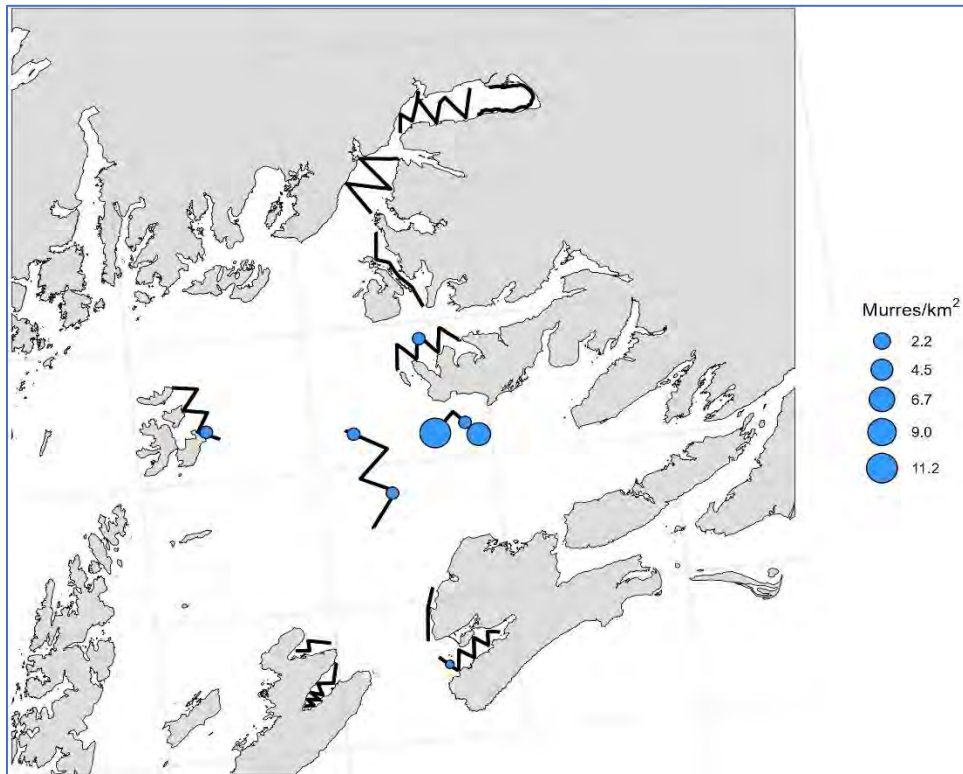
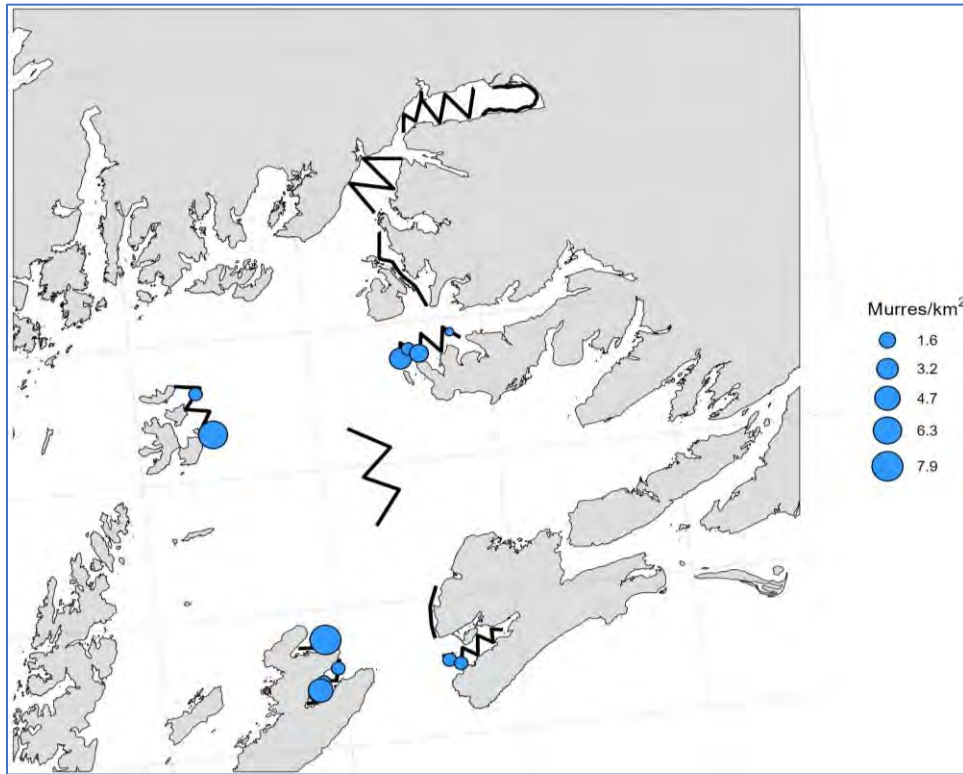


Figure A-10. Distribution of common murres by density (birds/km²) during September (top) and November (bottom) 2024 surveys.

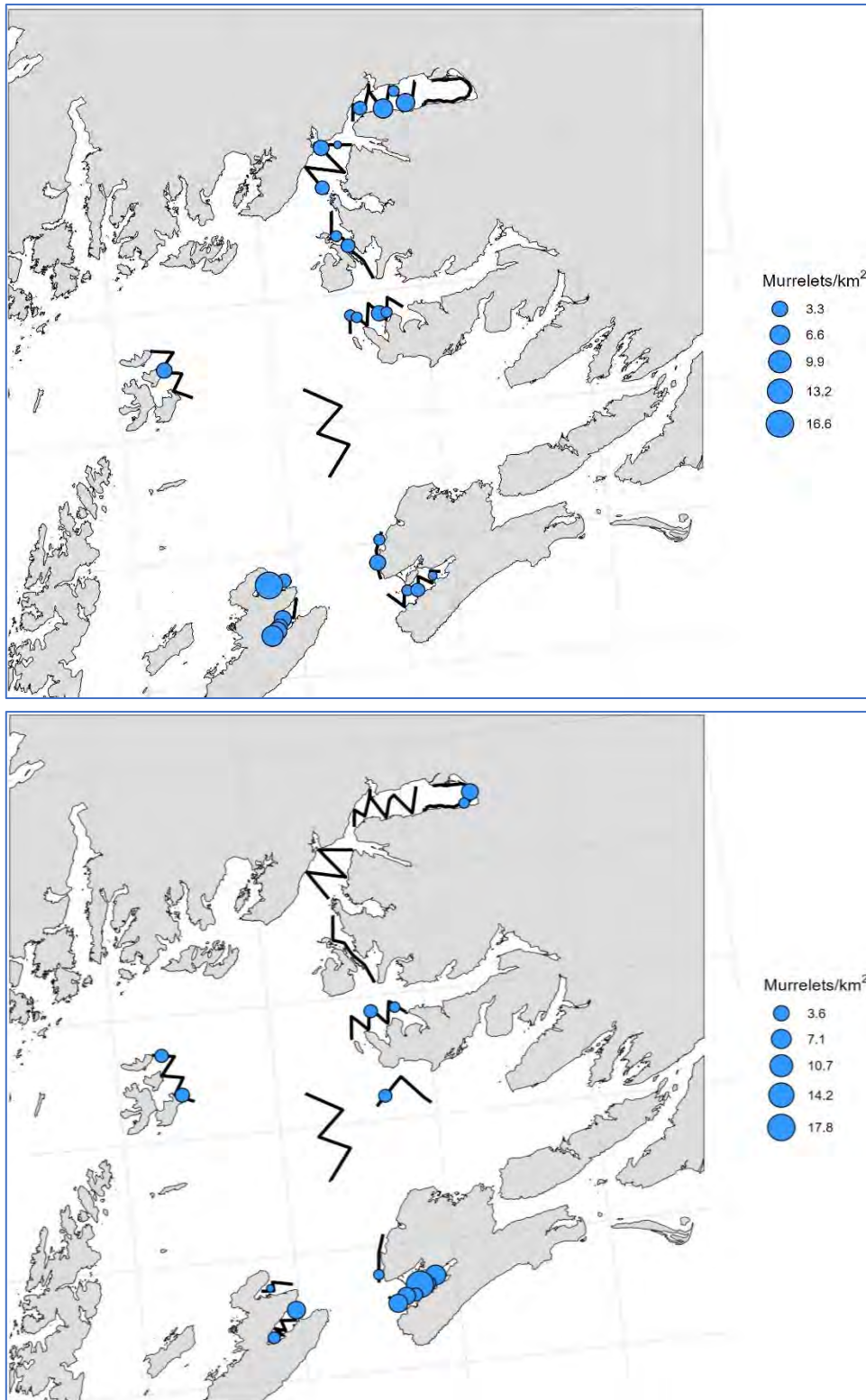


Figure A-11. Distribution of murrelets (marbled, unidentified) by density (birds/km²) during September (top) and November (bottom) 2024 surveys.

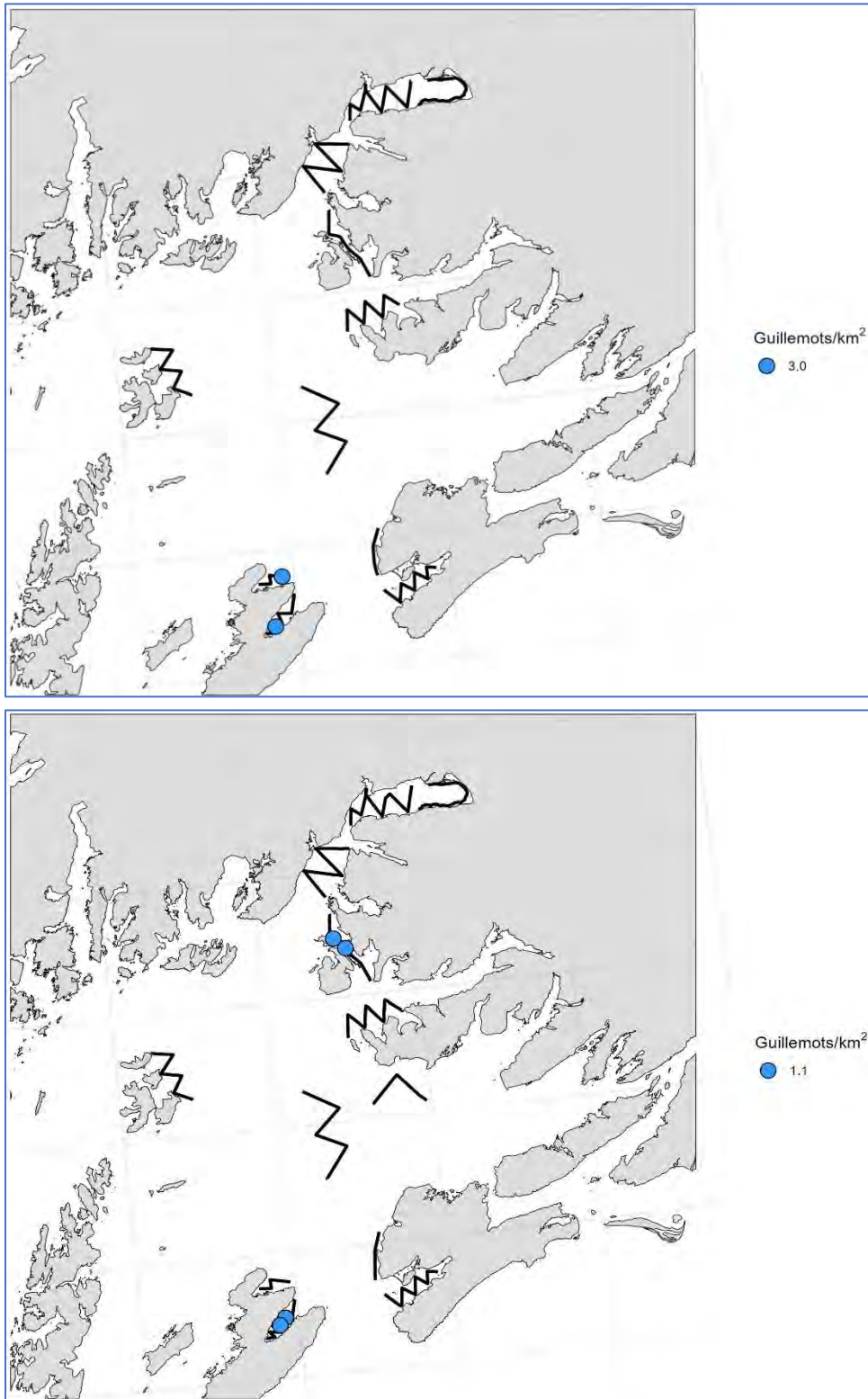


Figure A-12. Distribution of pigeon guillemots by density (birds/km²) during September (top) and November (bottom) 2024 surveys.

Appendix B. Marine mammals observed by species and location, September and November 2024.

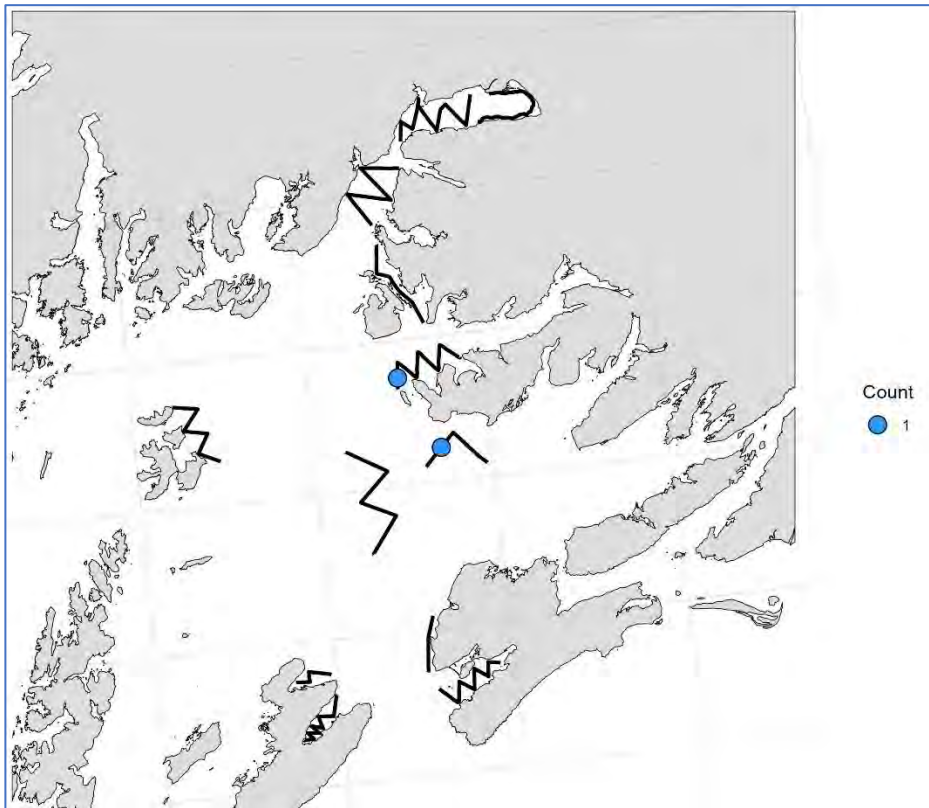


Figure B-1. Distribution and count of humpback whales observed during November 2024 surveys. No whales were observed during the September 2024 surveys.

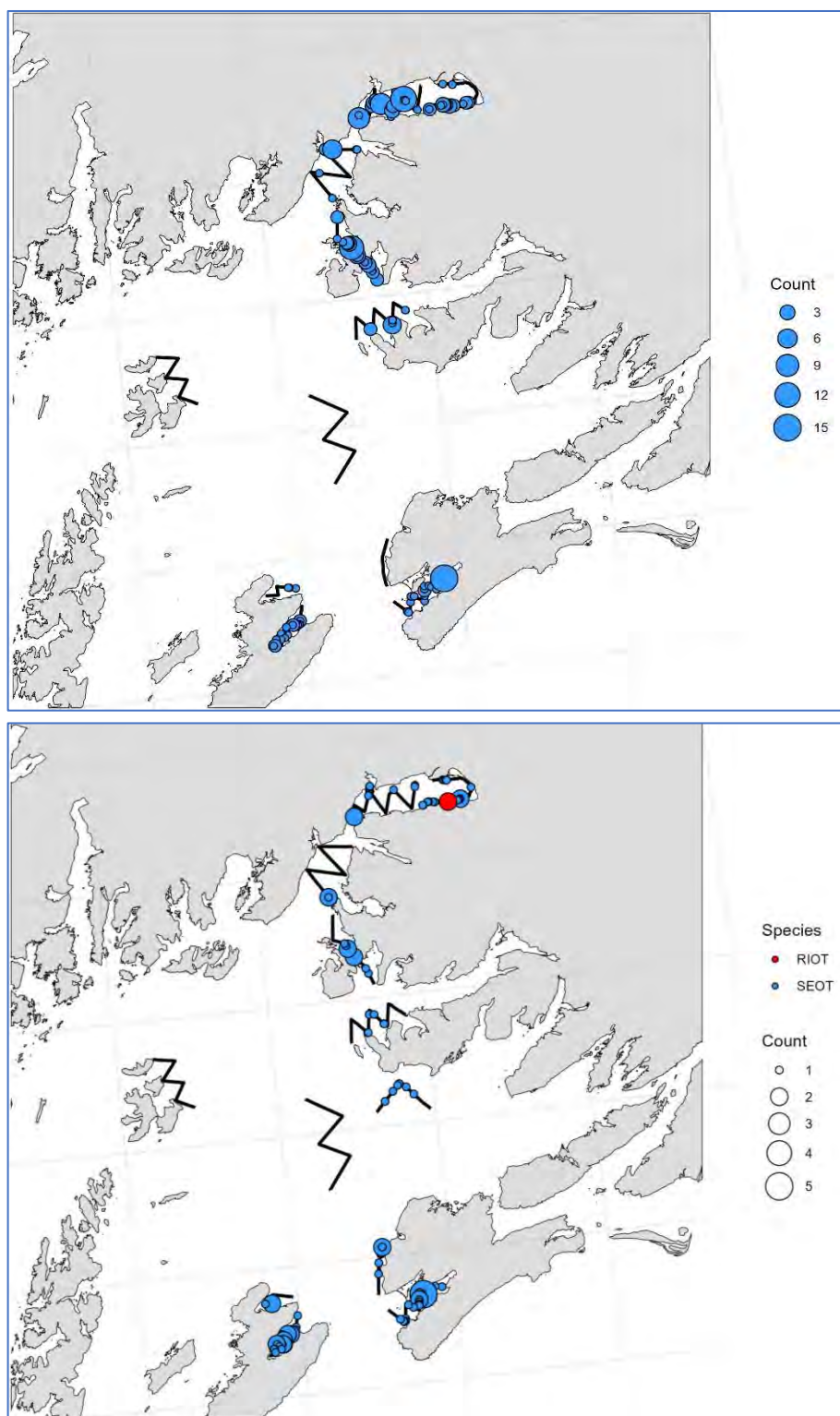


Figure B-2. Location and count of sea otters (SEOT) and river otters (RIOT) observed during September (top) and November (bottom) 2024 surveys.

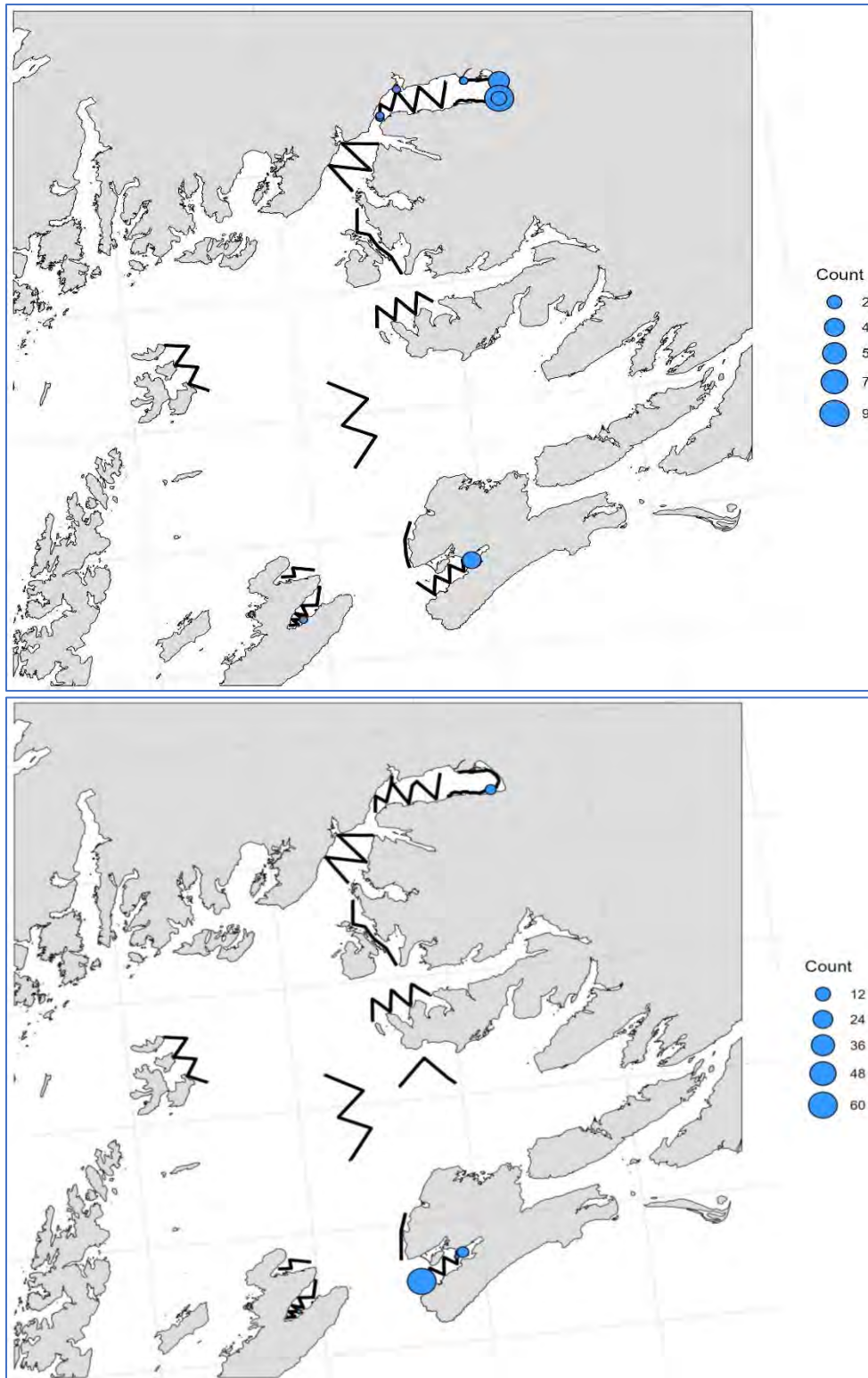


Figure B-3. Location and count of sea lions observed during September (top) and November (bottom) 2024 surveys.

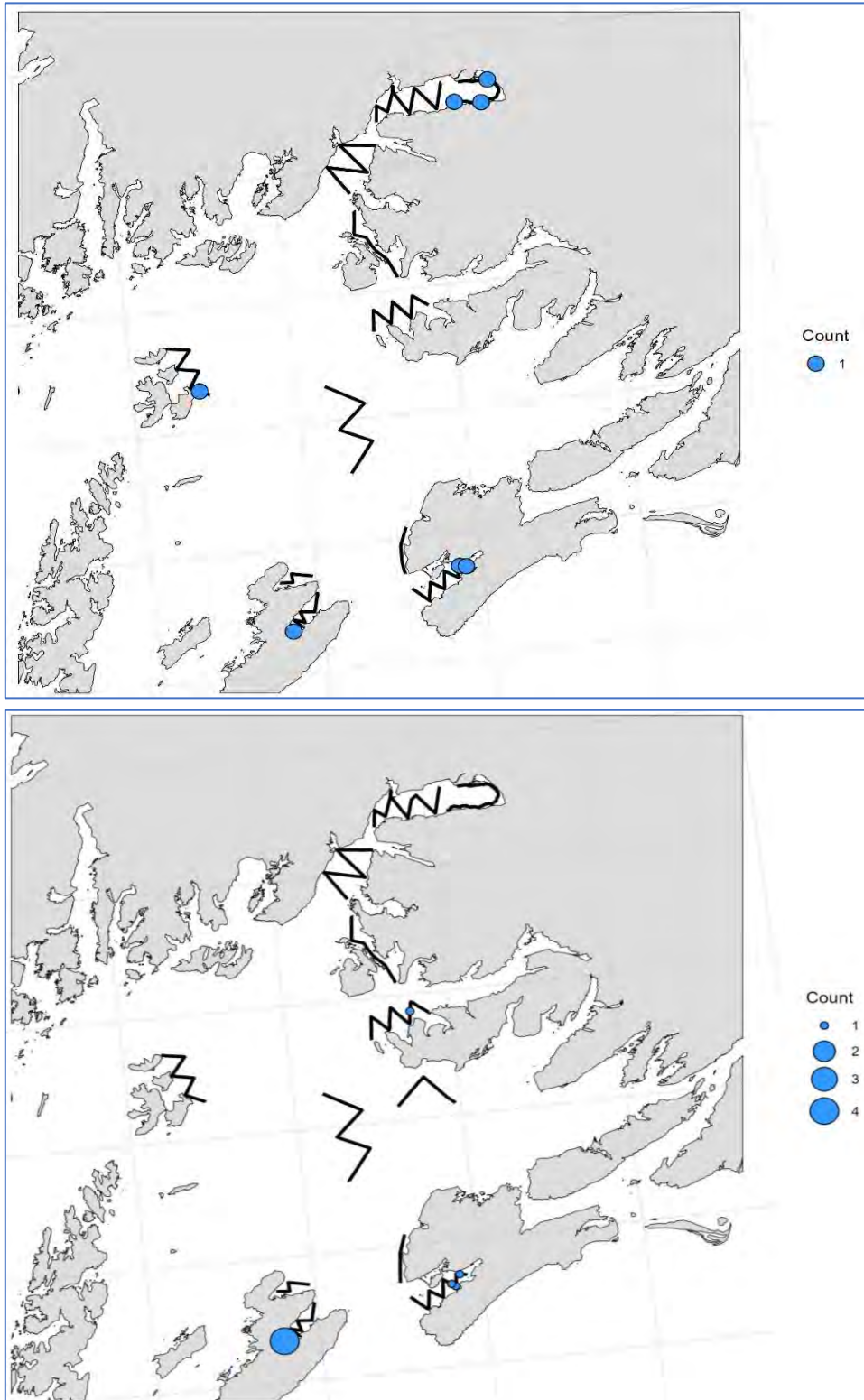


Figure B-4. Location and count of Harbor Seals observed during September (top) and November (bottom) surveys.



Figure B-5. Location and count of Dall's Porpoises observed during November 2024 survey. No porpoises were observed on the September 2024 survey transects.

Briefing for PWSRCAC Board of Directors – May 2025

ACTION ITEM

Sponsor: John Guthrie and the POVTS Committee

Project number and name or topic: 8250 - Assessing the likelihood of non-indigenous species biofouling on vessel arrivals within the Exxon Valdez Oil Spill Region

1. **Description of agenda item:** The Board is being asked to accept the report titled "Assessing the likelihood of non-indigenous species biofouling on vessel arrivals within the Exxon Valdez Oil Spill Region" by Natalie Kiley-Bergen dated February 2025.
2. **Why is this item important to PWSRCAC:** This project provides an update on non-indigenous species (NIS) biofouling risk characterization from vessels arriving in Prince William Sound and the Exxon Valdez oil spill (EVOS) region. By assessing six major vessel classes within the EVOS region, including tankers, this project assesses the relative risk of biofouling NIS arriving in the region from tanker activity compared to other vessel types. Taking a comprehensive look at vessel activity in the region will highlight priorities for additional research and additional monitoring efforts.
3. **Previous actions taken by the Board on this item:**

<u>Meeting</u>	<u>Date</u>	<u>Action</u>
Board	5/2/2024	Funds for project were included in FY2025 budget which were approved at the May 2024 Board meeting. Purchase order approved by Executive Director Donna Schantz on September 25, 2024.
4. **Summary of policy, issues, support, or opposition:** None.
5. **Committee Recommendation:** The POVTS Committee reviewed this work at their committee meeting on February 4, 2025. The committee recommended that the report be accepted by the Board via e-mail poll on March 17, 2025.
6. **Relationship to LRP and Budget:** Project 8250 - Assessing Non-Indigenous Species Biofouling on Vessel Arrivals is in the approved FY2025 budget and annual work plan with a budget amount of \$5,750.
7. **Action Requested of the Board of Directors:** Accept report titled "Assessing the likelihood of non-indigenous species biofouling on vessel arrivals within the Exxon Valdez Oil Spill Region" by Natalie Kiley-Bergen dated February 2025, as final and for distribution to the public.
8. **Alternatives:** None recommended.
9. **Attachments:** Draft report titled "Assessing the likelihood of non-indigenous species biofouling on vessels arrivals within the Exxon Valdez Oil Spill Region."

Assessing the likelihood of non-indigenous species biofouling on vessel arrivals within the Exxon Valdez oil spill region

Final report

Presented to: Prince William Sound Regional Citizens' Advisory Council
3709 Spenard Road, Suite 100
Anchorage, AK 99503

May 1, 2025

Presented By:

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Purchase Order 17782

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

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Acronyms

CCR	California Code of Regulations
EVOS	Exxon Valdez oil spill
GT	gross tonnage
IMO	International Maritime Organization
km	kilometer
NBIC	National Ballast Information Clearinghouse
NIS	non-indigenous species
N_p	niche proportion
NVMC	National Vessel Movement Center
PWSRCAC	Prince William Sound Regional Citizens' Advisory Council
r^2	coefficient of determination
RoRo	roll-on roll-off
SD	standard deviation
SERC	Smithsonian Environmental Research Center

SOLAS	International Convention for the Safety of Life at Sea
USCG	United States Coast Guard
VIDA	Vessel Incidental Discharge Act
WSA	wetted surface area

Executive Summary

Biofouling on commercial shipping vessels constitutes a major vector by which marine non-indigenous species (NIS) are transported between coastal environments. Certain vessel characteristics and behaviors contribute to the likelihood of introducing biofouling NIS from vessel arrivals. This project (1) assesses the spatial and temporal patterns of vessel arrivals in the Exxon Valdez oil spill (EVOS) region between 2012 and 2022, and (2) quantifies the likelihood of NIS introduction and survival in for six commercial vessel groups (bulk carrier, container, passenger, tanker, roll-on roll-off (RoRo), and general cargo) based on four established and quantifiable biofouling risk factors.

Since 2012, nearly 700 commercial vessels arrived annually to ports in the EVOS region, driven predominantly by nearly 300 annual tanker arrivals to the Alyeska Pipeline Service Company's Valdez Marine Terminal. While tanker arrivals declined slightly over the study period, tanker traffic to Cook Inlet is expected to increase in the next few years from liquified natural gas imports. Outside of the anomalous COVID-19 pandemic from 2020-2021 when cruise ships were out of operation, passenger vessel traffic increased in the study period and is expected to continue this trend. Container ships arrived in comparable numbers as passenger vessels while few bulkers, general cargo vessels, and RoRos arrived to the region during the study period.

Arrivals were analyzed using four biofouling risk factors: wetted surface area (WSA) - vessel's quantifiable submerged fouling habitat, years since last dry dock, environmental distance between ports of call, and residency time in arrival port. An average of 10 kilometers² (km²) of WSA arrived to the EVOS region each year of the study period – roughly three times the size of Central Park in New York City. Residency time in arrival port was less than 24 hours for most vessel arrivals in the study area. The top port connections for tankers were between Nikiski and Valdez and Port Angeles, Washington, and Valdez and Long Beach, California. Most arrivals to the EVOS region originated from ports in the Gulf of Alaska, followed closely by arrivals from the North American Pacific coastline. Some arrivals also came from ports in eastern Asia. Environmental distance, measured as the similarity of mean annual temperature and salinity between ports, was minimal for arrivals from the Gulf of Alaska and generally increased with geographic distance to a maximum for ports in eastern Asia. Most vessel arrivals for which data are available reported having been in dry dock within the last 5 years, in compliance with international regulations.

An assessment of these risk factors is combined with a review of best practices for hull maintenance, biofouling regulation, and recommendations to refine regional and local assessments of vessel biofouling, providing critical context for proactive management and

regional biosecurity at high latitudes. Additional recommendations for research, regulatory oversight, and industry engagement are also provided.

Introduction

Marine Non-indigenous Species

Changes in transportation networks, maritime shipping, and globalization over the past two centuries have increased the pace with which the anthropogenically-mediated spread of NIS occurs (Seebens et al., 2017). NIS can disrupt marine ecosystems by out-competing native species, changing species composition, and altering resource availability (Bax et al., 2003). These invasions can dominate habitats and threaten the survival of native populations, economies, and human well-being (Catford et al., 2018).

Sessile (fixed and immobile) organisms found on hard substrates, including tunicates, bivalves, sponges, bryozoans, and algae, are among the most prevalent documented marine invaders (G. Ruiz et al., 2009). Among sessile marine NIS, tunicates are the most common group (Lambert, 2007). These NIS filter feeders have been observed to replace native species and eventually dominate benthic communities; as seen in Sitka, Alaska, where colonies of the tunicate *Didemnum vexillum* in Whiting Harbor has been observed coating fishing gear and other marine infrastructure (Cohen *et al.* 2011).

Sessile NIS can be transported vast distances numerous ways, including as juvenile zooplankton discharged in ballast water of ships or as adult forms attached to vessel hulls and niche areas such as rudders, propellers, and sea chests or to aquaculture equipment. Vessels take on coastal seawater as ballast water to offset the weight of delivered cargo, often unintentionally transporting large volumes of coastal organisms between ports. In contrast, biofouling refers to the process by which organisms attach to or occupy submerged parts of a vessel and can include both sessile and mobile fauna of various sizes. Biofouling has long been considered a major vector for NIS introduction and is deemed responsible for the largest share of historical introductions of marine NIS in San Francisco Bay (Bax et al., 2003).

Biofouling Management & Policy

Recently, rigorous management requirements have been implemented for ballast water by the International Maritime Organization (IMO), United States, and other regulatory entities, yet similar requirements for biofouling are lacking in most places. Notable exceptions include New Zealand and Australia where biosecurity is a top concern and stringent regulations, such as proof of hull cleaning within 30-days of arrival, have been implemented since 2018 (New Zealand Ministry for Primary Industries, n.d.).

Through the International Convention for the Safety of Life at Sea (SOLAS), the IMO requires active commercial vessels to drydock for hull cleaning and other maintenance every five years with an intermittent underway survey in lieu of drydocking. However, some vessels take additional biofouling precautions at more frequent intervals. More proactive management for biofouling can include in-water cleaning by divers or robots between drydock cleanings. Biofouling is also managed by antifouling paints and coatings applied to ship hulls. There are various types of antifouling treatments and these coatings must balance effectiveness with environmental impacts.

Regional Context

The distribution of marine NIS varies latitudinally. Outside of the tropics where low rates of NIS are attributed to high biotic resistance, the distribution of NIS align with latitudinal trends in species richness and geographic range sizes (Sax, 2001). Rates of marine NIS are high in the temperate zones and decrease at higher latitudes towards the polar regions (de Rivera *et al.*, 2011). While a relatively low number of established marine NIS have been documented at high latitudes, some high latitude locations receive large volumes of vessel traffic and associated propagule pressure (the number of individuals released and the frequency of release), thereby increasing the risk of marine NIS establishment (Lo *et al.*, 2012). Despite this increased risk, a combination of limitations in dispersal mechanisms, abiotic resistance (e.g., salinity, temperature), or biotic resistance (e.g., predators) currently limit NIS from establishing and spreading in these areas. However, the compounding impacts of climate change altering the marine environment and vessel traffic patterns, such as increased shipping in the Arctic, pose a potential increase in the risk of marine NIS establishment at high latitudes (Mahanes & Sorte, 2019) (Chan *et al.*, 2013).

Given its high latitude and relatively low anthropogenic disturbances, Alaska has relatively few established marine NIS (<15 species, Fofonoff *et al.*, 2018). Despite this low number, much of the commercial vessel traffic to Alaska comes from more heavily invaded ports, such as San Francisco Bay with over 300 established NIS (G. M. Ruiz *et al.*, 2015). Many established NIS on the west coast of North America have potential ranges that are much larger than their current extent, encompassing significant reaches of Alaska's coastline (de Rivera *et al.* 2011, Ruiz, unpublished data). For example, the barnacle *Amphibalanus improvisus*, the crab *Carcinus maenas*, the snail *Littorina saxatilis*, and the tunicate *Styela clava* have a projected suitable habitat range that encompasses considerable sections of Alaska's coastline (de Rivera *et al.*, 2011). This habitat compatibility suggests that limitations in dispersal mechanisms, rather than biotic or abiotic factors, could currently be preventing the establishment of many NIS species in Alaska. Consequently, focal points for early detection of marine NIS in Alaska are regions with relatively high abundance of vessel

traffic engaged in coastwise and overseas travel. In addition, warming water and air temperatures also have the potential to make coastal Alaska increasingly hospitable to NIS that are currently thermally restricted from establishing in higher latitudes (Mahanes & Sorte, 2019), further increasing the importance of early detection protocols in areas of high ship traffic.

Coupled with increasing vessel traffic from more heavily-invaded regions of the North American Pacific coast and climate-induced changes in ocean conditions (de Rivera et al. 2011, Mahanes & Sorte 2019), Alaska faces an increasing risk of novel marine invasions. European green crab (*Carcinus maenas*), a recent NIS arrival to Alaska, was first detected on Annette Islands Reserve in southern southeast Alaska in 2022, and has since been observed in multiple places in southeast Alaska (NOAA, 2022). In southcentral Alaska, the EVOS region faces particular risks from marine NIS. Not only does the EVOS region receive considerable commercial vessel traffic, but also, environmental disturbances, such as oil spills, have been shown to affect invasion resistance from native species (G. M. Ruiz et al., 2000).

EVOS Region Analysis

Since the Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) last funded a research effort to characterize risk associated with vessel fouling and NIS in Prince William Sound (Cordell and Sosik 2009), novel and data-driven methodologies to characterize risk from NIS biofouling on vessel arrivals have been developed. Quantifying total WSA of a vessel, the submerged surface area of the hull and niche spaces, functions as a quantitative representation of habitat availability to biofouling NIS (Ceballos-Osuna et al., 2021). Niche areas, such as sea chests, propellers, and thruster tunnels, are features of the hull with increased surface area and reduced drag during transit, resulting in greater accumulation of biofouling (Moser, 2017). In a pioneering work, Moser (2015) quantified total WSA for the global commercial shipping fleet by calculating the relationship between WSA and vessel tonnage using naval architecture to account for the proclivity of biofouling on the submerged surfaces of commercial vessels.

Calculating WSA provides a proxy for potential propagule pressure – a measure of how many organisms are introduced to a specific place and time - to facilitate NIS invasion. Consequently, quantifying the WSA of vessel traffic is a foundational step to understanding the potential introduction of biofouling-based NIS to areas of interest (Ceballos-Osuna et al., 2021). Miller *et al.* (2018) combined WSA calculations and information on vessel arrivals and previous ports of call to profile potential sources of biofouling for the contiguous United States.

In addition to analyzing WSA, other arrival characteristics affect the likelihood of introducing marine NIS from biofouling. Since the likelihood of hull fouling organisms having the opportunity to spawn or reproduce within an arrival port increases with the time spent in port, analyzing residency time of arrivals furthers understanding of introduction potential. Assessing the environmental distance between the arrival port and last port of call as a measure of abiotic similarity and physiological suitability for biofouling organisms provides an indication of the survival potential for any NIS introduced into a new environment. A smaller environmental distance between port calls indicates higher environmental similarity and a potentially greater opportunity for NIS survival. Date of last dry dock can also be a useful data point, providing an indication of opportunity for hull fouling growth on a vessel over time, which may also affect the likelihood of introducing marine NIS. The more recently a vessel was cleaned the less opportunity for hull fouling growth on the vessel and the fewer potential NIS that could be introduced to a new environment.

Building on existing research and using publicly available vessel arrival databases, this project quantifies the likelihood of NIS introduction and survival in the EVOS region for six commercial vessel groups (bulk carrier, container, passenger, tanker, RoRo, and general cargo) between 2012 and 2022. Likelihood of biofouling on commercial vessels is assessed using the variability among the following risk factors: total WSA including niche areas, environmental similarity between ports of call, residency time in arrival port, and years since last dry dock. An assessment of these risk factors is combined with a review of best practices for hull maintenance, biofouling regulation, and recommendations to refine regional and local assessments of vessel biofouling.

Given the region's large coastline, numerous coastal communities dependent on marine economies, expanding commercial shipping activity, and warming climate, analyzing these risk factors is a foundational step towards risk assessment of biofouling NIS arrivals. Profiling risk from a regional perspective with a focus on port and vessel type rather than by individual vessel arrival is prudent in places with limited resources to prioritize locations for piloting additional management practices and implementing early detection efforts. These findings provide important and timely information on port-specific NIS arrival potential to inform proactive management priorities and provide critical context for regional biosecurity assessments.

Methods

Data Sources

Data on vessel arrivals to the EVOS region, from 2012 through 2022, were obtained from National Ballast Information Clearinghouse (NBIC) and National Vessel Movement Center (NVMC) as part of a larger statewide analysis. NBIC is jointly managed by Smithsonian Environmental Research Center (SERC) and the United States Coast Guard (USCG), and NVMC is managed by the USCG. Nearly all commercial vessels that operate in U.S. waters must submit a Ballast Water Management Reporting Form to NBIC, which documents their arrival to a U.S. port. Reporting compliance is estimated to be 94% (M. Minton, personal communication). Applicable data include vessel name, IMO number, owner, vessel type, gross tonnage (GT), arrival date, arrival port, last port of call, next port of call, transit type (i.e., coastwise or overseas), and date of last dry dock. The exclusive economic zone (200 nautical miles) marks the boundary between “coastwise” and “overseas” vessel transit types. Similarly, NVMC records all notices of arrival and departure information for vessels entering U.S. ports and facilities except for vessels under 300 GT and certain tugs operating without hazardous materials on board, which are exempt from NVMC reporting. For this project, relevant information from the two data sources has been integrated to ensure the most comprehensive dataset of vessel arrivals available for analysis.

The integrated NBIC and NVMC dataset is informative to analyze trends in vessel behavior in the EVOS region. This information was analyzed to consider changes in vessel arrivals over time for certain vessel types and arrival ports, along with the relative makeup of vessel arrivals by factors that include last port of call, seasonality, and relative size classes.

Although the EVOS region has arrivals for other vessel types – namely fishing vessels, ferries, tugs, barges, and recreational vessels – this analysis is limited to the six commercial vessel types identified due to the availability of information for arrival validation and calculating risk factors.

Risk Factors

Wetted Surface Area

WSA, which includes exposed hull and niche areas, was calculated for documented commercial vessels arrivals in the dataset following Ceballos-Osuna et al. (2021), Miller et al. (2018), and Moser et al. (2015). WSA is estimated using a vessel's GT, a widely available metric of vessel's internal volume. The relationship between WSA and GT is calculated for each vessel type using established linear regressions with coefficients of determination (r^2) greater than 0.9 (Ceballos-Osuna et al., 2021). An individual vessel's WSA is then multiplied

by a type-specific niche proportion (N_p), typically ranging from 0.07 to 0.09 except for passenger vessels which have a higher N_p (0.27). The sum of these values yields the total WSA per vessel and represents area for biofouling relative to their GT and type (Moser, 2017). WSA equations were readily available for the six commercial vessel types identified for this study (Ceballos-Osuna et al., 2021).

Environmental Distance

Environmental distance is assessed for each arrival using a method of calculating environmental similarity between the ecoregion of the last port of call and the ecoregion of the arrival port. Ecoregions were identified based on a global system for classifying coastal environments into areas of general similarity based on oceanographic and biological characteristics (Spalding, 2007). For this analysis, environmental distances are based on Euclidian distances calculated between ecoregions using monthly minimum, maximum, and average salinity and temperature measurements at three depths based on data in the World Ocean Atlas (Tzeng, 2022). Smaller environmental distance values suggest greater environmental similarity between ports and consequently increased likelihood of NIS survival. Environmental distances between ecoregions ranges from 0-110 globally.

Residency Time

Residency time is the reported amount of time a vessel spends in arrival port, ranging from less than one day to multiple days, or on rare occasions weeks. Residency time is available for NVMC arrivals (about two-thirds of the dataset).

Years Since Dry Dock

Years since last dry dock for individual vessels is available for a subset of the data – arrivals from 2020 to 2022 in the NBIC database. In 2020, NBIC added date of last dry dock to its reporting requirements. Since the IMO requires commercial vessels go into dry dock every five years in SOLAS, the expected range of years since last dry dock in this data set is from less than one year to five years.

Risk Assessment

For this analysis, these risk factors are considered as comparative metrics between vessel types and ports to assess how tankers compare to other vessel arrivals. These risk factors are also assessed to identify priority areas for further research and management recommendations.

Results

Descriptive Analysis

Arrivals per Year

A total of 7,547 vessels arrived to ports in the EVOS region between 2012 to 2022, to 33 different ports, averaging nearly 700 arrivals each year. Vessel traffic to the region was dominated by tanker arrivals (461 mean annual arrivals), followed by passenger vessels (111 mean annual arrivals) and container vessels (81 mean annual arrivals, Figure 1). There were less than 20 mean annual arrivals for bulkers and general cargo vessels and only three RoRo arrivals throughout the study period. Most vessel types had modest variation in vessel arrivals year over year, but passenger vessels dramatically declined during the COVID-19 pandemic in 2020 and 2021. Outside of those years, passenger vessel arrivals gradually increased over the study period.

Arrival Histories

Last port of call was available for all vessel arrivals. Most vessel traffic to the EVOS region arrived from ports in the North Pacific – coming from ports within Alaska, along the North American Pacific coastline, and from East Asia (Figure 2). Tankers traveled within the EVOS region between Valdez and Nikiski, and also arrived from ports with oil and gas refineries along the North American Pacific coastline (Table 1). Key port connections within the EVOS region for tanker arrivals were Nikiski, Valdez, and Homer, with the most arrivals attributed to tankers arriving in Nikiski from Valdez (488 arrivals during the study period). Tankers arriving to the EVOS region outside of Alaska came from refineries in Washington (Port Angeles and Anacortes) and California (Long Beach and San Francisco). Far fewer tanker arrivals to the EVOS region came from ports outside of the North American Pacific coastline. The top overseas tanker port connections were attributed to Valdez-bound arrivals from Singapore (28 arrivals) and Onsan, South Korea (25 total arrivals).

The most common last port call connection for non-tanker arrivals were container ships that arrived in Kodiak from Anchorage (744 total arrivals, Table 2). Most passenger vessels arriving to the EVOS region traveled between ports in Alaska with cruise ship terminals, namely arrivals to Whittier and Seward from Skagway, and Sitka in Southeast Alaska. Few vessels arrived to the EVOS region from overseas with some bulkier arrivals to the timber export port in Afognak from Taiwan and South Korea, and a few passenger vessels that arrived to Japan from Kodiak (9 total arrivals).

Tanker Arrivals

As the most common vessel arrival, variation and trends in tanker arrivals are of particular importance. With an average of 461 tanker arrivals each year, tanker traffic declined 3.1% annually over the study period from 530 arrivals in 2012, to 366 arrivals in 2022 (Figure 3). While daily tanker arrivals were relatively consistent throughout each year of the study period, average daily arrivals declined from 1.9 tankers per day in 2012, to 1.5 tankers per day in 2022 (Figure 4).

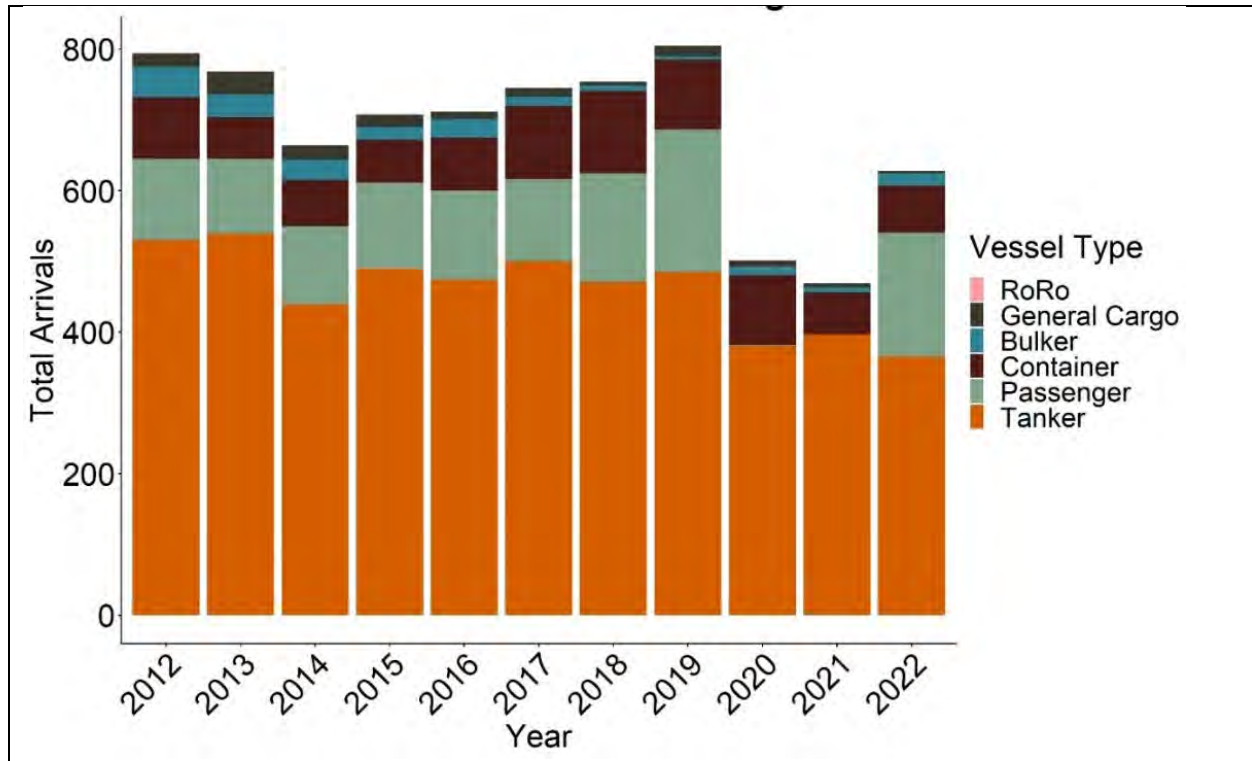


Figure 1. Total commercial vessel arrivals to the EVOS region 2012-2022.

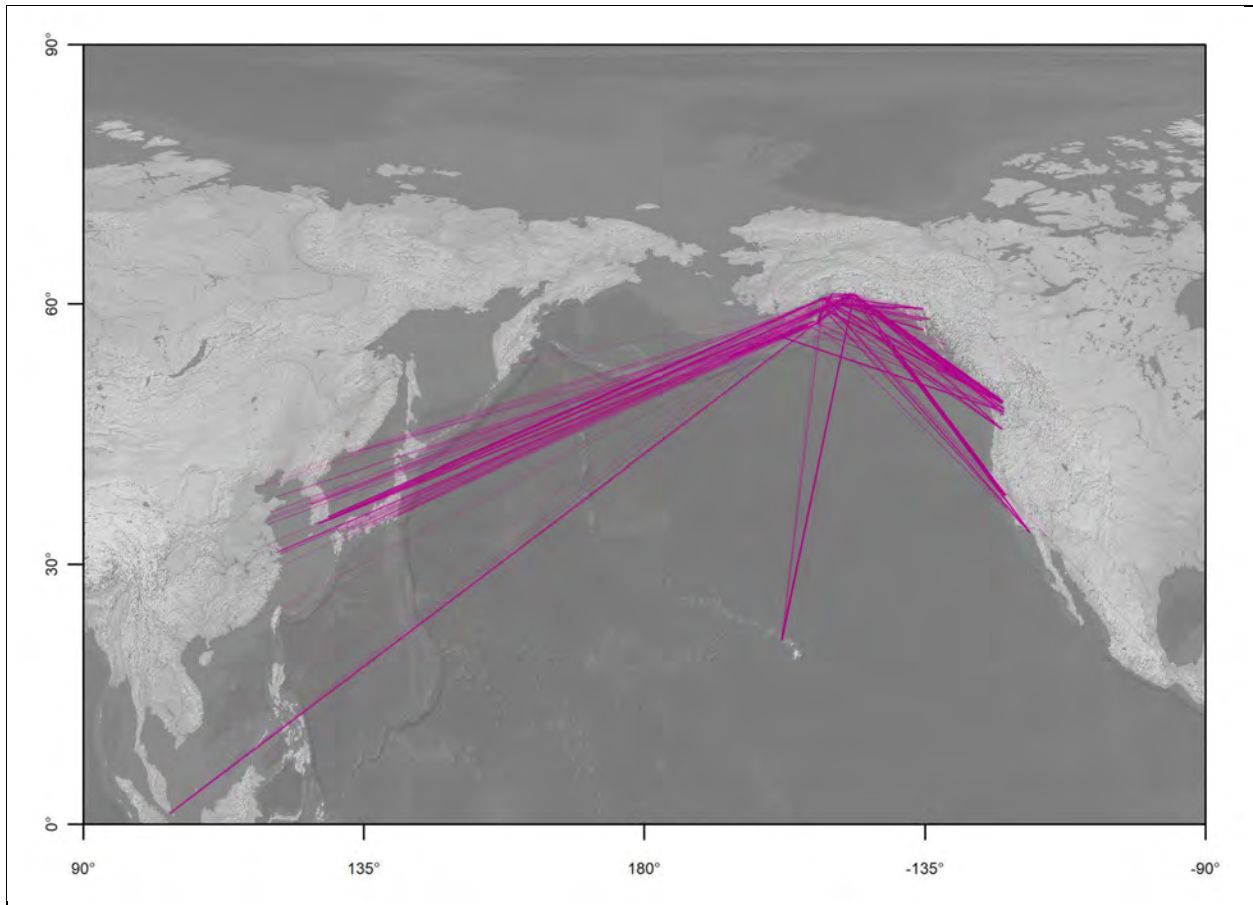


Figure 2. Port connections for commercial vessel arrivals the EVOS region 2012-2022.

Table 1. Top port connections for tanker arrivals to the EVOS region 2012-2022.

Arrival Port	Last Port of Call	Vessel Type	Transit Type*	Arrivals
Nikiski	Valdez, AK	Tanker	Coastwise	488
Valdez	Port Angeles, WA	Tanker	Coastwise	443
Valdez	Nikiski, AK	Tanker	Coastwise	412
Valdez	Long Beach, CA	Tanker	Coastwise	359
Homer	Valdez, AK	Tanker	Coastwise	279
Valdez	Anacortes, WA	Tanker	Coastwise	278
Valdez	San Francisco, CA	Tanker	Coastwise	278
Valdez	Bellingham, WA	Tanker	Coastwise	219
Valdez	Puget Sound, WA	Tanker	Coastwise	190
Valdez	Benicia, CA	Tanker	Coastwise	182
Valdez	Singapore	Tanker	Overseas	28
Nikiski	Onsan, South Korea	Tanker	Overseas	25

*Transit Type: coastwise transit includes all vessel arrivals from the North American Pacific coastline and overseas transit includes all vessel arrivals from outside the North American Pacific coastline.

Table 2. Top port connections for non-tanker arrivals to the EVOS region 2012-2022.

Arrival Port	Last Port of Call	Vessel Type	Transit Type	Arrivals
Kodiak	Anchorage, AK	Container	Coastwise	744
Whittier	Skagway, AK	Passenger	Coastwise	369
Seward	Skagway, AK	Passenger	Coastwise	309
Seward	Sitka, AK	Passenger	Coastwise	121
Chignik	Seattle, AK	Container	Coastwise	76
Chignik	Seattle, AK	General Cargo	Coastwise	66
Kodiak	Homer, AK	Passenger	Coastwise	47
Homer	Anchorage, AK	Passenger	Coastwise	43
Seward	Yakutat, AK	Passenger	Coastwise	30
Afognak	Taicang, Taiwan	Bulker	Overseas	20
Afognak	Busan, South Korea	Bulker	Overseas	17
Kodiak	Kushiro, Japan	Passenger	Overseas	9

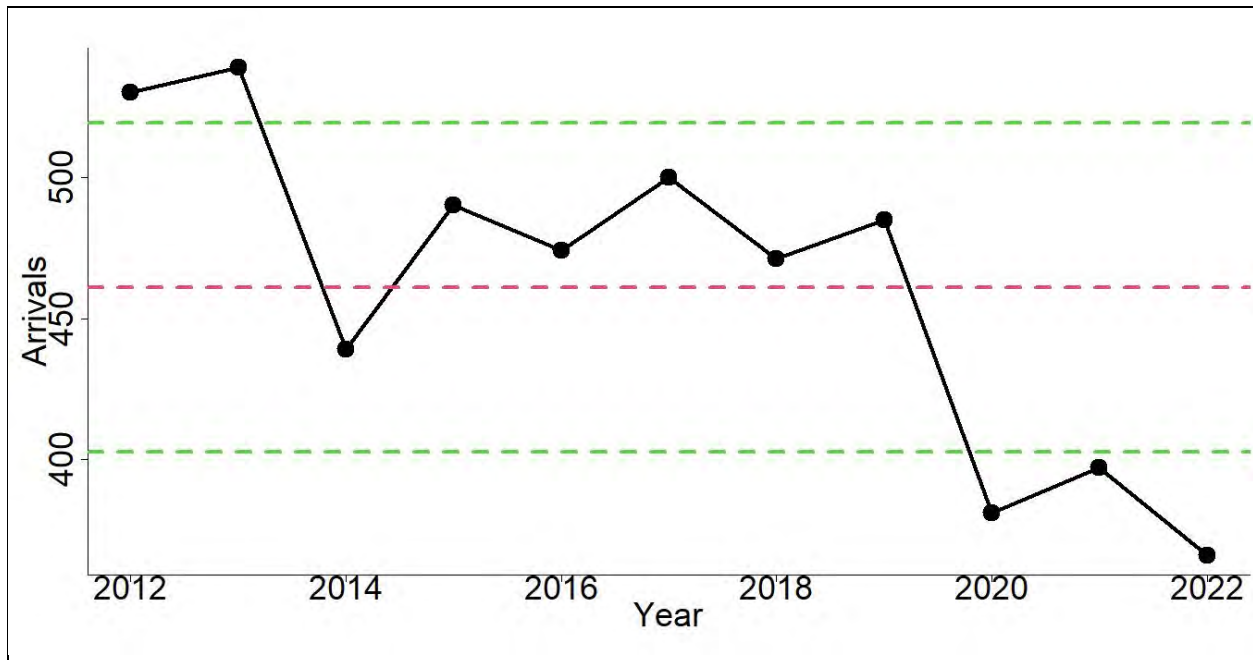


Figure 3. Average tanker arrivals to the EVOS region 2012-2022.

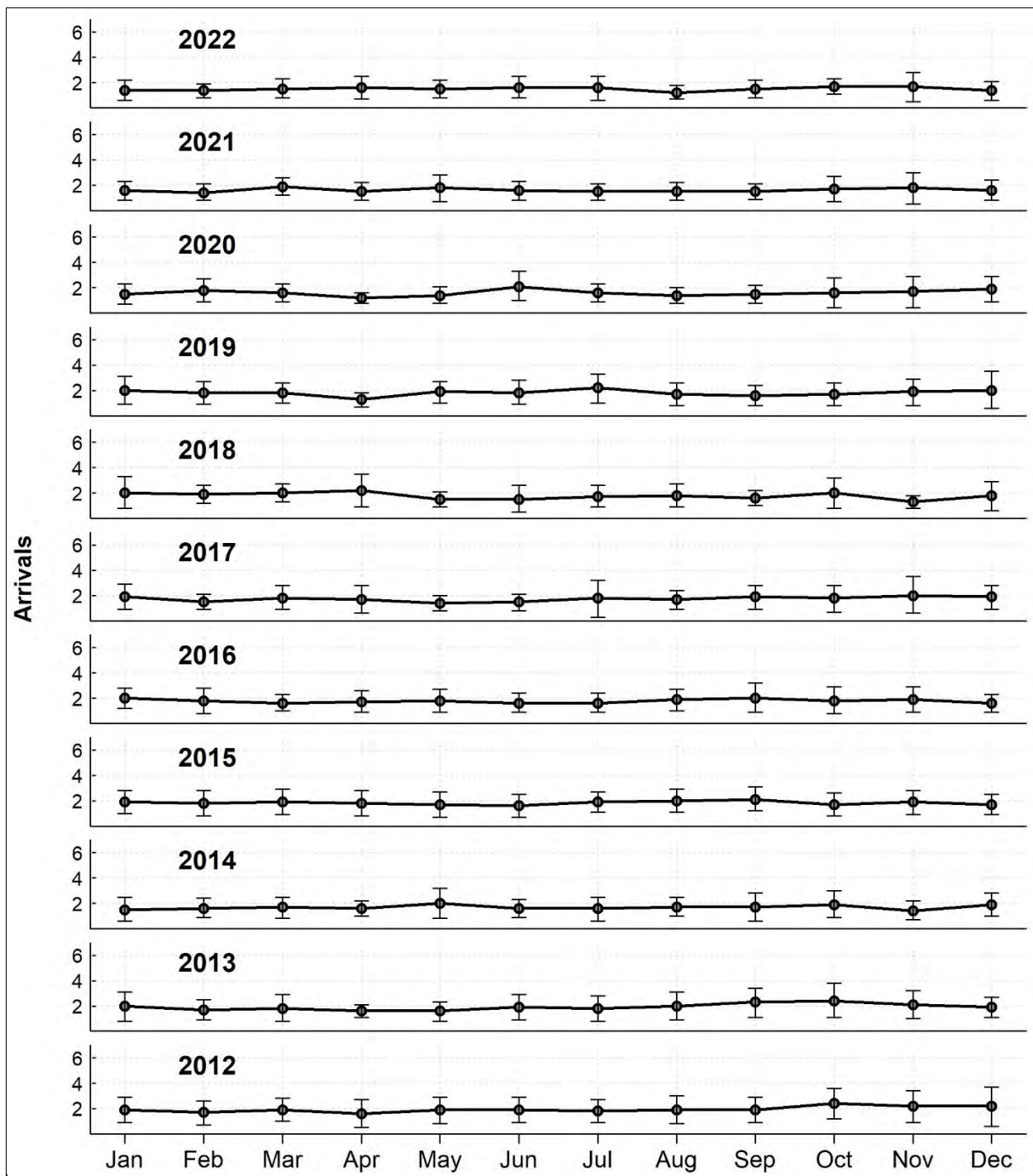


Figure 4. Monthly mean daily tanker arrivals to the EVOS region 2012-2022.

Wetted Surface Area

An average of 9.4 km² of WSA arrived to the EVOS region during the study period – roughly three times the size of Central Park in New York City (Figure 5). A majority of WSA is attributed to tanker vessel arrivals, followed by passenger vessels and container ships. There was little WSA attributed to passenger vessel arrivals in 2020 and 2021. Similar to

their overall arrival numbers, the volume of WSA arriving from tanker vessels declined over the study period.

Valdez received more than half of all WSA in the EVOS region, averaging 5.6 km² each year (Figure 6). Prominent cruise ship terminal ports of Seward, Whittier, and Homer received considerable WSA outside of notable declines during the COVID-19 pandemic in 2020 and 2021. Other ports with comparable WSA and arrivals to cruise ship ports were Nikiski, Kodiak, and Knowles Head. Afognak, Drift River, and Cape Hinchinbrook¹ had small but measurable WSA arrivals each year.

The distribution of WSA per arrival varies by vessel type, reflecting different sizes of vessels as vessels with a higher GT have a larger WSA (Figure 7). The largest vessels were tanker and passenger vessels that had the largest WSA arrivals, indicating more available biofouling habitat than other vessel types (WSA >20,000 m²). However, there were more midsize tankers than passenger vessels (20,000 m² > WSA > 10,000 m²). Most container ships and bulkers are also midsize vessels with a moderate amount of WSA. General cargo and RoRo arrivals tended be smaller in size with less WSA and a smaller amount of available biofouling habitat than other vessel types (WSA <5,000 m²).

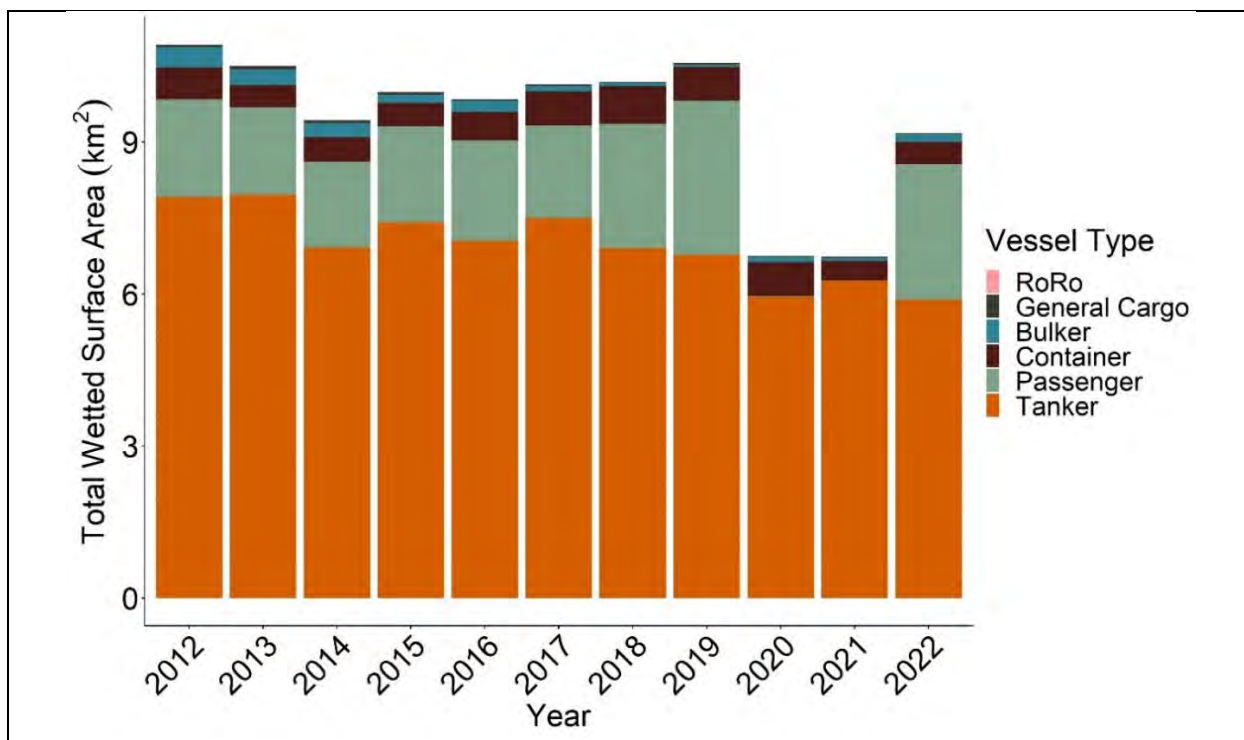


Figure 5. WSA from commercial vessels arrivals to the EVOS region 2012-2022.

¹ Some arrival records identify anchorage locations and marine landmarks as their arrival port, such as Cape Hinchinbrook.

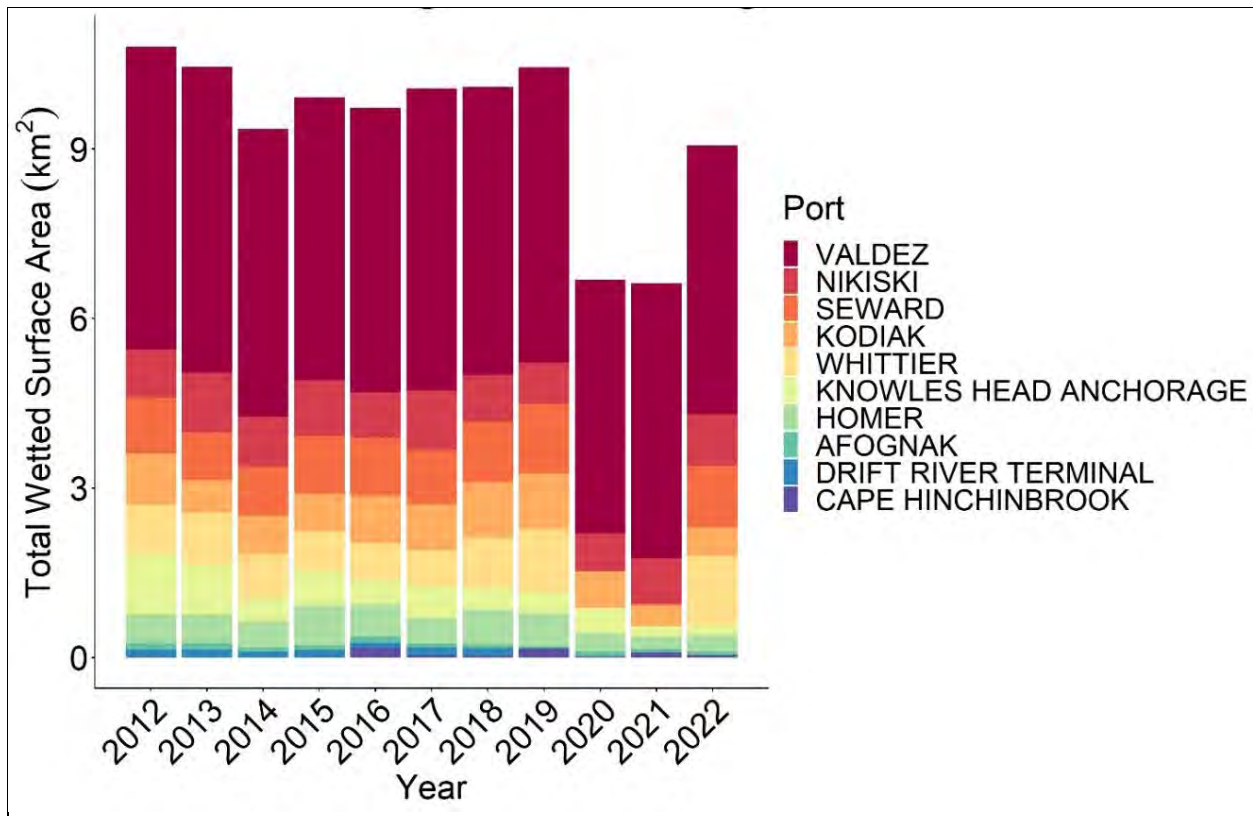


Figure 6. WSA from commercial vessel arrivals received at top 10 ports in the EVOS region 2012-2022

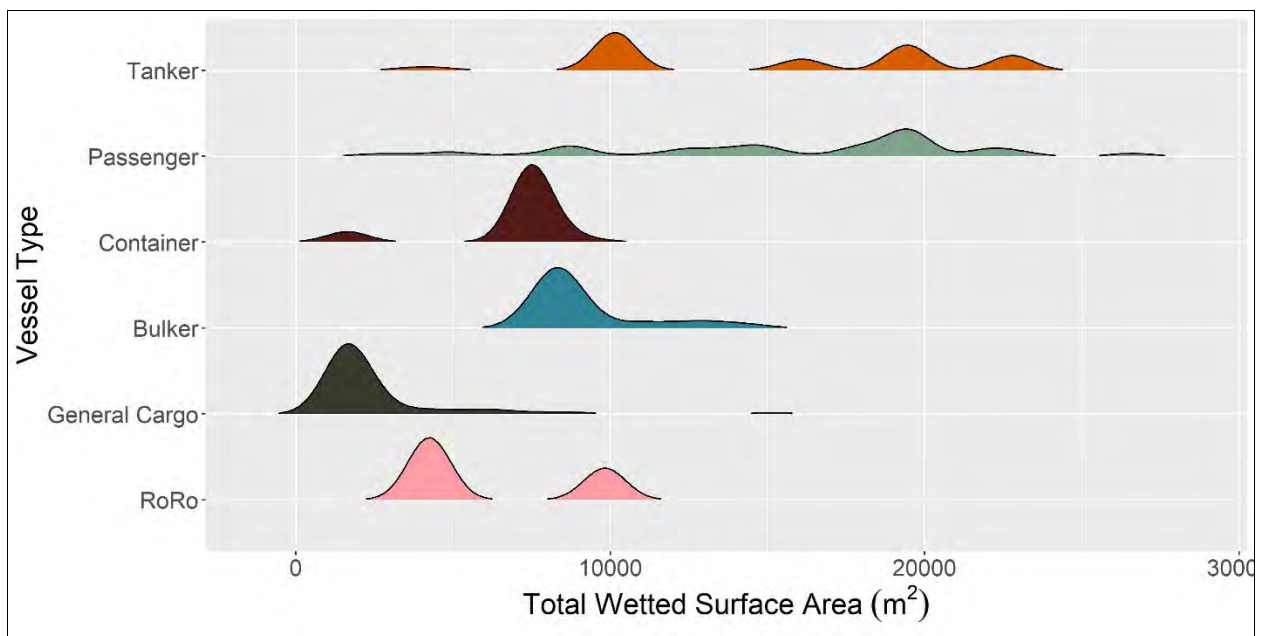


Figure 7. Distributions of WSA by vessel type for the EVOS region 2012-2022.

Residency Time

With the exception of bulkers, arrivals to the EVOS region had an average residency time of less than two days for most vessel types (Figure 8). Container and general cargo ships spent the least time in arrival ports. While passenger vessels and container ships kept port visits to less than two days, some tankers stayed for more than two days and even longer than a week. Bulkers spent multiple days in port with most staying 5-10 days.

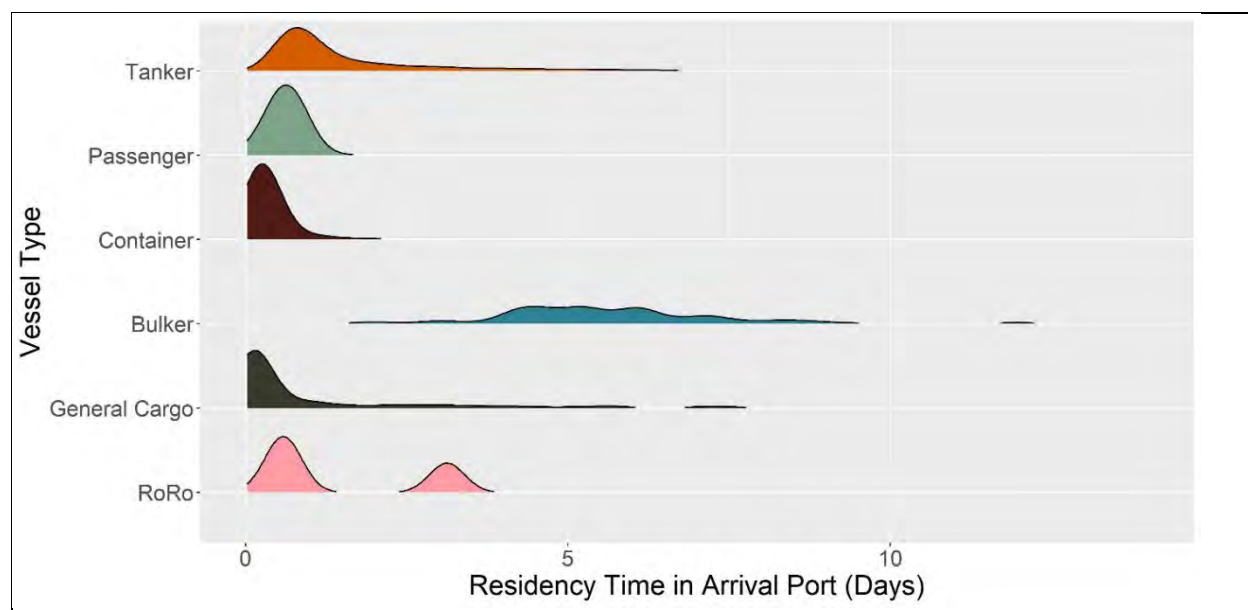


Figure 8. Distributions of residency time by vessel type for the EVOS region 2012-2022.

Environmental Distance

There are six marine ecoregions in Alaska – southeast Alaska (known as the North American Pacific Fjordland), Gulf of Alaska, Aleutian Islands, Eastern Bering Sea, Bering Sea, and Chukchi Sea. Vessel arrivals to the EVOS region came from last ports of call from 23 different marine ecoregions. All of the arrival ports within the EVOS region and many of the last ports of call were located within the Gulf of Alaska ecoregion (Figure 9).

Tanker, passenger vessel, and container ship voyages departing from and arriving to ports within Gulf of Alaska had an environmental distance score of zero (Figure 10). The mode centered over zero for tankers reflects travel between Valdez and Nikiski, and the mode centered over zero for container ships reflects vessels arriving in Kodiak from Anchorage. Most passenger vessels had a small environmental distance, arriving from Skagway and Sitka in the adjacent southeast Alaska ecoregion. Tankers, container ships, bulkers, and general cargo ships arrivals with an environmental distance of 10-20 indicate vessel arrivals from Washington, California, or other places on the North American Pacific Coastline.

Tankers, bulkers, and general cargo ships arrivals with an environmental distance of 35-45 reflect overseas arrivals from East Asia.

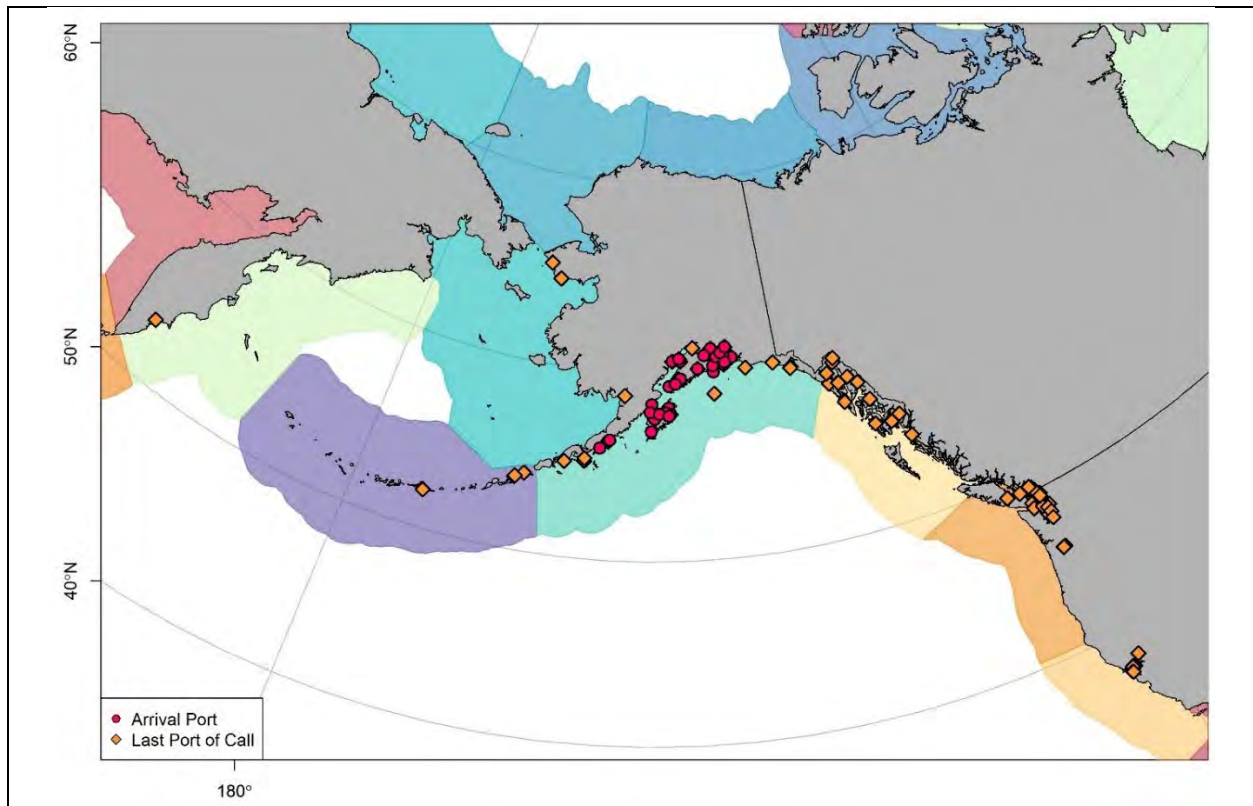


Figure 9. Arrival ports, last ports of call, and marine ecoregion boundaries for commercial vessel arrivals the EVOS region 2012-2022.

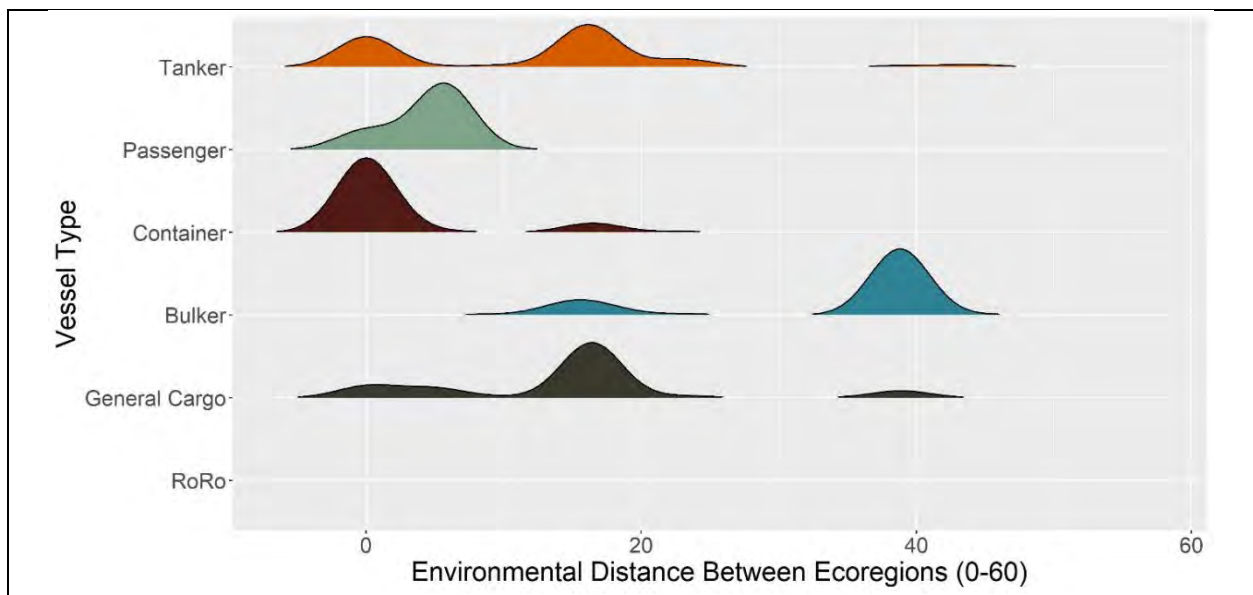


Figure 10. Distributions of environmental distance between ecoregions by vessel type for the EVOS region 2012-2022.

Years Since Dry Dock

For the subset of data that date of last dry dock is available (2020-2022 NBIC arrivals), most vessel arrivals to the EVOS region were cleaned in dry dock within three years of each arrival (Figure 11). Tankers had a wider distribution of years since last dry dock than other vessel types with some arrivals from vessels having gone four or five years since their last dry dock. Passenger vessel arrivals were mostly last in dry dock within two years of their arrivals. Passenger vessel arrivals were mostly last in dry dock within two years of their arrivals.

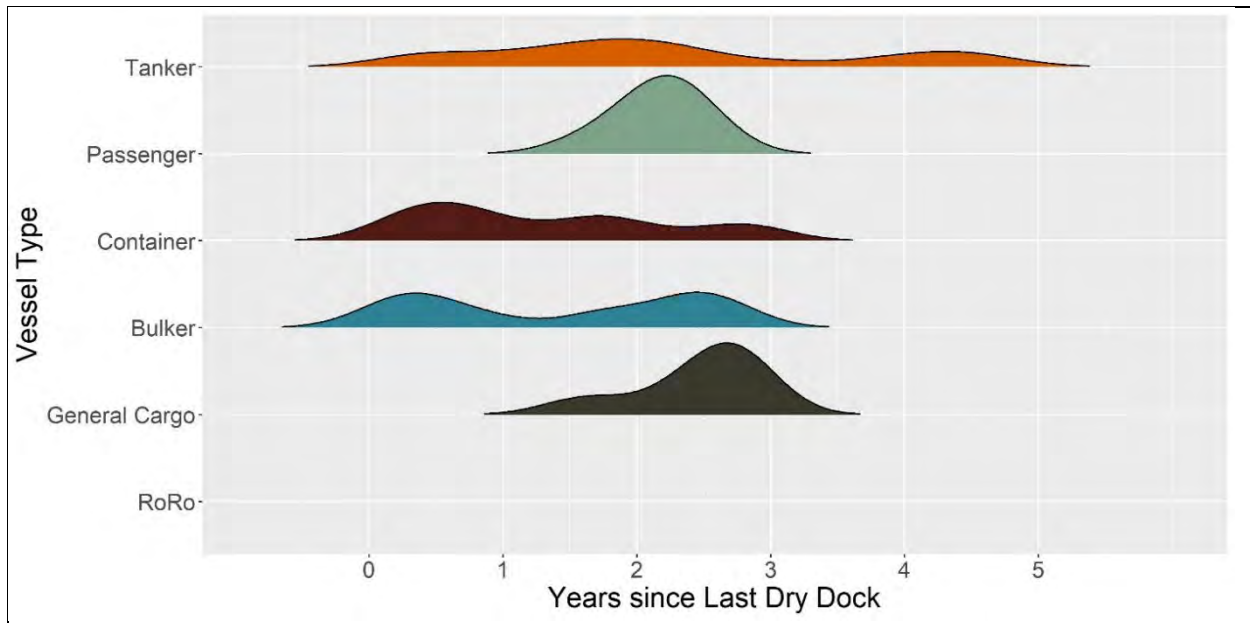


Figure 11. Distributions of years since last dry dock by vessel type for the EVOS region 2012-2022.

Risk assessment

Table 3 provides a summary of biofouling risk factors for vessel arrivals to the EVOS region with total arrivals, mean annual arrivals, and the mean per arrival for each risk factor: WSA, residency time, environmental distance, and years since last dry dock.

Table 3. Vessel biofouling risk factors summary for commercial vessel arrivals to the EVOS region 2012-2022.

Vessel Type	Total Arrivals	Mean Annual Arrivals	Mean WSA per Arrival (m² ± SD*)	Mean Residency Time per Arrival (Days ± SD*)	Mean Environmental Distance per Arrival (0-60 ± SD*)	Mean Years since Last Dry Dock per Arrival (Years ± SD*)
Tanker	5,072	461	15,092 (± 5,469)	1.9 (± 2.8)	12.0 (± 10.4)	2.3 (± 1.3)
Passenger	1,226	111	15,677 (± 5,660)	0.6 (± 0.6)	4.7 (± 3.7)	2.2 (± 0.3)
Container	890	81	6,926 (± 1,938)	0.3 (± 0.3)	2.5 (± 6.9)	1.3 (± 0.9)
Bulker	210	19	9,114 (± 1,878)	6.2 (± 8.3)	33.3 (± 10.2)	1.4 (± 1.0)
General Cargo	146	14	2,449 (± 2,150)	3.9 (± 12.3)	14.7 (± 9.5)	2.2 (± 0.5)
RoRo	3	0	6,104 (± 3,226)	1.4 (± 1.5)	27.5 (± 15.7)	NA

*SD: standard deviation

Discussion

Tankers

Tankers likely represent a greater risk of introducing marine NIS via biofouling than other vessel types based on the number and frequency of arrivals, relatively large WSA per arrival, time spent in arrival port, and environmental similarity to their last port of call. Since Valdez receives the majority of tanker arrivals, it is likely that Valdez is at a greater risk of marine NIS being introduced from biofouling than other ports in the EVOS region based on these variables.

Not only do tanker arrivals constitute two-thirds of all vessel arrivals to the EVOS region, tankers also have a large average WSA when compared to other vessel types in this analysis. Tankers had an average WSA comparable only to passenger vessels with both vessel types averaging more than 15,000 m². Based on their larger volume of WSA, tanker arrivals have higher potential for increased propagule pressure and higher likelihood of introducing marine NIS when compared to other vessel types. At 1.9 days, tankers also had a longer average residency time in arrival ports than passenger vessels and container ships which both stayed in port less than 1 day. Longer residency time also increases the likelihood of marine NIS introduction as hull fouling organisms have a longer chance to spawn while in the arrival port or relocate into the arrival port.

Tanker arrivals had a bimodal distribution of environmental similarity between last port of call and arrival port with a peak of high environmental similarity for vessels traveling from Washington and California. Tanker arrivals with a moderate environmental distance (10-20) suggest that environmental conditions were relatively similar between the last port of call and arrival port, increasing the likelihood that an introduced NIS survives in the arrival port. Most documented marine NIS introduced in Alaska spread northward from existing invasions on the North American Pacific coastline (G. M. Ruiz et al., 2011). Arrivals from within Alaska and from heavily invaded ports in California and Washington have the potential to introduce NIS through secondary invasion. Although tanker arrivals were comparable to other vessel types based on mean years since last dry dock, tankers had a larger distribution of time since last dry dock with more vessel arrivals having hulls cleaned within the last four or five years than other vessel types.

Although tanker arrivals declined over the study period, tanker traffic to the EVOS region may increase if gas and electric utilities begin importing natural gas to proposed terminals in Nikiski in response to the on-going natural gas shortfall in Cook Inlet. The source of

imported natural gas has not been determined. Importing natural gas to Cook Inlet would change the volume, arrival ports, and last ports of call for tanker traffic in the EVOS region.

Passenger Vessels

Based on the number and WSA of arrivals, passenger vessels likely represent a higher risk of introducing marine NIS than other non-tanker vessel arrivals. Passenger vessels have the highest mean WSA per arrival, in part based on their high niche proportion ($N_p = 0.27$). With large niche areas and high mean WSA per arrival, passenger vessels have a higher risk of introducing marine NIS per arrival than other vessel types, comparable only to tankers. Passenger vessels have low mean residency time compared to other vessel types which reduces the opportunity to introduce marine NIS. However, these arrivals came from ports with a lower mean environmental distance than other vessel types, increasing the likelihood marine NIS from the last port of call survive if introduced. On average, passenger vessels were last in dry dock about two years ago which is relatively low risk and on par with other vessel types in the EVOS region. Outside of the COVID-19 pandemic, passenger vessel traffic increased in the EVOS region during the study period and is expected to continue to increase from new cruise ship terminals and expansions in Whittier and Seward.

Container

Container ships constituted the third most EVOS region arrivals, but each arrival is attributed to less WSA on average than tanker and passenger vessels. With less WSA per arrival, container ships have lower potential propagule pressure, decreasing the likelihood of their arrivals introducing marine NIS. These arrivals also had the shortest residency time in arrival port and were most recently dry docked among the vessel types in this analysis, further reducing the potential risk of introducing marine NIS. The highest risk factor for container ships was a lower mean environmental distance among the vessel types in this analysis, increasing the likelihood of a potential NIS surviving in the arrival port.

Other Vessel Types

With few arrivals, bulkers, general cargo ships, and RoRos are likely at a lower overall risk of introducing marine NIS to the EVOS region. These vessels bring less WSA per arrival than tankers and passenger vessels on average, with general cargo vessels bringing the least WSA to arrival ports. However, bulkers and general cargo vessels have the longest mean residency time per arrival which increases the likelihood of any one of these arrivals successfully introducing a marine NIS. These vessel arrivals have the largest average environmental distance per arrival due to more overseas arrivals from East Asia which

reduces the likelihood that a potential marine NIS from the last port of call survives in an arrival port in the EVOS region. Most arrivals for these vessel types have been cleaned in dry dock within one to three years of arriving.

Management Review

Maintenance

Vessel owners and operators are incentivized to maintain clean hulls because biofouling on vessel hulls causes drag, which affects fuel efficiency while a vessel is underway, and biofouling on rudders and propellers affects vessel performance (Davidson et al., 2016). However, there is little industry incentive to minimize biofouling in other niche areas because they do not have a direct impact on vessel performance (Davidson et al., 2016).

As discussed, vessels go into dry dock at least every five years where they undergo thorough out of water cleaning. Dry dock cleaning removes most if not all biofouling on the hull and niche areas of vessels, thereby heavily reducing the likelihood that vessels that recently underwent dry dock cleaning introduce marine NIS to arrival ports.

To further control biofouling, vessels hulls are coated in anti-fouling treatments during dry dock. These treatments can include antifouling paints and coatings with biocides like copper and zinc, or other foul release materials based on teflon, silicon, or epoxy. Treatment materials strike a delicate balance between making the hull inhospitable without harming the surrounding waters as many of these compounds are also known to bioaccumulate in the environment. In 2008, the IMO banned a common hull treatment, tributyltin, because of its high toxicity to non-target organisms. Overall, there is a global ban on 49 tributyl and organotins that were previously used in coatings but presented negative impacts to marine ecosystems (Hewitt et al., 2009; IMO, 2001; Nehring, 2001).

Some places are also evaluating the impacts of copper based antifouling paints and regulating their use. In Title 3 California Code of Regulations (CCR) § 6190 effective July 1, 2018, California established regulations for the leach rate of copper-based antifouling paints and coatings on recreational vessels after marinas were found to be exceeding the water quality criteria for dissolved copper (Burant, n.d.). Fouling paints reduce and slow marine growth but do not fully prevent it, and their effectiveness reduces over time. However, there is also an emerging world of ultrasonic antifouling systems that provide resilient biocide-free antifouling (Sonihull, n.d.).

Another key area of innovation and regulation is the expanding world of in-water cleaning. Initially in-water cleaning was done by divers, but technological advancements led to the

use of cost-saving unmanned cleaning robots. Increasingly in-water cleaning technology operates with capture mechanisms to collect fouling organisms and toxic paints as they are removed in an effort to prevent spreading NIS and toxic coatings in the immediate surroundings during cleaning. California requires capture for in-water cleaning in harbors, ports, and marinas, and other places ban in-water cleaning such as New Zealand, meaning in-water cleaning occurs 12 miles off-shore in international waters (California State Water Resources Control Board, n.d.; New Zealand Ministry for Primary Industries, n.d.).

Management

Management of hull fouling is determined by various geographic jurisdictions – international, national, and regional. The IMO manages requirements for treatments, dry docking, and survey at an international level. All commercial vessels are required to be inspected in dry dock every five years with an intermediate survey every 36 months, except for passenger vessels which are required to get a hull inspection annually. The IMO also requires that ships participating in international voyages and larger than 400 GT are required to hold an International Anti-fouling System Certificate.

Some countries have stricter requirements, notably New Zealand and Australia. New Zealand and Australia require cleaning vessel hulls less than 30 days before arrival or within 24 hours of arrival, documentation of continual maintenance using best practices, and application of approved treatment types (New Zealand Ministry for Primary Industries, n.d.). In 2023, New Zealand turned multiple cruise ships away for being in violation of these regulations (Boerne Marcus, 2024).

The United States is updating hull biofouling management through the Vessel Incidental Discharge Act (VIDA; 2018) which identifies hulls and associated niche areas as incidental discharges. While these regulations have yet to be implemented, they are intended to replace regulations currently in place through the USCG and Environmental Protection Agency's Vessel General Permit (2013). Some states also have stricter requirements. California requires robust documentation of hull fouling maintenance through the Biofouling Management Regulations to Minimize the Transfer of Nonindigenous Species from Vessels Arriving at California Ports (2 CCR § 2298.1). Vessels are required to document consistency with the IMO Biofouling Guidelines, details about the antifouling systems in use, and planned actions to manage biofouling associated with specific niche areas, among other information through their Biofouling Management Plan and Biofouling Record Book (Scianni et al., 2021). Compliance inspections are prioritized for high risk vessels – risk determined by potential propagule pressure of a vessel's WSA and ballast water volume

(Ceballos-Osuna et al., 2021). Vessel operators have a 60-day grace period for compliance after their first violation. There are no additional biofouling regulations in place in Alaska.

Management Recommendations

This analysis provides the basis for developing a targeted program to sample vessel hulls based on higher risk profiles arriving to the EVOS region. Hull sampling efforts would be best focused on comparing low and high-risk arrivals for key vessel types at their respective ports (i.e., tanker arrivals in Valdez, cruise ships in Seward and Whittier, container ships in Kodiak, and bulkers in Afognak). A comprehensive management program would take into consideration relative risk of biofouling factors, such as larger versus smaller WSA, longer versus shorter residency time, smaller versus larger environmental distances, and longer versus shorter time elapsed since last dry dock. Effective analysis of samples collected from vessels could be based on established methodologies of morphological and metagenetic analysis through the Smithsonian Environmental Research Center's Plate Watch program (G. Ruiz et al., 2024).

Other research opportunities include collecting and analyzing data about vessel hull treatments and maintenance directly from shippers, continuing upkeep of merged NBIC and NVMC datasets (especially since the inclusion of date of last dry dock data in NBIC), and continuing to seek learnings and best practices from leaders in biosecurity (e.g., California and New Zealand). Further, ferry arrivals were not considered as part of this analysis because the Alaska Marine Highway System arrivals are only available for 2017-2022. PWSRCAC has the opportunity to periodically conduct this type of vessel behaviors and risk potential analysis to stay informed on changes in data availability and regional shipping dynamics.

There are also clear opportunities to advocate for improved biofouling regulations in Alaska. PWSRCAC could encourage the Alaska Department of Environmental Conservation to get more involved in state regulation, and advocate for in-water cleaning regulations to require capture and biofouling documentation and inspection akin to California. On the national level, PWSRCAC could continue to stay involved in implementation of VIDA. There is also an opportunity to engage with industry during vessel design stage to identify ways to reduce WSA and niche areas in particular which is an ongoing area of innovation for drag reduction and fuel conservation.

Conclusion

The combined NVMC and NBIC datasets offer a detailed assessment of vessel arrival characteristics and biofouling risk factors for the EVOS region. Since Alaska lacks robust biosecurity measures for hull biofouling, sampling hull fouling on higher risk vessel arrivals and advocating for more increased hull fouling requirements are the most pertinent recommendations from this analysis. As environmental conditions and commercial vessel traffic change in the EVOS region, proactive measures for biofouling and other key NIS vectors are paramount for regional biosecurity.

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Briefing for PWSRCAC Board of Directors – May 2025

ACTION ITEM

Sponsor: Sadie Blancaflor and the TOEM Committee

Project number and name or topic: 5057 - Air Quality Review of the VMT

1. **Description of agenda item:** The Board is being asked to accept the report titled “Volatile Organic Compound (VOC) Emissions from the Snow Removal Incident at the Alyeska Pipeline Service Company’s Valdez Marine Terminal East Tank Farm in Early 2022,” by Dr. Ranajit (Ron) Sahu.

2. **Why is this item important to PWSRCAC:** The 2022 VMT Crude Oil Storage Tank Vent Incident resulted in several tank vents being severely damaged or sheared off entirely due to excessive snow load and ice accumulation, resulting in VOC and Hazardous Air Pollutant (HAP) emissions being released into the surrounding atmosphere. These emissions may pose adverse environmental and health impacts to residents of Prince William Sound, necessitating the need to better understand the volume of VOC and HAP emissions that were released. Since its inception, PWSRCAC has had a continuing interest in reducing or eliminating emission of HAPs at the VMT, and this study satisfies the Council’s role of monitoring the actual and potential environmental impacts at the VMT.

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

<u>Meeting</u>	<u>Date</u>	<u>Action</u>
Board	1/25/2024	The Board authorized a contract with Ron Sahu, Ph.D., 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.
Board	3/19/25	The Board authorized a FY2025 budget modification transferring \$20,000 from the contingency fund to project 5057 Air Quality and authorized a corresponding change order to increase the contract with Dr. Ranajit (Ron) Sahu in an amount not to exceed \$70,000.

4. **Summary of policy, issues, support, or opposition:** A Notice of Violation (NOV) letter was issued to Alyeska on May 3, 2022. The letter alleges that Alyeska violated the VMT’s Air Quality Permit No. AQ0082TVP02, Air Quality Control Regulations as established by Alaska Administrative Code, 18 AAC 50, and Alaska Statute Title 46, Chapter 14. Violations (2) and (3) each have 12 separate counts. Each of the 12 counts of violation (2) state, “The Department is still investigating the circumstances and the actual volume of vapor released from the Crude Oil Storage Tank,” and each of the 12 counts of violation (3) state, “The Department is still investigating the circumstances and the volume of Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs) that was released to the atmosphere from the Crude Oil Storage Tank.”

It is the Council’s understanding that this Alaska Department of Environmental Conservation (ADEC) investigation is still ongoing.

Report Acceptance: 2022 VMT Crude Oil Storage Tank Vent Incident 4-5

These NOVs were issued against the VMT's 2012 Title V Air Quality permit AQ0082TVP02, under which Alyeska is being allowed to indefinitely continue operating through a "permit shield." After the ADEC Division of Air Quality published a 2017 Public Notice for renewal of Alyeska's Title V Air Quality Permit for the VMT (Permit Number AQ0082TVP03), the permit did not advance due to changes made by the EPA to the Organic Liquids Distribution Maximum Achievable Control Technology (MACT) under the National Emission Standards for Hazardous Air Pollutants (NESHAP) Organic Liquids Distribution (OLD). Furthermore, it is the Council's understanding that Alyeska's October 7, 2020 Motion to Stay the Final NESHAP-OLD Rule submitted to U.S. Circuit Court of Appeals for the District of Columbia (D.C. Circuit) and the petition for reconsideration granted by the EPA to Alyeska on December 15, 2020, regarding the final Residual Risk and Technology Review of NESHAP-OLD (85 Fed. Reg. 40740 dated July 7, 2020), is adding to these delays.

A draft of Dr. Sahu's report was provided to Alyeska on February 4, 2025, for their feedback and input. Alyeska responded on February 25, 2025, confirming receipt of the draft report. Alyeska transmitted a second letter on March 7, 2025, respectfully disagreeing with the report findings. However, the reasoning provided in the transmitted letter did not provide enough details about what they disagreed with for our contractor to understand if revisions to the report are warranted. Alyeska was asked at the March 7, 2025 TOEM meeting if they would like to provide more detailed feedback. On March 13, 2025, Alyeska staff informed Council staff verbally that Alyeska would not be providing additional feedback on this report.

5. **Committee Recommendation:** On March 7, 2025, the TOEM Committee recommended Board acceptance of the report, titled "Volatile Organic Compound (VOC) Emissions from the Snow Removal Incident at the Alyeska Pipeline Service Company's Valdez Marine Terminal East Tank Farm in Early 2022," as meeting the terms and conditions of contract number 5057 pending any contractor review and response to Alyeska's GL 60176, which was received immediately prior to this meeting.

6. **Relationship to LRP and Budget:** Work associated with this project was included in the FY2025 budget under contract 5057.24.01 that was approved by the Board in an amount not to exceed \$70,000.

7. **Action Requested of the Board of Directors:** Accept the report titled "Volatile Organic Compound (VOC) Emissions from the Snow Removal Incident at the Alyeska Pipeline Service Company's Valdez Marine Terminal East Tank Farm in Early 2022," as meeting the terms and conditions of contract 5057.24.01 with Dr. Ranajit (Ron) Sahu.

8. **Attachments:**

- Report titled "Volatile Organic Compound (VOC) Emissions from the Snow Removal Incident at the Alyeska Pipeline Service Company's Valdez Marine Terminal East Tank Farm in Early 2022"
- Alyeska's letter GL 60176 response dated March 7, 2025.

**Report on the
Volatile Organic Compound (VOC) Emissions from the
Snow Removal Incident at the
Alyeska Pipeline Service Company's
Valdez Marine Terminal East Tank Farm in Early 2022**

by

Dr. Ranajit (Ron) Sahu, Consultant¹

December 2024

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

¹ Brief Biographical Summary provided in Appendix A.

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Acronym List

APSC	Alyeska Pipeline Service Company
EPA	U.S. Environmental Protection Agency
ETF	East Tank Farm
FLIR	Forward Looking Infrared
HAPs	Hazardous Air Pollutants
IWC	Inches Water Column
LEL	Lower Explosive Limit
PWSRCAC	Prince William Sound Regional Citizens' Advisory Council
PVV	Pressure Vacuum Valves
RVP	Reid Vapor Pressure
TOEM	Terminal Operations and Environmental Monitoring Committee, PWSRCAC
VMT	Valdez Marine Terminal
VOC	Volatile Organic Compound
VRS	Vapor Recovery System

MEMORANDUM

DATE: May 1, 2025

SUBJECT: Prince William Sound Regional Citizens' Advisory Council Report:
"Volatile Organic Compound Emissions from the Snow Removal Incident at the Alyeska Pipeline Service Company's Valdez Marine Terminal East Tank Farm in Early 2022"

FROM: Donna Schantz, Executive Director

This report is an analysis by Dr. Ranajit "Ron" Sahu, an air quality subject matter expert, commissioned by the Prince William Sound Regional Citizens' Advisory Council (PWSRCAC).

PWSRCAC is a federally mandated, 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 (Alyeska). PWSRCAC's 19 member organizations are communities in the region affected by the 1989 Exxon Valdez oil spill, as well as commercial fishing, aquaculture, Alaska Native, recreation, tourism, and environmental groups.

PWSRCAC commissioned this report to address concerns raised by the public related to an incident in 2022, where hazardous air pollutants (HAPs) and volatile organic compound (VOC) emissions were released into the atmosphere from crude oil storage tanks at Alyeska's Valdez Marine Terminal. During this incident, inadequate removal of excessive snow and ice buildup led to vents being damaged or completely sheared off the crude oil storage tanks in the terminal's East Tank Farm. This damage resulted in the aforementioned emissions, though an estimated amount of those emissions is not known to the Council to have been provided by Alyeska or regulators to date.

These findings are intended to provide perspective on the impacts to air quality as a result of this incident for terminal employees and Valdez residents. In 2022, PWSRCAC requested information from Alyeska to better understand the 2022 tank vent incident. As of the date of this report, the information has not been provided by Alyeska. As such, this study is based primarily on information received from State of Alaska regulatory agencies with oversight responsibilities at the terminal. Alyeska's feedback and collaboration were solicited on both the draft report and throughout the finalization process. A short timeline of proceedings is listed below.

TIMELINE:

- **February 4, 2025:** A draft report of these findings was transmitted via email to Alyeska.

- **February 25, 2025:** A letter from Alyeska (GL60146) to PWSRCAC, dated February 25, 2025, confirmed receipt of this draft report and that the information contained herein was being reviewed by subject matter experts.
- **March 7, 2025:** A follow-up letter from Alyeska (GL60176, Appendix D) was transmitted on March 7, 2025, sharing that Alyeska reviewed Dr. Sahu's draft report, that Alyeska respectfully disagreed with many of the report's calculations and conclusions, and that they believe the total emission estimates are overestimated. Alyeska specifically cited that the report "...appears to rely upon several factual inaccuracies, including misstating PVV [pressure vacuum valve] set points and incorrectly calculating the time-period during which PVVs were damaged before being plugged or repaired. Of particular significance is that the report inaccurately describes the operation and dynamics of the VMT's tank and vapor system... We also note that the report does not include the modelling inputs or outputs, or other data relied upon by Dr. Sahu."
- **March 7, 2025:** During their regularly scheduled meeting, PWSRCAC's Terminal Operations and Environmental Monitoring (TOEM) Committee members verbally expressed to Alyeska staff present that the committee would like to collaborate with Alyeska to refine the report findings and address Alyeska's concerns.
- **March 13, 2025:** PWSRCAC transmitted the requested tank input/output data to Alyeska, per Alyeska's March 7 letter, noting the data was drawn from Alyeska source documents listed in the report body. Subsequently, Alyeska staff verbally confirmed receipt of the requested data, and stated that Alyeska would not be providing additional feedback or information on the report.
- **March 19, 2025:** Alyeska reconfirmed in writing that they would not be providing additional feedback on the report and expressed hope that PWSRCAC will work to make corrections and provide the context (such as the modeling) for how the report was generated. Some of the information requested had already been previously shared with Alyeska on March 13, 2025 (see above).

PWSRCAC worked with Dr. Sahu to make revisions based on the limited feedback provided by Alyeska. With that said, due to the lack of specific details on what Alyeska believes to be incorrect and/or lack of additional information needed from Alyeska to make corrections (which PWSRCAC has requested), PWSRCAC is restricted in our ability to make more substantial changes to address their concerns.

It is the goal of PWSRCAC to use the information contained in this report to advocate for the highest standards for operational and environmental safeguards in Prince William Sound - for the people who live near, work for, and are affected by the Valdez Marine Terminal and tanker operations. This analysis was also done in the interest of satisfying our mandate to monitor the environment impacts of the operation of the terminal facilities, per the Oil Pollution Act of 1990 and our contract with Alyeska.

With Alyeska's statements that they do not intend to provide any additional information, PWSRCAC has determined to move this report forward. Dr. Sahu developed this conservative VOC emission estimate based on a review of public records and documents produced by Alyeska, as well as his 30+ years of experience in air quality research, design, regulatory compliance, and projects involving communicating environmental data to the public. Dr. Sahu's preliminary conservative estimates range from roughly 79 to 193 tons of VOCs released over the February through May 2022 time period. Given the conservative assumptions used, Dr. Sahu believes that actual emissions are likely to have been *more* than 193 tons. This report is being released in the public interest of discussing and addressing emissions released as a result of the 2022 tank vent incident.

PWSRCAC remains open to further examining and/or reevaluating the findings and conclusions of this report should Alyeska provide further information. PWSRCAC will continue its efforts to help ensure that the operations of the terminal and associated tankers are the safest possible.

Summary

This report outlines the considerations involved in calculating Volatile Organic Compound (VOC) estimates from the 2022 Tank Vent Damage incident at the Alyeska Pipeline Service Company's (Alyeska or APSC) Valdez Marine Terminal (VMT). The preliminary conservative VOC emission estimates range from roughly 79 to roughly 193 tons over the February through May 2022 time period;² given the conservative assumptions used, actual emissions are likely to have been *more* than 193 tons. These levels of VOC emissions even on an annual basis would qualify the VMT as a "major source," defined by the U.S. Environmental Protection Agency (EPA) as a "stationary source or group of stationary sources that emit or have the potential to emit 10 tons per year or more of a hazardous air pollutant or 25 tons per year or more of a combination of hazardous air pollutants."³

As noted in the memorandum, Alyeska was provided with the opportunity to respond to these findings and subsequently stated that they believe these report findings disregard or discount certain critical factors and conditions that do not support the conclusions drawn (see Appendix D). Their letter noted that the report, "...appears to rely upon several factual inaccuracies, including misstating PVV [pressure vacuum valve] set points and incorrectly calculating the time-period during which PVVs were damaged before being plugged or repaired. Of particular significance is that the report inaccurately describes the operation and dynamics of the VMT's tank and vapor system... We also note that the report does not include the modelling inputs or outputs, or other data relied upon by Dr. Sahu."

The reasoning for the time period considered in calculating these emission estimates is outlined further in this report, and examples of the modelling input/outputs are attached as Appendix C (and previously shared with Alyeska). The data relied upon by Dr. Sahu is described in this report and drawn directly from Alyeska source documents and provided information.

Furthermore, the author notes that ultimately, the PVV set point in this incident is not a significant factor in calculating emission estimates, when the vents in question are significantly damaged/sheared off and cannot therefore contain the vapors generated in the tanks or effectively respond to pressure set points. The author emphasizes that leak prevention cannot be guaranteed with temporary blinds/plugs on the tanks without more permanent repairs, which is explained further within this report.

Subsequent to this input, Alyeska has provided no further information to the Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) or the contractor as to what these

² The author would like to note that this report does not address what the routine emissions of VOCs would be from the East Tank Farm, with or without damaged tank vents. The purpose of the report is to estimate the VOC emissions from the 2022 snow-related time period.

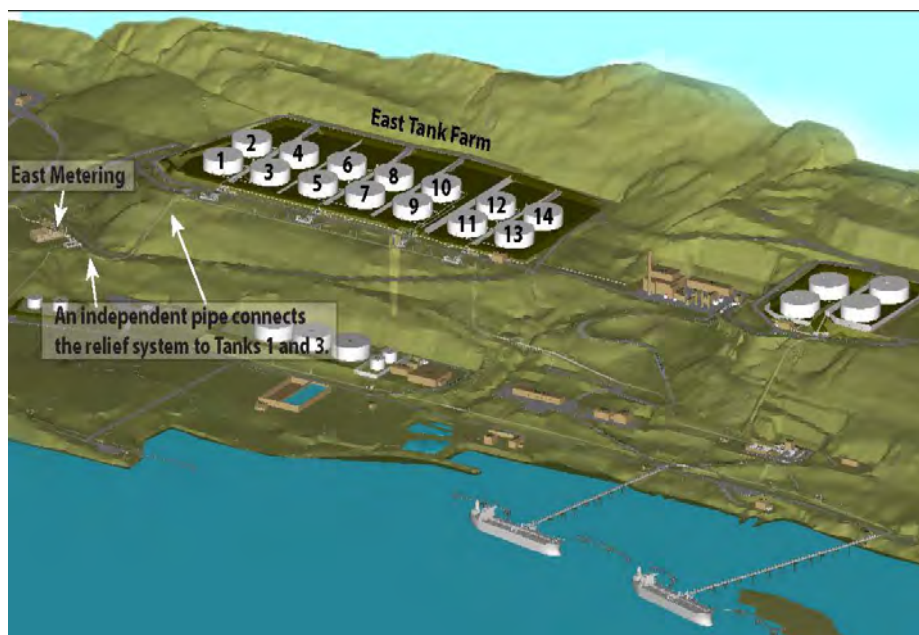
³ U.S. EPA. "Summary of the Clean Air Act." <https://www.epa.gov/laws-regulations/summary-clean-air-act>, text under "Sources of Pollution" section. Page dated July 31, 2024.

critical factors and conditions are. PWSRCAC would welcome the opportunity to receive this information to refine the report findings as appropriate.

A. Overview of the Valdez Marine Terminal

Alyeska is the operator of the Trans Alaska Pipeline System (TAPS), including the VMT, which is the receiving end of the pipeline, and the East Tank Farm (ETF) at the VMT. The ETF has the storage capacity for nearly 7 million barrels of Alaska North Slope crude oil at any given time. There are 14 tanks in the ETF, of which 13 are currently in active use.⁴ Each tank is of welded construction, has a conical roof with a tank diameter of 250 feet and a height of 63 feet. The nominal capacity of each tank is 510,000 barrels of crude oil. Figure 1 shows an overview of the VMT. The ETF is shown in the center with the tanks numbered 1 through 14.

Figure 1 – Map of the Valdez Marine Terminal⁵



⁴ As of October 22, 2024, Alyeska permanently removed Tank 8 from service. Tank 8 is not in active use, but still subject to field checks and cathodic protection. Tank 8 was in operation at the time of the incident.

⁵ Taken from Figure 8-5 of the VMT Tank Farm Manual, VOP/0500.

B. Brief Description of the Vapor Recovery System

Alyeska's Power Vapor facility "manages vapors from the tank farm and tanker loading activities... the plant can produce at least 50 percent of power requirements for the VMT from the vapor system; the rest is supplemented by ultra-low sulfur diesel."⁶

The Vapor Recovery System (VRS) is connected to each crude oil storage tank at the VMT East Tank Farm. The VRS ensures that the pressure inside these tanks is maintained close to atmospheric pressure by adding and removing gases to these tanks. Excess vapors are collected and burned for power across the VMT in Power Vapor, as described above.

The tanks regularly experience pressure changes that must be managed due to the nature of crude oil's volatile properties. This volatility produces pressure changes in two primary ways:

- 1) *Working losses* occur when the liquid level in the tanks change.

Filling tanks with oil causes the liquid level to rise, displacing existing vapors, and increasing the amount of pressure in the tank. This requires removal of gases in the tanks to maintain atmospheric pressure.

Withdrawing oil from tanks causes the liquid level to drop, creating more room for the existing vapors and decreasing the amount of pressure in the tank. This requires the addition of a blanket gas (nitrogen) to the tank to maintain atmospheric pressure.

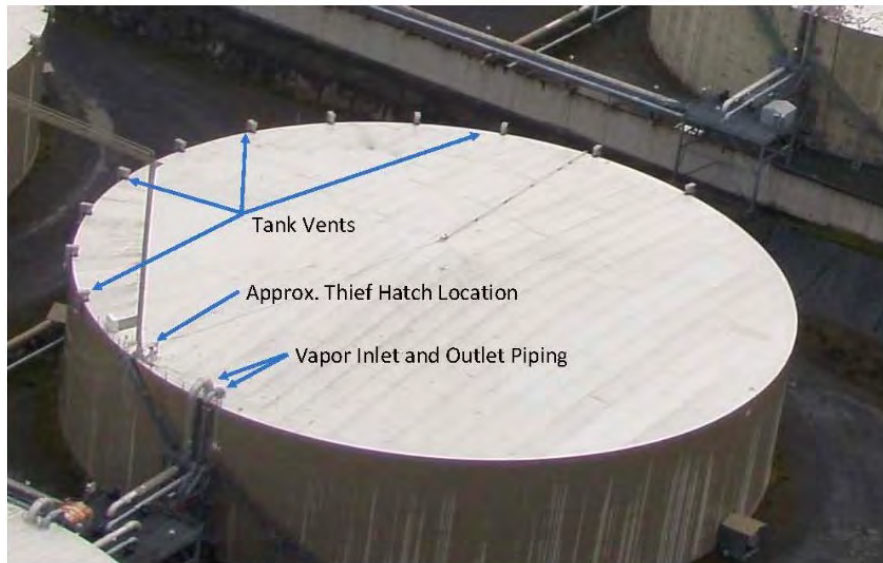
- 2) *Breathing losses* occur when emissions are produced from the ambient heating of the tanks, often from sunlight or outside temperature increases. This also causes an excess buildup of pressure in the tanks. Breathing losses occur even when tank liquid levels do not change.

Figure 2 shows a close-up of a single tank and the individual components connected to the VRS, which allow for pressure management of these breathing and working losses.

The VRS is a critical system for VMT operative safety, as the design basis of these crude oil storage tanks does not account for significant vacuum/negative or positive pressures above atmospheric levels. Without the use of the VRS or tank venting, if these tanks were to internally experience extreme pressure differentials from atmospheric conditions without the use of vapor control, significant structural damage could result.

⁶ <https://alyeska-pipe.com/valdez-marine-terminal/>, under "VMT Power Vapor" section, as of April 2025.

Figure 2 – Typical Tank, with Certain Details Shown



a. Vapor Inlet and Outlet Piping

As depicted in Figure 2, the vapor inlet is responsible for allowing vapors to enter the tank through a 16-inch diameter line used to discharge inert blanket gas inside the tank. Meanwhile, the vapor outlet is responsible for removing vapors from the tank via a 30-inch diameter vapor recovery line.

The relative close positioning of the vapor inlet and outlet piping is functionally a poor design given the large diameter of the tank. They should be farther away from one another to allow for more even gas mixing in the tank headspace without effectively “short-circuiting” the inlet/outlet gas flow without proper engagement with the rest of the large tank as a whole.

b. Thief Hatch

Also noted is the location of the thief hatch in close proximity to the vapor inlet and outlet piping. Thief hatches are used to test the tank liquid levels, tank pressure, and the headspace gaseous composition. Given that the thief hatch location is right next to where vapors are being removed and added to the tank headspace, the data collected here are not necessarily an accurate representation of the tank’s gaseous composition as whole. A better design would include more space between the thief hatch and the inlet/outlet vapor piping locations.

c. Tank Vents

Tank vents are designed to modulate tank internal pressures around atmospheric pressure to both positive and negative pressure differentials. For example, when internal pressure increases, the tanks are able to reduce pressure via the release of emissions through tank vents (depicted around the tank circumference of Figure 2). Tank vents open and close when triggered by internal tank pressures at certain set points to maintain tank pressures around atmospheric pressure. When these vents open, vapors (emissions) vent to the atmosphere.

Figures 3 and 4 are schematics that show the flow of tank vapors in a typical vent during over-pressure and vacuum conditions, respectively. As Figure 3 shows via the red arrows, when the pressure inside the tank is greater than acceptable (i.e., there is an over-pressure condition), the vapors are vented to the atmosphere. Similarly, as shown in Figure 4, in an under-pressure or vacuum situation, ambient air (with potentially dangerous levels of oxygen) enters the tank.

Figure 3 – Vapor Flows in a Typical Vent (Over-Pressure Condition)

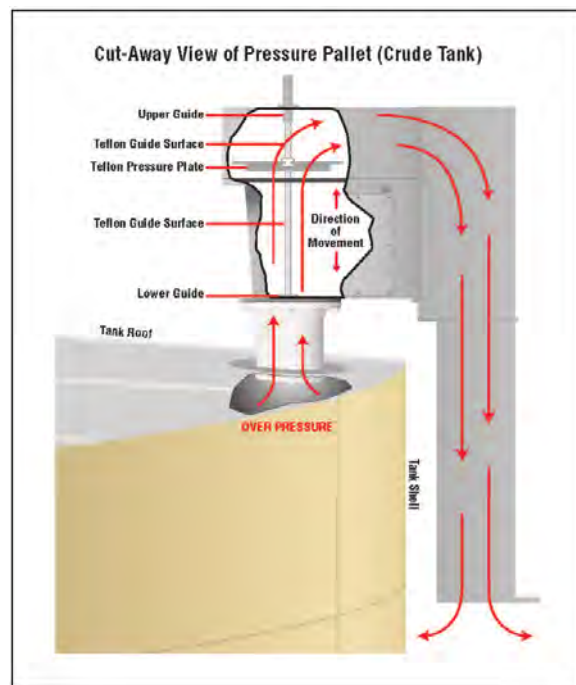
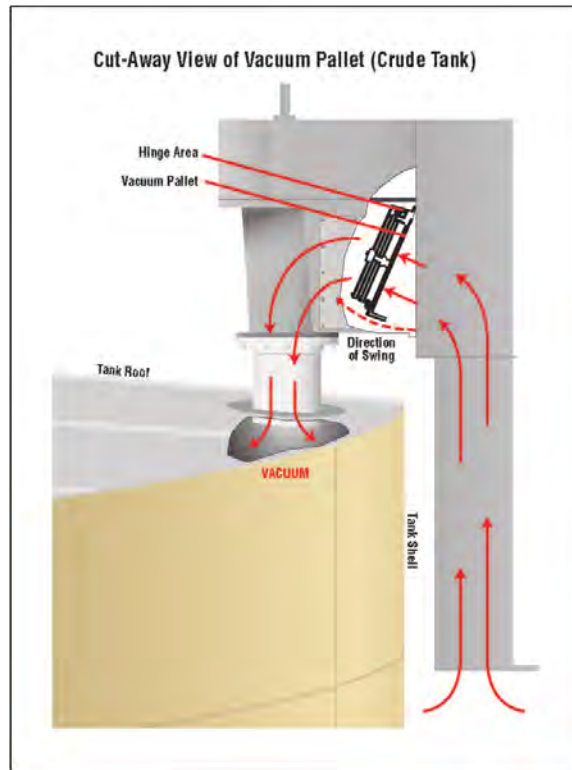


Figure 4 – Vapor Flows in a Typical Vent (Vacuum Condition)



C. The Snow Removal Event in 2022 and Resulting Damage

During the winter/spring of 2022, Alyeska's inadequate removal of excessive accumulation of snow and ice in winter 2021-2022 led to the migration/shedding of this accumulated snow and ice from the tank tops that exerted tremendous physical pressure on the tank vents. As a result, several tank vents were severely damaged or entirely sheared off. Taku Engineering's June 2023 report, commissioned by the Prince William Sound Regional Citizens' Advisory Council (PWSRCAC), titled "Crude Oil Storage Tank Vent Damage," supports the assertion above related to the cause of the tank vent damage, noting, "[snowfall that winter] ...was not exceptionally high. Utilizing a 5-year benchmark, the accumulated snow depth that led to the tank vent damage was 25-30% lower in 2021 than in 2016. The snow accumulation was within the level that should have been anticipated."

This conservative preliminary assessment of timeline, damage, and emission estimates is based on a review of public records, and documents produced by the terminal operator and acquired by PWSRCAC through public records requests, which were then provided to the author.

a. Event Timeline

The full time period of this incident and resulting operator emission management could reasonably be framed as the period between February through July 2022. However, for the purposes of providing a conservative emissions estimate, the time period for which emissions were assessed in Winter/Spring 2022 is focused on late February through May 2022. This is discussed below. The source of the vent leak discovery and completion of repairs is taken from a document shown in Figure 5.

Figure 5 – Chart Showing Start/End of Vent Damage/Repair

Attachment E

The table below provides estimates for when Alyeska found either leaking or sheared vents, but these estimates are not an indicator that leaks or emissions were occurring during the time periods referenced below. Alyeska managed tank pressures to eliminate or reduce emissions, consistent with managing O₂ levels and tank safety, until the pressure vacuum vents were blinded, plugged, repaired, or found not to be leaking.

Note that times, where available, are approximate.

Tank	Valve	Discovery Date/Time	Type of Damage	Date/Time Repair	Type of Repair
1	B	3/28/2022 7:07	Broke Off	4/1/2022 15:30	Plugged
2	B	3/11/2022	Leak	3/17/2022	Repaired
2	C	3/13/2022 17:50	Broke Off	3/14/2022 15:24	Blind
2	D	3/22/2022	Leak	N/A	Found not to be leaking
2	E	3/18/2022	Leak	3/30/2022	Repaired
2	F	3/20/2022 7:50	Broke Off	3/26/2022	Plugged
2	H	3/10/2022 16:45	Broke Off	3/13/2022 14:30	Plugged
3	A	2/28/2022 14:30	Leak	N/A	Found not to be leaking
3	B	2/28/2022 14:30	Leak	N/A	Found not to be leaking
3	F	3/29/2022	Leak	3/31/2022	Blind
3	H	Leak Discovered 3/29/2022 Vent Broke off 3/30/2022 11:00	Leak Broke Off	3/30/2022	Plugged
4	B	Leak Discovered 3/10/2022 Vent Broke Off 3/19/2022 8:40	Leak Broke Off	3/19/2022	Plugged
4	D	2/28/2022 14:30	Leak	N/A	Found not to be leaking
4	F	Leak Discovered 3/25/2022 Vent Broke off 3/27/2022 1:15	Broke Off	3/27/2022	Plugged
4	I	3/10/2022 8:00	Broke Off	3/18/2022 16:16	Plugged
5	B	3/11/2022	Leak	3/24/2022 16:07	Repaired

5	C	2/28/2022 14:30	Leak	N/A	Found not to be leaking
5	E	3/15/2022	Leak	3/24/2022 16:07	Repaired
6	A	2/28/2022 14:30	Leak	N/A	Found not to be leaking
6	B	2/28/2022 14:30	Leak	N/A	Found not to be leaking
6	H	3/7/2022 0:38	Broke Off	3/10/2022 16:45	Plugged
9	D	3/28/2022	Leak	N/A	Found not to be leaking
9	G	3/11/2022	Leak	N/A	Found not to be leaking
9	H	3/21/2022	Leak	3/22/2022	Repaired
10	A	3/23/2022	Leak	3/23/2022 17:03	Repaired
10	C	2/28/2022 14:30	Leak	3/23/2022 17:03	Repaired
10	D	2/26/2022 10:23	Leak	3/23/2022 17:03	Repaired
10	E	2/26/2022 10:23	Leak	3/23/2022 17:03	Repaired
10	H	3/10/2022 17:00	Broke Off	3/20/2022	Plugged
11	K	3/10/2022	Leak	4/1/2022 17:23	Repaired
12	D	2/28/2022 14:30	Leak	3/13/2022	Repaired
13	N/A	1/20/2022 1:37	Venting	1/20/2022 1:37	N/A - Reported per permit requirements
13	A	3/26/2022 12:08	Leak	3/27/2022	Repaired
13	B	2/25/2022 04:30	Leak	2/28/22	Repaired
13	C	3/26/2022 12:08	Leak	3/27/2022	Plugged
13	F	3/28/2022	Leak	3/28/2022	Repaired
13	I	Leak Discovered 2/28/2022 14:30 Vent Broke off 3/21/2022 15:00	Leak Broke Off	3/22/2022	Plugged
13	K	3/28/2022	Leak	3/29/2022	Repaired
14	F	3/10/2022	Leak	3/14/2022	Plugged
14	H	3/3/2022 4:00	Broke Off	3/8/2022 17:51	Blind
14	I	2/28/2022 14:00	Leak	3/12/2022	Repaired

VMT records indicate that the damaged vents were first identified in February 2022.

However, there is evidence of leaking well before the February 2022 time period that is the beginning of this analysis. For example, see the entry in Figure 5 (above) for Tank 13, which was venting in January 2022. See also Daily Incident ID 33361 which confirmed a vent failure in Tank 13 discovered on January 19, 2022. Finally, as examples, see Work Orders 171021657-10 and 181014654-10, indicating damaged vents as far back as 2018. These confirm that certain vents were damaged well before the period of this analysis (i.e., February through May 2022).

During this incident, Alyeska also discovered a thief hatch leak on Tank 93. An Alyeska email dated March 15, 2022, links the observed damage on the thief hatch to snow/ice, causing the hatch to “leak a significant amount of HC [hydrocarbon] vapors]. We have instances in the past where they had to be 5200’d to get them to seal” [emphasis added]. The author notes that while this email thread makes clear that emissions from a thief hatch did occur during the 2022 snow vent damage incident, for the purpose of providing a highly conservative estimate, these emissions were not accounted for in the calculations.

After the vent damage detection in February 2022, Alyeska mobilized to begin shoveling off the accumulated snow and begin plugging/blinding the damaged vents. Operator data states that while most tanks were plugged/blinded by April 2022, Tank 2 is a marked exception, as pressure data indicates that despite tank vents C, F, and H being plugged/blinded in April, problems with the temporary repairs continued into May/June. **It is important to note here that simply plugging/blinding tanks does not assure there are no leaks.**

The operator continued to engage in tank pressure management in response to this tank vent damage incident into May, and level data shows, for example, that Tank 2 was not back in active use until the end of July 2022.

However, the record indicates leaks continued even after May 2022. For example, in an update (#9) on the tank vent damage provided by PWSRCAC to various recipients dated June 2, 2022, PWSRCAC staff, based on information provided by Alyeska, noted that after a comprehensive inspection of all 144 vents was completed, there were 13 vents that were out-of-service on eight tanks in the East Tank Farm. This indicates Alyeska was working on a permanent repair plan for these 13 vents. It is not clear when all of these vents and the rest of the 144 vents were permanently repaired such as by welding.

Given the above information, the author’s estimate conservatively accounts for the time period of operator tank pressure management (i.e., when pressure management is known to have begun and ended, as noted by the terminal operator), which extends from late February to May 2022.

Crucially, the beginning of pressure management is not the same as when an actual vent on a specific tank first sustained damage and therefore began to leak (when the tank was at high pressure and likely being filled/emptied as would be the case typically). Thus, all VOC emissions – both from breathing/standing losses as well as from working losses – in the time period from when the first vent was damaged until pressure management was implemented on that tank – are unaccounted for in this estimate. This could be considerable. Examples of photographs showing the snow accumulation and resulting damage to the vent vents are shown in the Figures 6A through 6G below.

Figures 6A through 6G – Examples of Snow Loading and Damaged Tank Vents









The extent of the damage to the various vents is also summarized in the excerpted charts and diagrams created by Alyeska in March 2022, shown in Figure 7.

i. Specific Tanks Assessed

For the purposes of providing a conservative emission estimate, the author notes that VOCs were assessed from Tanks 1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 13, and 14, which were reported by Alyeska as leaking. The reasoning for assessing emissions from these specific tanks is based on designations of broken and leaking vents, and are directly taken from summaries prepared by Alyeska.

The author did not include Tank 7 and 8 VOCs in these emission estimates based on Alyeska reports that Tanks 7 and 8 had no leaks. However, Tank 7 and 8 both sustained vent damage. For Tank 8, two vents were noted to be “severely tilted,” while Tank 7 experienced several vents with “slight tilts.” It is clear from a review of operational and tank pressure data that there were such VOC emissions from these two tanks as well. The author notes that the lack of leaking vents identified via a Lower Explosive Limit (LEL) meter does not mean that there were no leaks of VOCs – just that the leak levels were not high enough to cause explosion concerns.

Figure 7 shows all of the tanks in the East Tank Farm along with the vents and their alpha numbering. At each tank, the vents are numbered A, B, C, etc., following the directions

shown in Figure 8. **Critically, the number of damaged vents is not identical across all tanks, requiring a tank-by-tank approach to calculating emissions estimates.**

Also, importantly, **Figure 8 shows the degree to which vents in each tank were damaged.** Red triangles denote vents that had completely broken or sheared off. Green triangles show vents which were compromised and leaking. Those that were suspected to be leaking, but found to not to be after further investigation, are shown as black triangles.

Figure 7 – Tank Vent Damage Assessment in March 2022

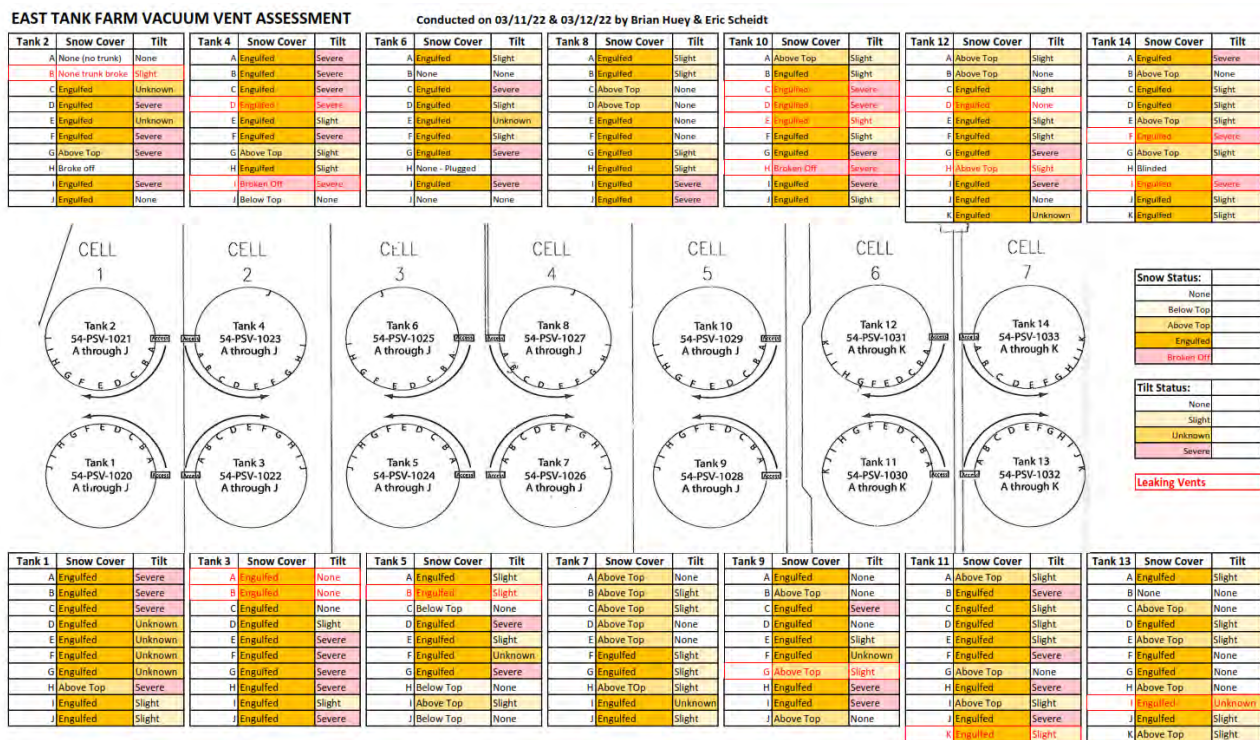
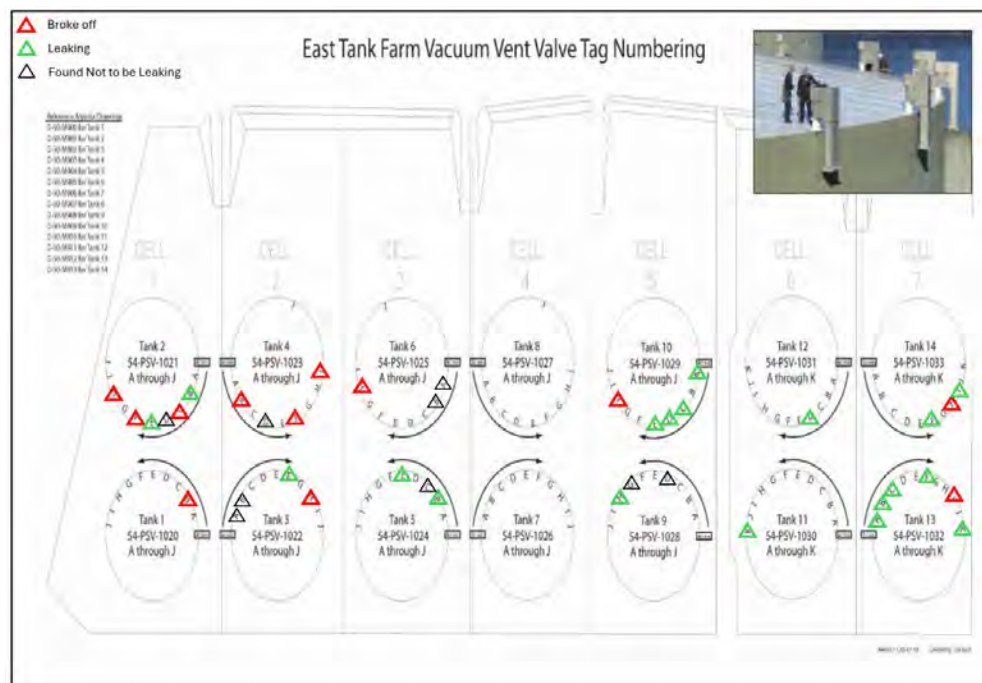


Figure 8 – Tank Vent Numbering and Condition During 2022 Snow Removal



D. Alyeska Response to Incident

VOC emissions are generated from both breathing and working losses, as described previously. That such emissions occurred, and vapors were released to the ambient air as a result of the 2022 tank vent damage, is not disputed. Alyeska's own documents, communications, correspondence, and data confirm this as described further in this section.

For example, high concentrations of vapors were measured in the vicinity and on the top of the tanks during snow removal. The author reviewed a variety of such documents and observational data from hand-held explosive monitors, and Forward Looking Infrared (FLIR) cameras, which demonstrated the release of emissions on video taken from ground level.

Given these emissions, Alyeska sought to minimize emissions from the damaged tanks/vents in two ways:

- 1) by limiting the filling of damaged tanks to reduce working losses; and
- 2) by attempting active pressure management using a slight negative vacuum on the tank headspace.

The following sections detail the evidence for both efforts and the ultimate limitations of each approach in reducing VOC emissions to ambient air.

However, given the critical role of tank vents in controlling tank VOC emissions as outlined in the previous section, this incident created areas of the tanks where emissions were actively released into the ambient air, instead of being collected by the VRS. While Alyeska instituted tank pressure management to minimize VOC emissions from the damaged tanks/vents, this did not entirely prevent VOC emissions from occurring. This is because even a single damaged tank vent presents a path of least resistance for vapors to escape to the atmosphere. Given the circumstances, the tank pressure management was not effective in preventing VOC emissions to the atmosphere.

a. Limiting the filling of damaged tanks to reduce working losses

The first effort at minimizing emissions from this incident is demonstrated by data received by the author depicting the tank level and tank pressure data for the period January 1 through July 31, 2022, for each of the tanks. This was provided in Excel format, and the author has provided an example of a small snippet of this dataset below in Figure 9 for illustrative purposes.

Figure 9 – Tank Pressure and Level Data Example

54-tk-01			54-tk-02			54-tk-03		
Date/time	pressure: IWC	level: feet	pressure: IWC	level: feet		pressure: IWC	level: feet	
01-Jan-22 00:00:00	0.303254	6.9586182	0.296648	4.235473633		0.29842	6.82409668	
01-Jan-22 00:01:00	0.294933	6.9586182	0.289596	4.235473633		0.293486	6.82409668	
01-Jan-22 00:02:00	0.316006	6.9586182	0.300567	4.235473633		0.314317	6.82409668	
01-Jan-22 00:03:00	0.290449	6.9586182	0.302823	4.235473633		0.298541	6.82409668	
01-Jan-22 00:04:00	0.29541	6.9586182	0.301288	4.235473633		0.299993	6.82409668	
01-Jan-22 00:05:00	0.300372	6.9586182	0.299753	4.235473633		0.29019	6.82409668	
01-Jan-22 00:06:00	0.301492	6.9586182	0.298217	4.235473633		0.322304	6.82409668	
01-Jan-22 00:07:00	0.29947	6.9586182	0.300795	4.235473633		0.297774	6.82409668	
01-Jan-22 00:08:00	0.297448	6.9586182	0.304623	4.235473633		0.299001	6.82409668	
01-Jan-22 00:09:00	0.304737	6.9586182	0.305559	4.235473633		0.300227	6.82409668	
01-Jan-22 00:10:00	0.306015	6.9586182	0.291158	4.235473633		0.297696	6.82409668	

The red labels denote the tank designations. For example, Tank 1 is 54-tk-01, Tank 2 is 54-tk-02, and so on. While the table format for tank levels and pressures is helpful, a visual plot of the levels and pressure is more helpful.

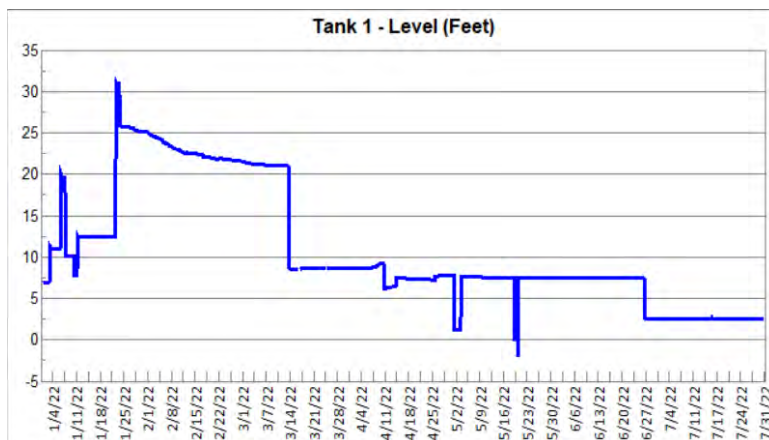
As depicted in Figures 10 and 11, respectively, as an example, the author plotted the tank liquid level and the pressure for Tank 1 against the elapsed time, shown as in the X-axis.

Thus, Figure 10 shows that at a certain point in time, the liquid level in Tank 1 was dropped to roughly 8 feet or so, or a bit lower, and was not increased (i.e., the tank was not filled back up). **In general, damaged tanks were not filled during the time period between when the tank vents were discovered to be damaged and temporary repairs to the tank vents were made.** There are exceptions to this, however, likely due to operative

needs necessitating the use of a damaged tank (given that the majority - 12 of the 14 - tanks were damaged for some periods of time).

While this was an attempt at reducing the emissions produced by working losses (filling the tanks with oil), this did not prevent emissions produced from breathing losses, as the tank was subject to ambient changes in the outside environment.

Figure 10 – Tank 1 Liquid Level During January-July 2022.



Note: X-axis shows time (date) and Y-axis shows the tank liquid height (in feet).

- b. Attempting active pressure management using a slight negative vacuum on the tank headspace

When Alyeska determined that the vents on this tank were damaged, Alyeska's operator reduced the pressure in the tank to a much lower-than-normal value, with the goal of maintaining a slight negative pressure to reduce emissions venting to the atmosphere.

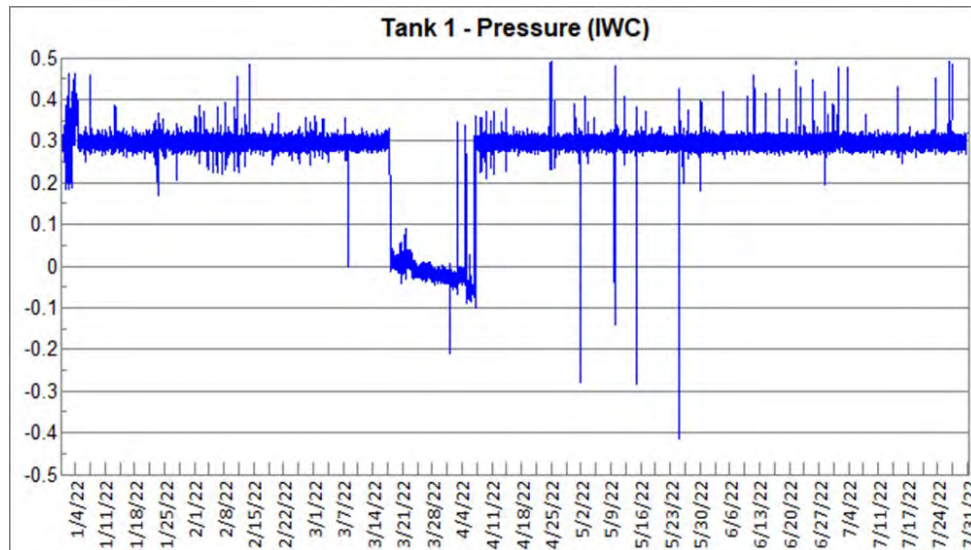
Yet eliminating emissions to the ambient air was rendered difficult for two main reasons: 1) creating a vacuum was at times unsuccessful given the configuration of the pressure management system, as evidenced by periods of positive pressure during pressure management; and 2) even when negative pressure was instituted, the damage left by the tank vents still left a pathway for emissions to escape into the ambient air due to the configuration of the pressure management system. The author describes the data for both reasons below.

- i) While Alyeska attempted to institute pressure management using a slight negative vacuum, this effort was unsuccessful as shown in Figures 10 and 11, which depict how positive pressure did still occur despite the efforts to achieve negative pressure. **Positive pressure, no matter how slight, automatically**

indicates a vapor escape pathway as long as there is a damaged or broken vent on the tank.

Figure 11 provides an example to illustrate the attempted pressure management of a negative vacuum by depicting the corresponding pressure for Tank 1 in inches of water column (IWC) for the January – July 2022 time period. Normally, the tank operated with pressures around 0.3 IWC. However, the pressures were attempted to be reduced to a slight negative, as seen in the U-shaped dip in the pressure profile. Once the damaged vent(s) were repaired, tank pressures were brought back to the standard 0.3 IWC as shown in the Figure.

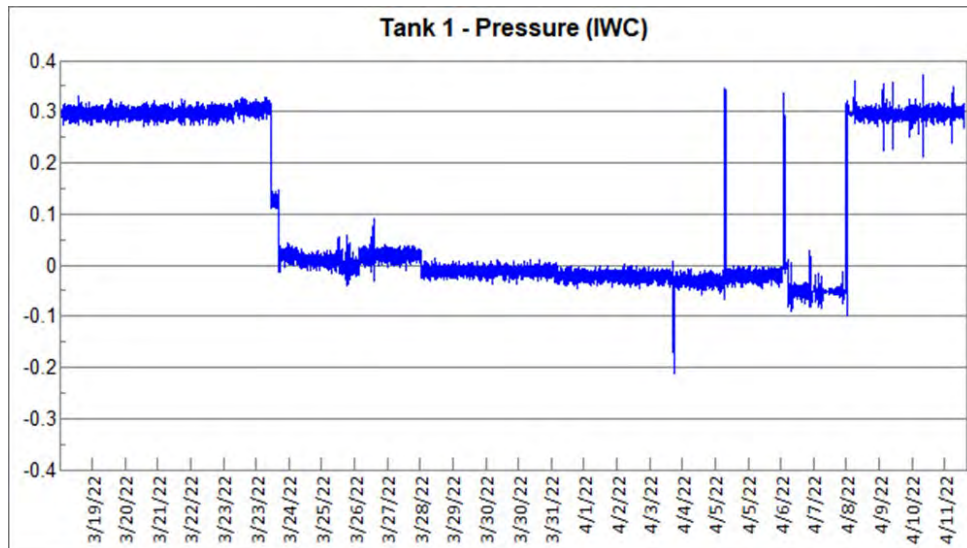
Figure 11 – Tank 1 Pressure During January – July 2022



Note: X-axis shows time (date) and Y-axis shows the tank pressure (measured in IWC).

Figure 12 shows the same data as Figure 11, with the tank pressure management time period expanded to show more detail. The start and end date/times in Figure 12 are the beginning and end of the pressure management period shown in Figure 11 previously.

Figure 12 – Tank 1 Pressure Management Detail



Note: X-axis shows time (date) and Y-axis shows the tank pressure (measured in IWC).

Figure 12 makes it clear that while the goal of pressure management was to achieve negative pressure on the tank, this was difficult to achieve in reality. This is evidenced by periods of slight positive pressure seen in Figure 12. Positive pressure indicates that emissions of vapors are escaping from within the tank to the atmosphere.

In each such instance of pressure management, it is clear that the pressure management could not and did not prevent the escape of VOC tank vapors to the atmosphere.

- ii) **Tank emissions also resulted when slight negative tank pressure management was occurring if the tank had any damaged or broken vents.**

As noted earlier, each tank is very large in diameter, at 250 feet. It is estimated that the distance, along the circumference, between the vents is 30 to 40 feet. As previously mentioned, vapor outlet and inlet piping are all located in a central location on one side of the tank.

Pressure management, relying on the single measurement point in each tank opposite from the vapor outlet/inlet piping, is rendered difficult because of the large distances between the measurement location and the vents. As a metaphor, imagine trying to vacuum a pile of dust at the end of the hallway opposite the vacuum machine – it is extremely difficult to achieve unless the vacuum is located closer to the pile of dust. Likewise, this is the same case for the pressure management in this situation. Damaged vents opposite the

central location of the pressure management system on the tanks provided an emissions pathway regardless of the negative pressure management instituted.

As further evidence for concern on the pressure management system design basis, as noted previously, the vapor outlet responsible for removing vapors from the tank via a 30-inch diameter vapor recovery line is positioned very close to the thief hatch. Thus, the measurements for each tank were taken via this single measurement location in close proximity to an outlet that was actively attempting to pull gases from the tank.

Given the thief hatch's location, the measurements are not necessarily representative of the entire tank headspace. It is entirely conceivable that vapors could be at positive pressure throughout the entire tank and escaping to ambient air, even when the thief hatch measurements indicate a negative pressure.

In other words, the measurable "reach" of the negative pressure at one location does not extend to the entire vapor space of the tank. **As a result, even if the pressure gauge was slightly negative, that does not ensure that vapors could not escape via a broken or damaged vent that is located at considerable distance away along the circumference of the tank.**

As further evidence, the fact that emissions occurred even when a tank was under negative pressure is documented. Consider this example from a terminal document:⁷

"...3/13/2022, H vent valve was completely ripped off. HCC shoveled path to H's port. Put full face respirators on down at truck. Wind was blowing about 30 mph. Walked up gangway and meters were chirping. PV confirmed tank vapor space was a slight negative... Had to shovel a bit more snow (about 10 mins) to get the plug in. Line attendant gave us an extra 3' in the line which turned it into a fall arrest system. Installed plug tightened by hand. Then tightened with crescent. Couldn't tie off plug to anything, so left rope coiled in cavity. LEL and VOCs instantly dropped to near zero once plug was in place. HCC has to do a bit more shoveling in order for us to access port, so we can blind it. Toxirae Pro PID 732 total VOC readings, peak: 212 ppm; TWA: 3 ppm; STEL: .7 ppm. LDAR peaked at 16% LEL, I believe. Note: meters

⁷ Page 38 of 72, WO Operation 221007906-20, OMS, 54-TK-2, Damaged and leaking vacuum vent valves, no WO actual start date listed.

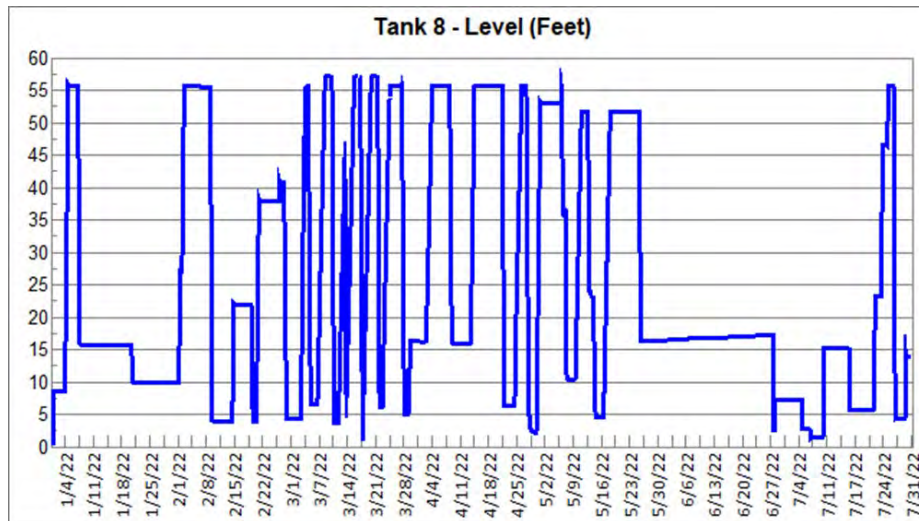
chirping on tank top while slight negative pressure in tank, VOC peaked at 212 ppm and LEL peaked at 16% LEL.” [emphasis added].

It is critical to note that pressure management of these systems is ultimately constrained by how much negative pressure a terminal operator could impose on a tank in order to keep all vapors within the tank, particularly in this case with broken/damaged vents. Trying to maintain too large a negative pressure or vacuum on the tank would mean that ambient air – and oxygen – would then enter the tank via the broken and damaged vents. This, of course, would present a safety hazard if too much oxygen infiltrates into the vapor space, potentially causing a flammable condition.

This constraint is more fully explored in a separate consultant report by Taku Engineering, LLC, titled “Crude Oil Storage Tank Vent Snow Damage,” and dated June 2023, which concludes that even with the tank pressure management used during the snow removal/damage period, **that potential worker safety hazards could have occurred as a result of oxygen introduction into the tanks.** Unfortunately, given that a single oxygen measurement at the combined vapor header may be a fundamental design flaw, actual oxygen levels in each tank are not known.

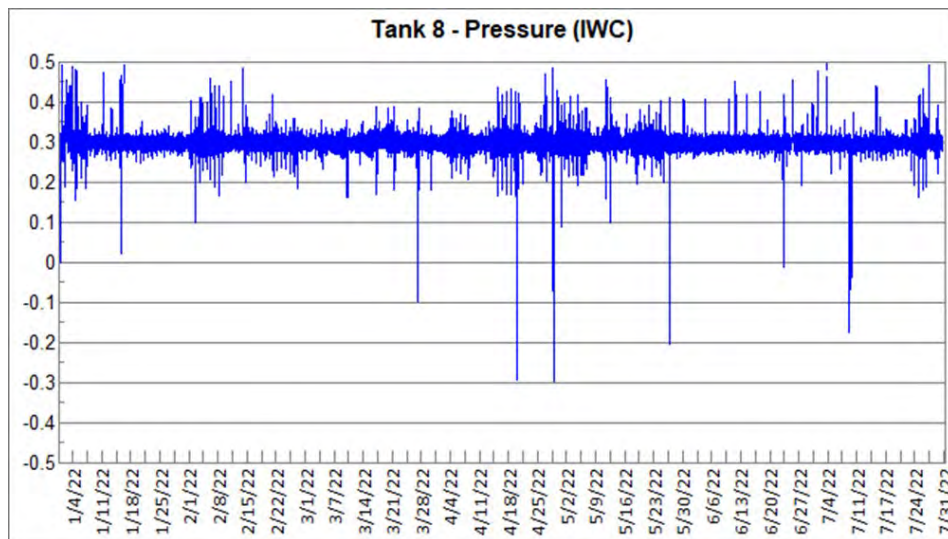
To close the discussion, Figures 13 and 14 show the liquid level and pressures in Tank 8. While Tank 8 vents supposedly did not leak even though some were damaged, as seen in Figure 7, there was no pressure management. The tank pressure was maintained at 0.3 IWC and liquid levels rose and fell as the tank was filled (from the pipeline) and emptied (into vessels), as needed. Even though the author did not include Tank 7 and 8 VOCs in these emission estimates, it is clear that there were such VOC emissions from these two tanks as well.

Figure 13 – Tank 8 Liquid Levels During January – July 2022



Note: X-axis shows time (date) and Y-axis shows the tank liquid height (in feet).

Figure 14 – Tank 8 Pressures During January – July 2022



Note: X-axis shows time (date) and Y-axis shows the tank pressure (measured in IWC).

Appendix B to this report contains liquid level and tank pressure charts, similar to Figures 10, 11, 12, 13, and 14, for each of the 14 tanks.

E. Summary of Methodology: EPA TANKS 5.0 Modeling and Conservative VOC Emissions Estimate During February Through May 2022

The data shown in the charts for each tank and standard EPA emissions calculation methods were used to determine the VOC emissions during the February through May 2022 time period when the tanks were known to have damaged/broken vents. It is not known if there have been any other professional or public attempts at such an estimation. **As such, these estimates are considered preliminary.**

The preliminary VOC emissions range is from an estimated 79 to 193 tons. The lower estimate is likely far too low given the low vapor pressure used as well as the conservative assumptions made and discussed previously. This report concludes that actual emissions are likely to have been substantially more than even the high end of the estimate (i.e., 193 tons).

Nonetheless, these estimates are considered to be conservative (i.e., that actual emissions are likely to have been substantially greater than estimates shown in this section).

The reasons for why actual VOC estimates are likely to have been greater are as follows:

- (i) The author's estimate only accounts for "breathing" (or "standing") losses when the tank liquid level is assumed to not be changing, such as due to filling, for example. While terminal operators stopped filling the tanks during pressure management as described in Section D and as seen in the Appendix B charts, for certain tanks and certain time periods that was not the case. As a result, there would have been some working losses with additional VOCs during such tank filling time periods. That is not included in the current estimate.
- (ii) The emission estimates do not include any contributions from Tanks 7 and 8, even though they were documented to have sustained damage from this event (Figure 7).
- (iii) The author's estimate only accounts for the time period of pressure management (i.e., when pressure management is known to have begun and ended, in the late February through May 2022 time period, as noted by the terminal operator); it does not account for records that indicate leaking before and after this time period.
- (iv) The author's emission estimate used EPA's approach/methodology for tank emissions estimates from AP-42 as coded in TANKS Version 5.0⁸ available on EPA's

⁸ <https://www.epa.gov/air-emissions-factors-and-quantification/tanks-emissions-estimation-software-version-5>

website. There are some indications that this methodology itself, based on empirical work conducted on small-scale tanks dating back to the 1950s and 1960s, likely underestimates VOC emissions.

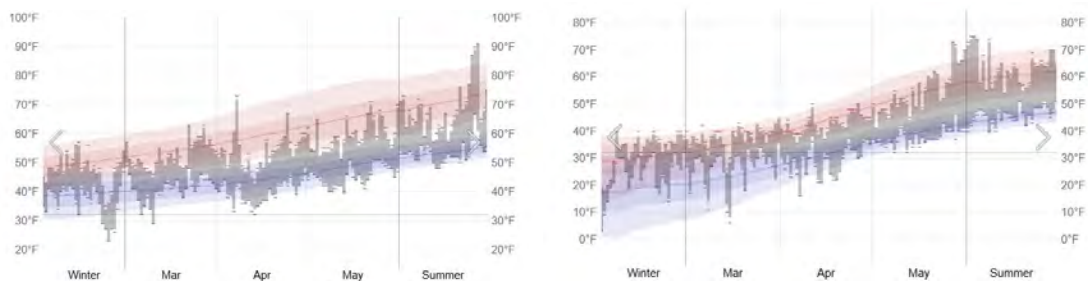
With caveats about why the emissions estimates are likely to be very conservative and that actual emissions are likely to have been substantially higher, the emission estimate used the following methodology:

(a) Used EPA TANKS 5.0 as noted above.

(b) Used tank geometry and capacity data for the tanks.

(c) Used a reasonable estimate of ambient conditions such as temperature; the EPA TANKS 5.0 Model does not have temperature settings for any Alaska cities. As such, the author used Seattle data, which had comparable temperatures to Valdez in winter 2022. See below for the respective graphs.

Figure 15



Right: Seattle Temperatures across Winter/Spring 2022; Left: Valdez Temperatures Across Winter/Spring 2022.⁹

(d) Used two different values for crude oil vapor pressure, an important input that drives the extent of VOC generation. One estimate used a value of 5.0 as the Reid Vapor Pressure (RVP), which is taken from AP-42 and is not specific to Alaska crude oils and is likely to be too low; the second used a value of 10.0, taken from an Exxon specification sheet for Alaska crudes. An excerpt of this is shown in Figure 16.

All of the documents relied upon or used in this analysis are cited in the body of the report or in footnotes. In addition, the author has also reviewed and considered numerous additional documents for context and background in order to provide his opinions.

⁹ <https://weatherspark.com/h/y/275/2022/Historical-Weather-during-2022-in-Valdez-Alaska-United-States>

Figure 16 – Excerpt from Exxon Alaska North Slope Crude Specification

Reference: ANS17Y

Crude: Alaska North Slope

ExxonMobil

Crude Summary Report

General Information		Molecules (%wt on crude)		Whole Crude Properties	
Reference:	ANS17Y	methane + ethane	0.02	Density @ 15°C (g/cc)	0.8648
Name:	Alaska North Slope	propane	0.31	API Gravity	32.1
		isobutane	0.60	Total Sulfur (% wt)	0.96
Origin:	Alaska	n-butane	2.14	Pour Point (°C)	-49
		isopentane	1.06	Viscosity @ 20°C (cSt)	11.1
Assay Date:	8/15/2017	n-pentane	1.49	Viscosity @ 40°C (cSt)	6.4
		cyclopentane	0.19	Nickel (ppm)	11.6
Comments:		C6 paraffins	2.16	Vanadium (ppm)	27.7
		C6 naphthenes	1.34	Total Nitrogen (ppm)	1720
		benzene	0.35	Total Acid Number (mgKOH/g)	0.20
		C7 paraffins	1.88	Mercaptan Sulfur (ppm)	3.9
		C7 naphthenes	2.15	Hydrogen Sulfide (ppm)	0.0
		toluene	0.86	Reid Vapor Pressure (kPa)	73.0

The RVP of 73 kPa is 10.59 psi. We used 10.0 in the second set of VOC calculations.

(e) The TANKS calculations were done for the months of February, March, April, and May in 2022, while VMT records suggest leaks certainly predated the initial identified in late February 2022 and leaks continued well after May 2022.

Finally, Figures 17 and 18 show the two estimates of VOC emissions, for RVP = 5 and RVP = 10 vapor pressures, respectively.

Figure 17 – Preliminary VOC Estimate Using RVP = 5.0

RVP=5.0 Calcs			
	Number of Leaking Days (All Tanks)	Average Daily Emissions (lb/day)	Emissions Total (lb)
February - All Tanks	7	353	2471
March - All Tanks	227.5	486	110672
April - All Tanks	34	718	24427
May - All Tanks	21	955	20052
All			157621
All			79

pounds
tons

- Since this only includes periods of pressure management, how long were the vents damaged/leaking before
Earliest Start Date of 2/25/2022
- 1a. In the pre-pressure management time period, there would be both breathing and working losses.
2. How long did leaks continue after
Last End Date of 5/21/2022

Figure 18 – Preliminary VOC Estimate Using RVP = 10.0

RVP=10 Calcs				
	Number of Leaking Days (All Tanks)	Average Daily Emissions (lb/day)	Emissions Total (lb)	
February - All Tanks	7	861	6026	
March - All Tanks	227.5	1182	269004	
April - All Tanks	34	1772	60252	
May - All Tanks	21	2454	51538	
All			386819	pounds
All			193	tons

1. Since this only includes periods of pressure management, how long were the vents damaged/leaking before
Earliest Start Date of 2/25/2022
- 1a. In the pre-pressure management time period, there would be both breathing and working losses.
2. How long did leaks continue after
Last End Date of 5/21/2022

As Figures 17 and 18 show, the preliminary conservative VOC emission estimates range from an estimated 79 to 193 tons, with the actual emissions likely being substantially more than 193 tons.

Appendix A

Biographical Summary

Dr. Ranajit (Ron) Sahu has over 32 years of experience in the fields of environmental, mechanical, and chemical engineering including: program and project management services; design and specification of pollution control equipment for a wide range of emissions sources including stationary and mobile sources; soils and groundwater remediation including landfills as remedy; combustion engineering evaluations; energy studies; multimedia environmental regulatory compliance (involving statutes and regulations such as the Federal CAA and its Amendments, Clean Water Act, TSCA, RCRA, CERCLA, SARA, OSHA, NEPA as well as various related state statutes); transportation air quality impact analysis; multimedia compliance audits; multimedia permitting (including air quality NSR/PSD permitting, Title V permitting, NPDES permitting for industrial and storm water discharges, RCRA permitting, etc.), multimedia/multi-pathway human health risk assessments for toxics; air dispersion modeling; and regulatory strategy development and support including negotiation of consent agreements and orders.

He has over 30 years of project management experience and has successfully managed and executed hundreds of projects in this time period. This includes basic and applied research projects, design projects, regulatory compliance projects, permitting projects, energy studies, risk assessment projects, and projects involving the communication of environmental data and information to the public.

He has provided consulting services to numerous private sector, public sector, and public interest group clients. His major clients over the past three decades include various trade associations as well as individual companies such as steel mills, petroleum refineries, chemical plants, cement manufacturers, aerospace companies, power generation facilities, lawn and garden equipment manufacturers, spa manufacturers, chemical distribution facilities, land development companies, and various entities in the public sector including EPA, the U.S. Dept. of Justice, several states (including New York, New Jersey, Connecticut, Kansas, Oregon, New Mexico, Pennsylvania, and others), various agencies such as the California DTSC, and various cities and municipalities. Dr. Sahu has executed projects in all 50 U.S. states, numerous local jurisdictions, and internationally.

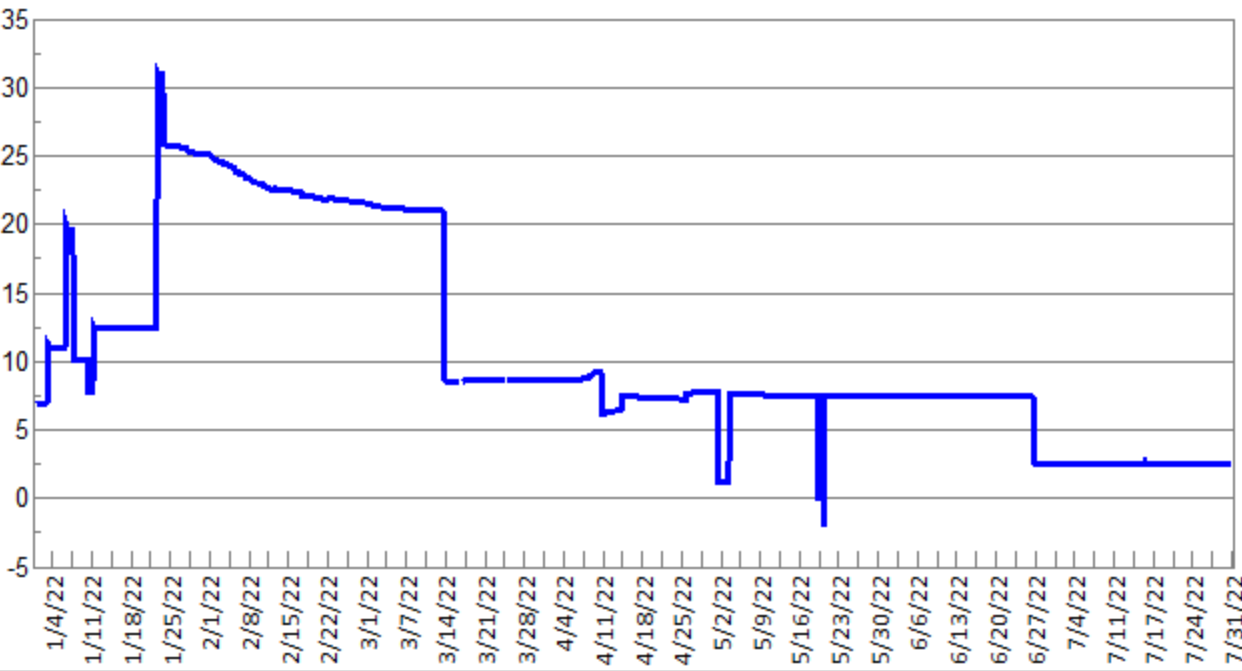
In addition to consulting, for approximately two decades, Dr. Sahu taught numerous courses in several southern California universities as an adjunct faculty, including UCLA (air pollution), UC Riverside (air pollution, process hazard analysis), and Loyola Marymount University (air pollution, risk assessment, hazardous waste management). He also taught at Caltech, his alma mater (various engineering courses), at the University of Southern California (air pollution controls), and at California State University, Fullerton (transportation and air quality).

Dr. Sahu has and continues to provide expert witness services in a number of environmental and engineering areas discussed above in both state and federal courts as well as before administrative bodies.

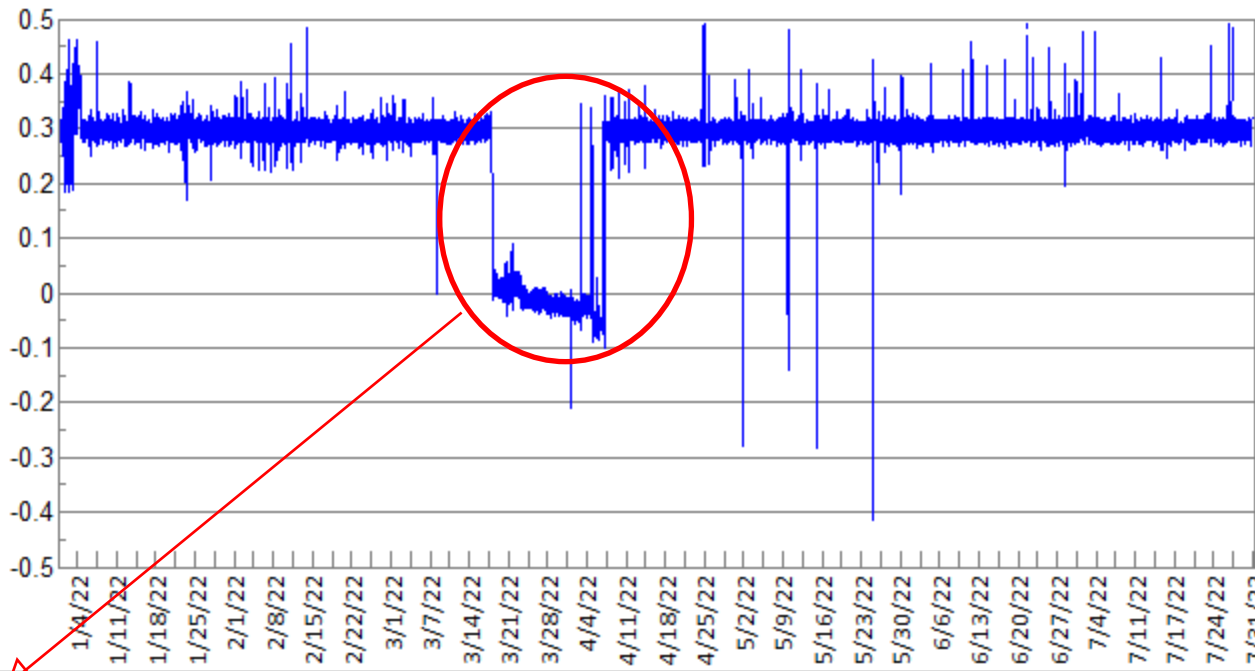
Appendix B

Tank Level and Pressure Charts

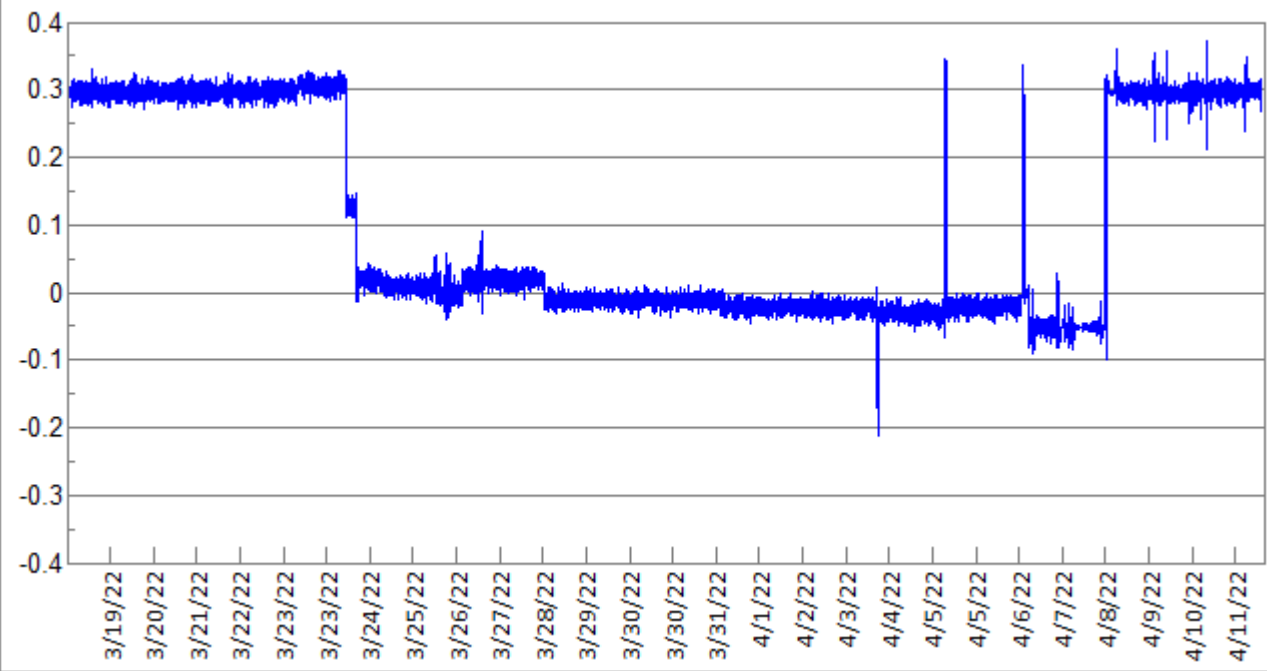
Tank 1 - Level (Feet)



Tank 1 - Pressure (IWC)

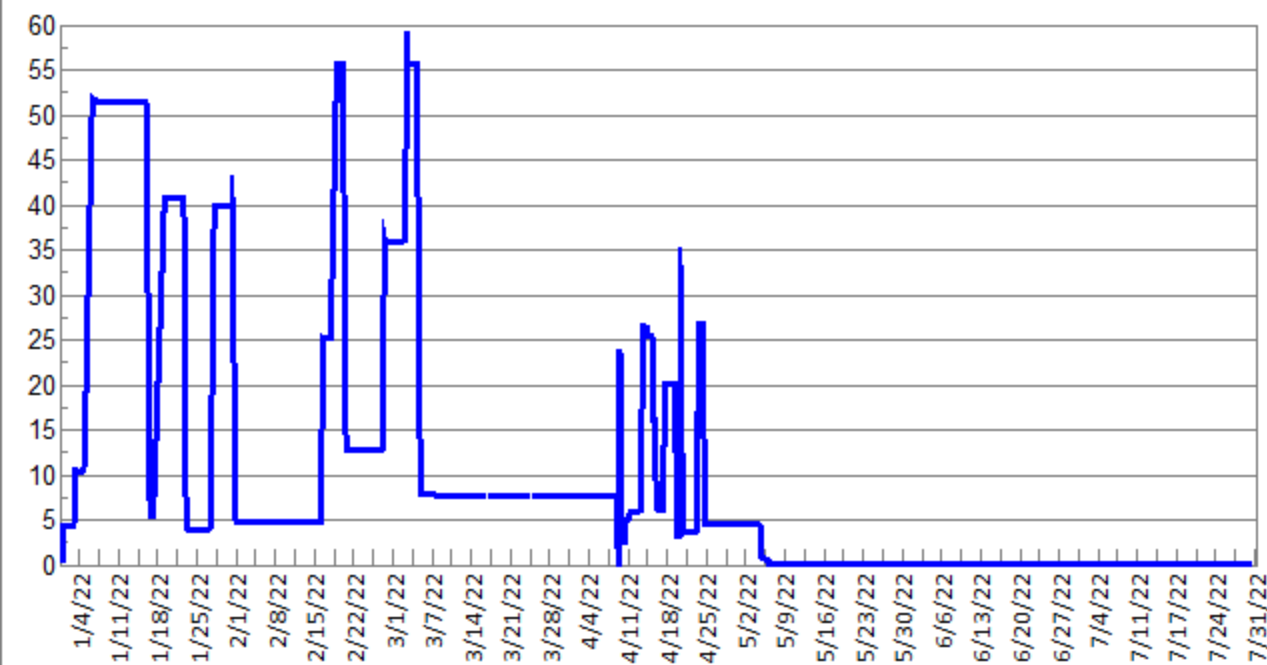


Tank 1 - Pressure (IWC)

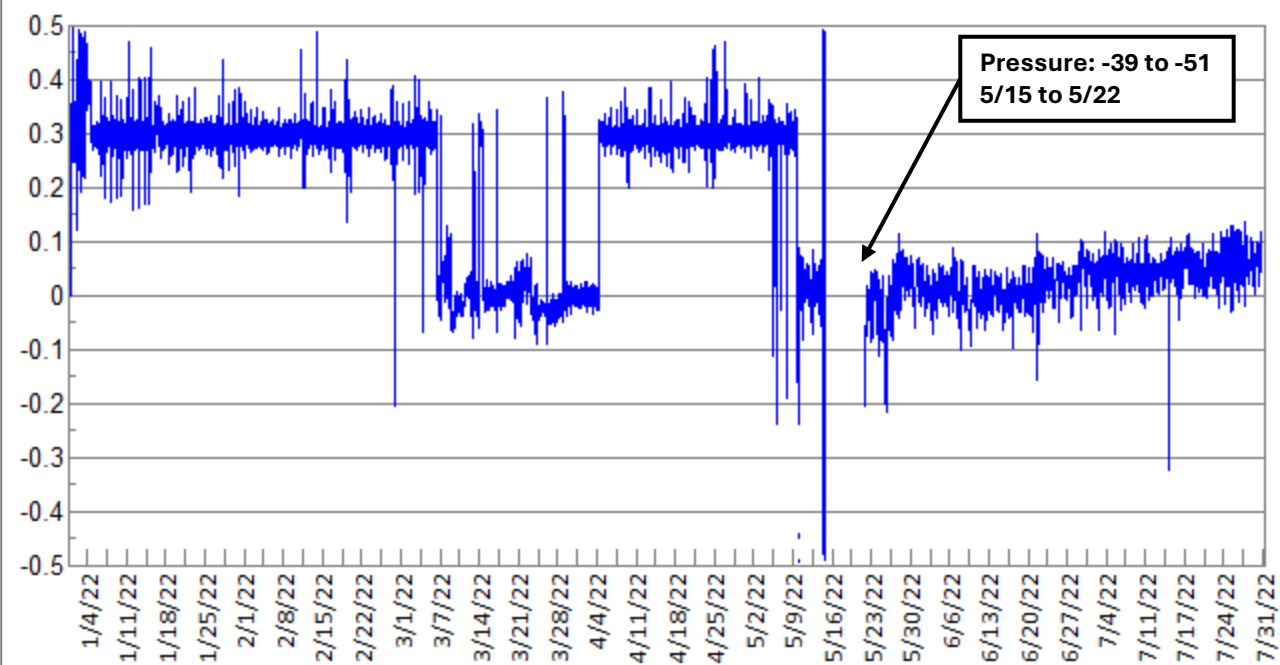


NOTE (for graphs show on pages 35-49):
X-axis shows time (date)
Y-axis shows tank pressure, measured in inches of water column (IWC)

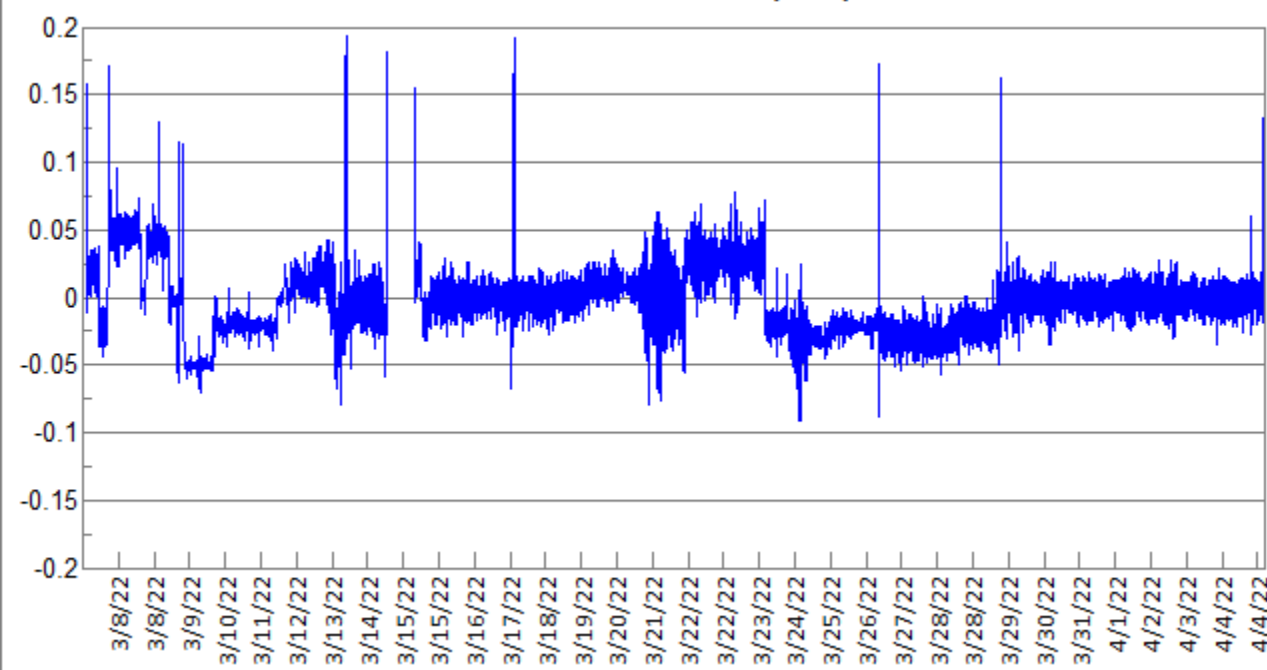
Tank 2 - Level (Feet)



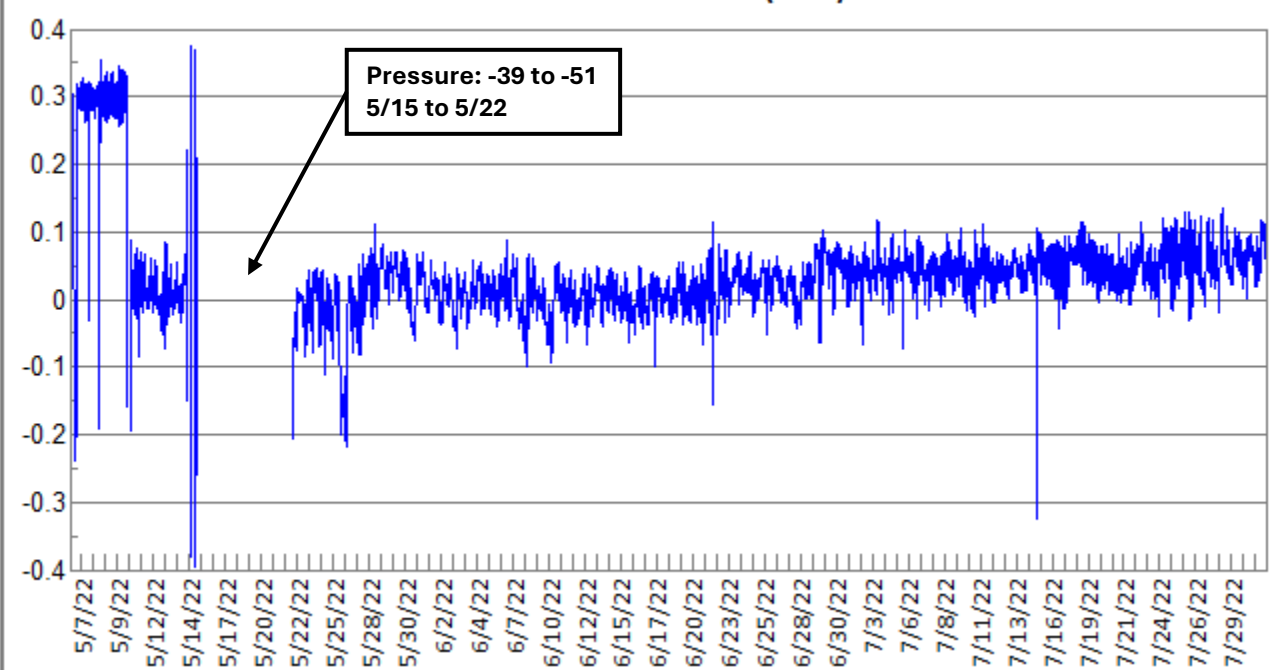
Tank 2 - Pressure (IWC)



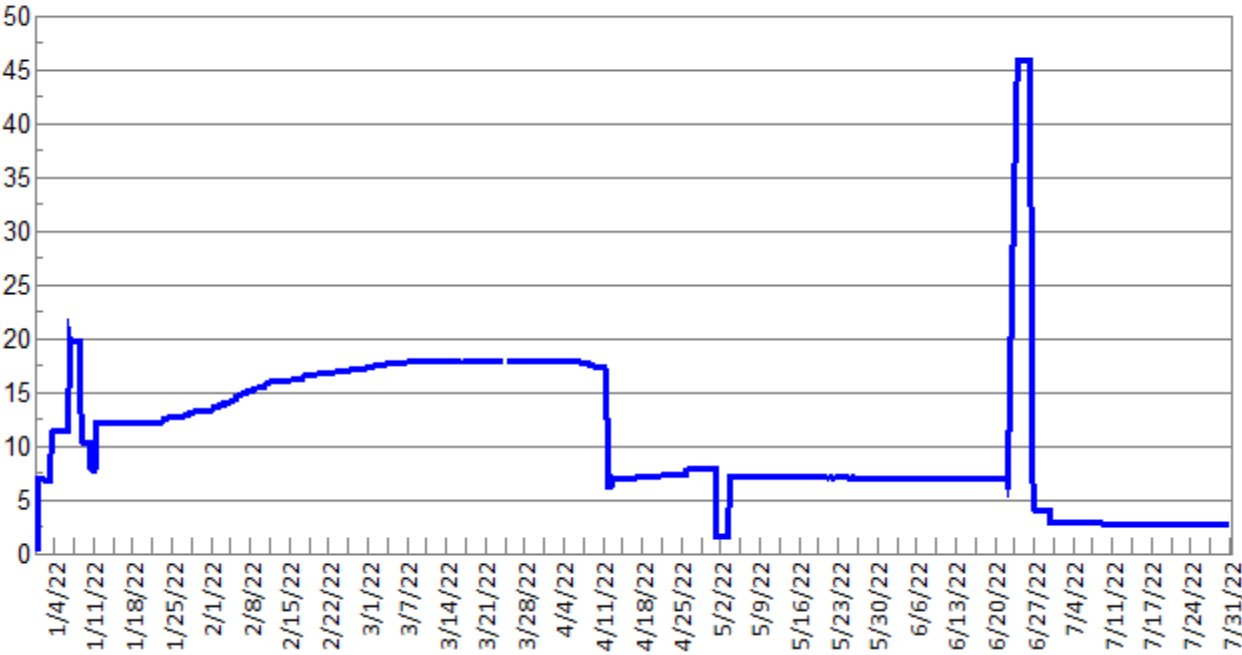
Tank 2 - Pressure (IWC)



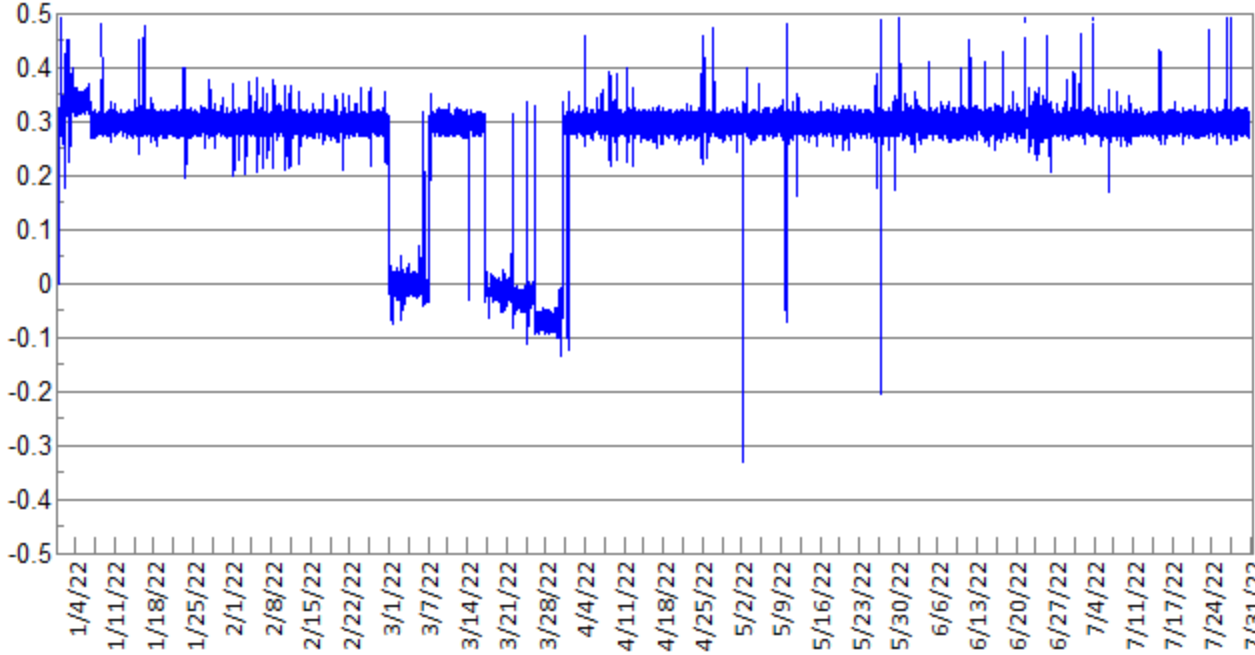
Tank 2 - Pressure (IWC)



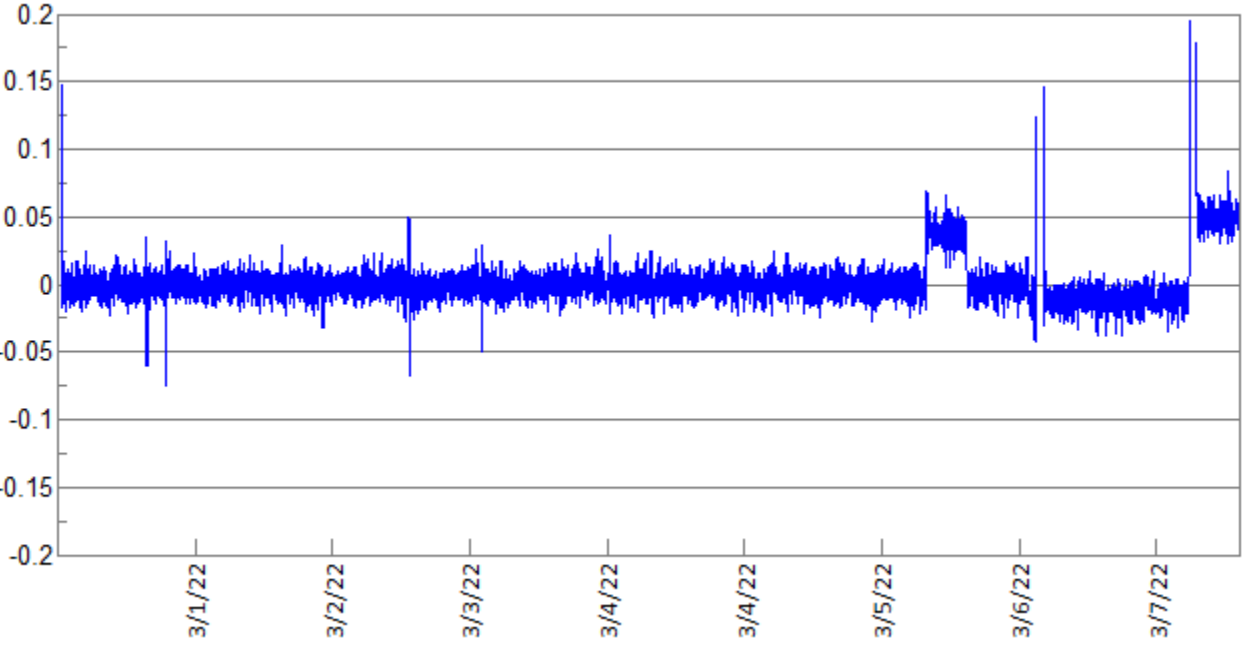
Tank 3 - Level (Feet)



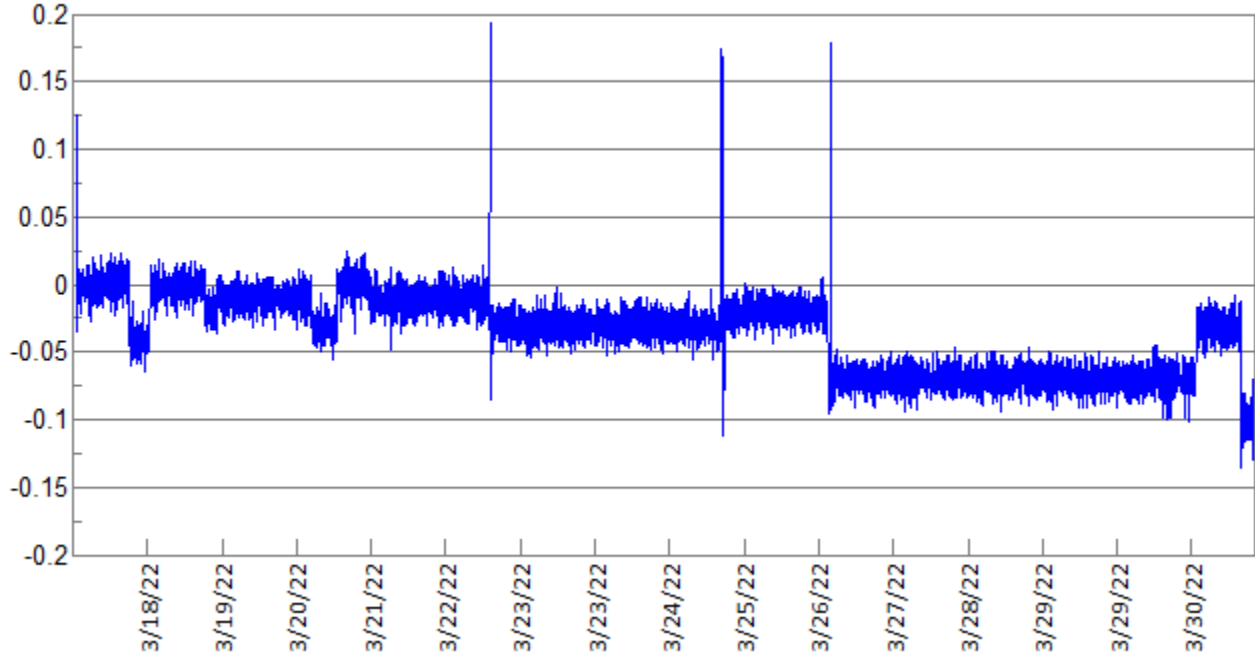
Tank 3 - Pressure (IWC)



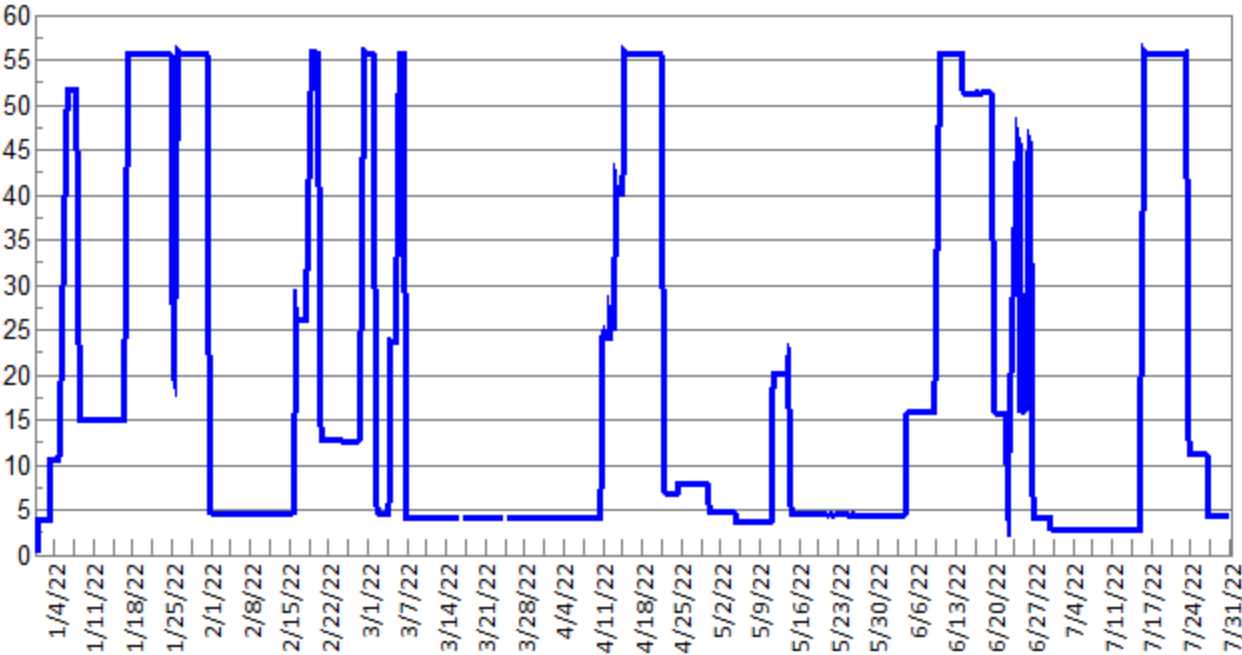
Tank 3 - Pressure (IWC)



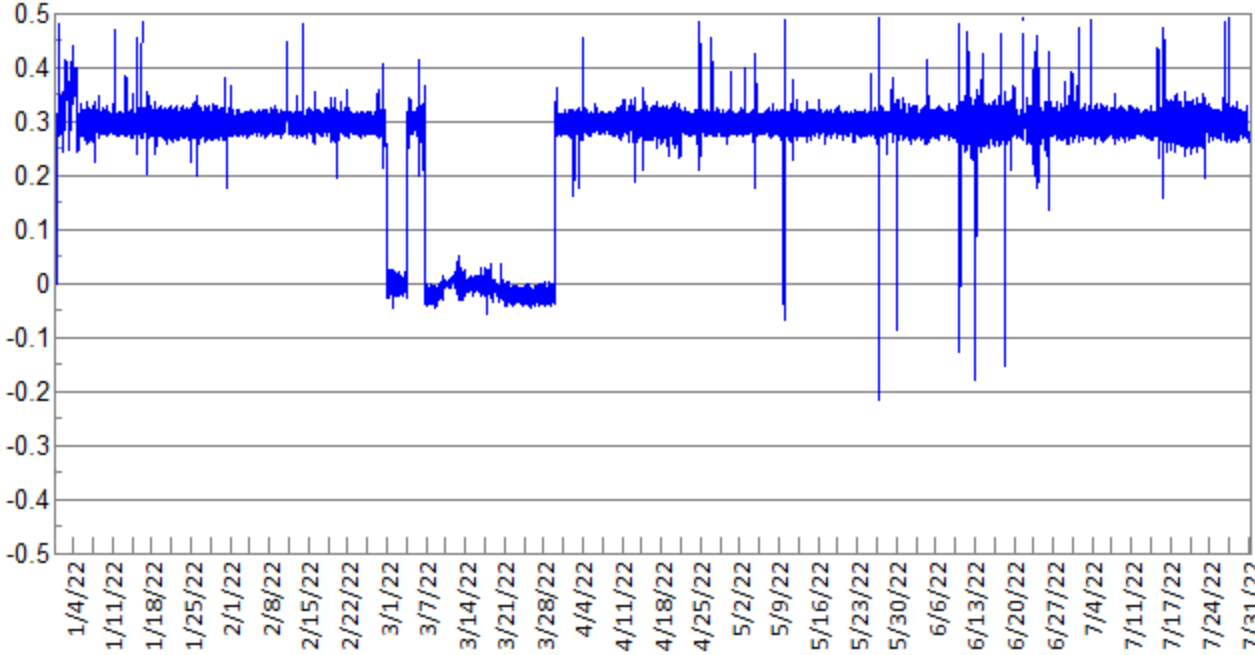
Tank 3 - Pressure (IWC)



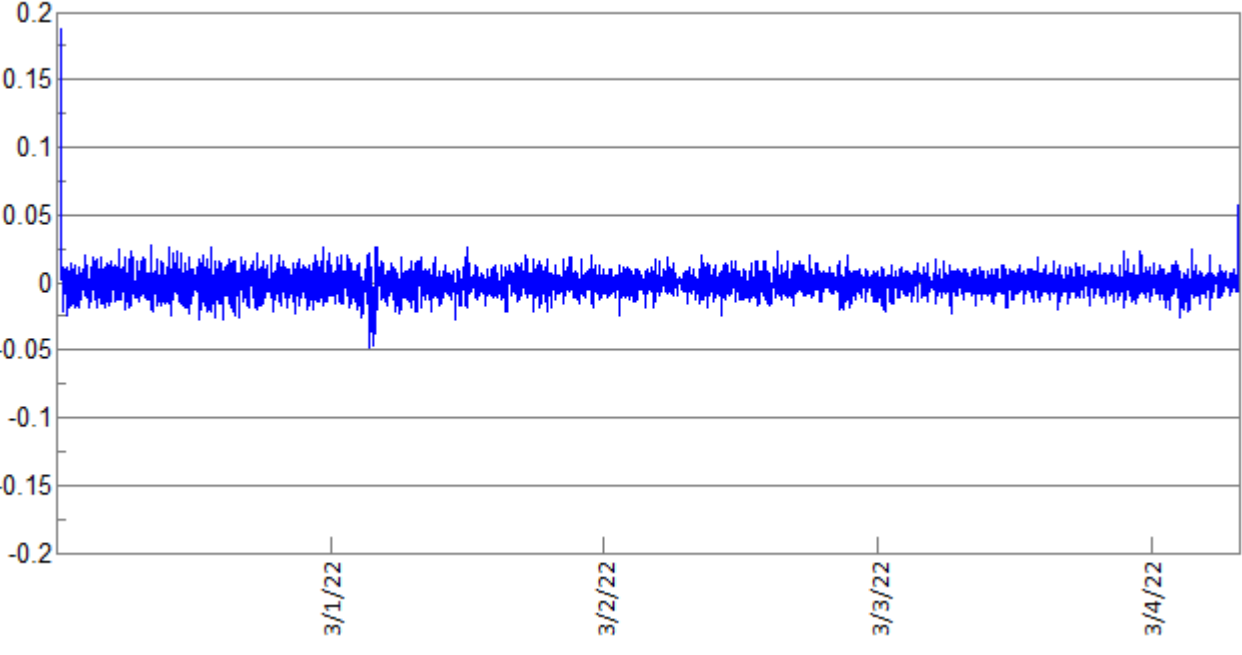
Tank 4 - Level (Feet)



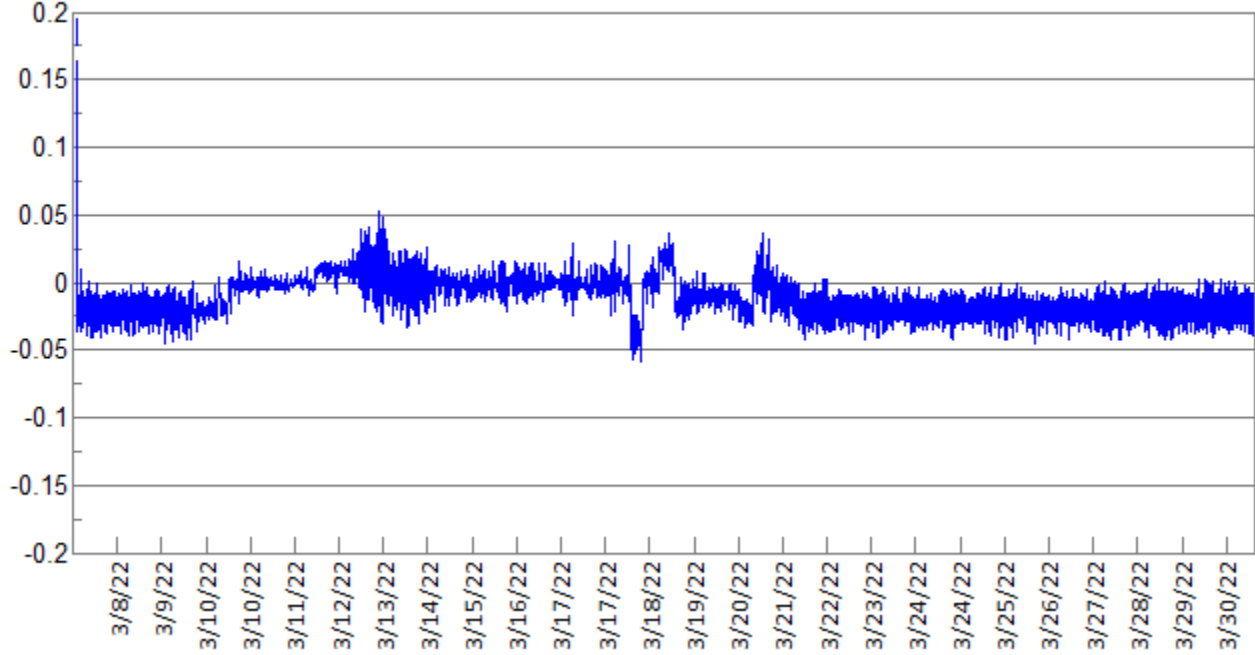
Tank 4 - Pressure (IWC)



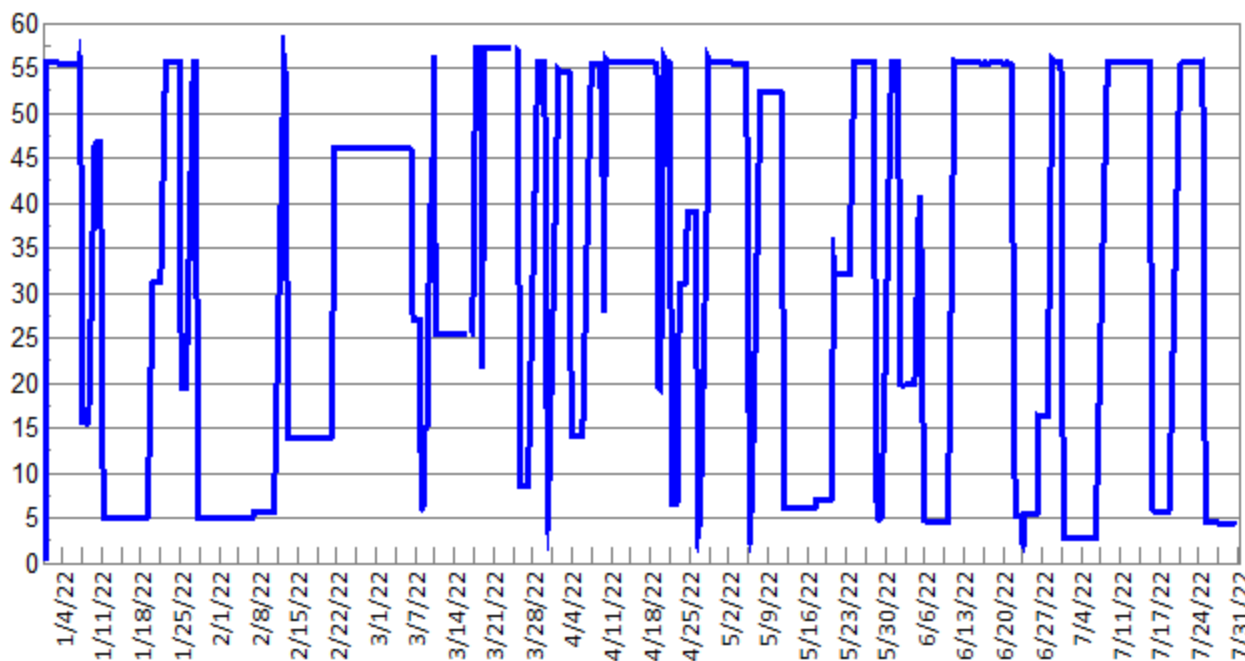
Tank 4 - Pressure (IWC)



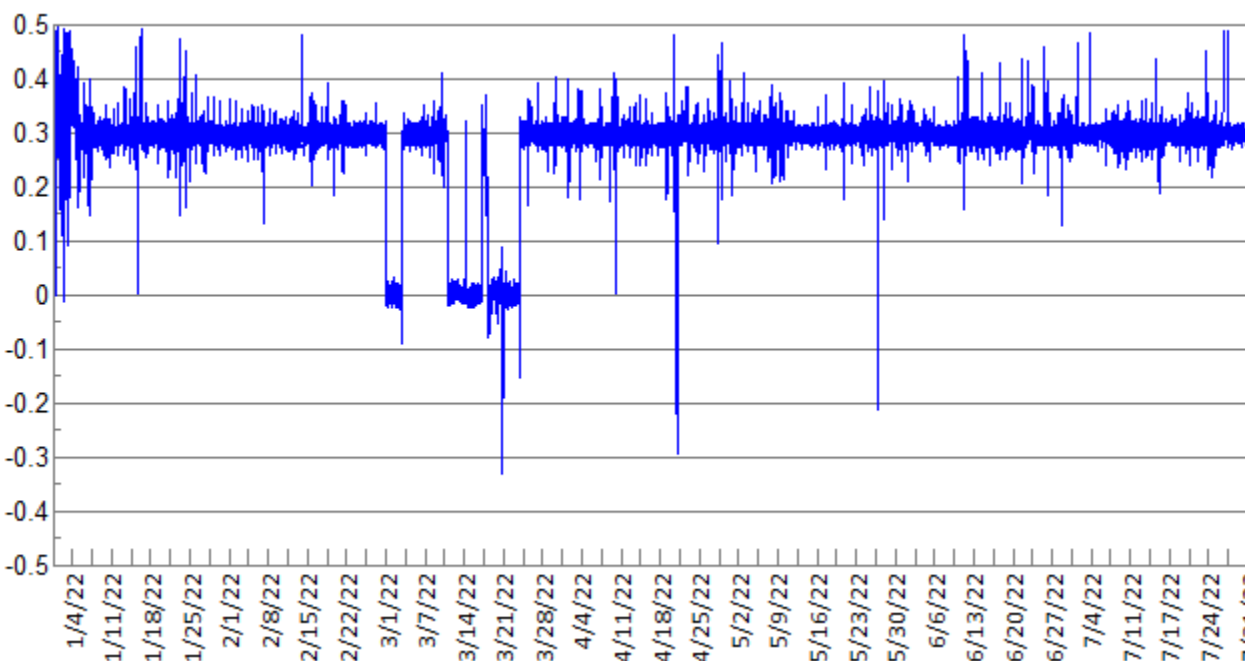
Tank 4 - Pressure (IWC)



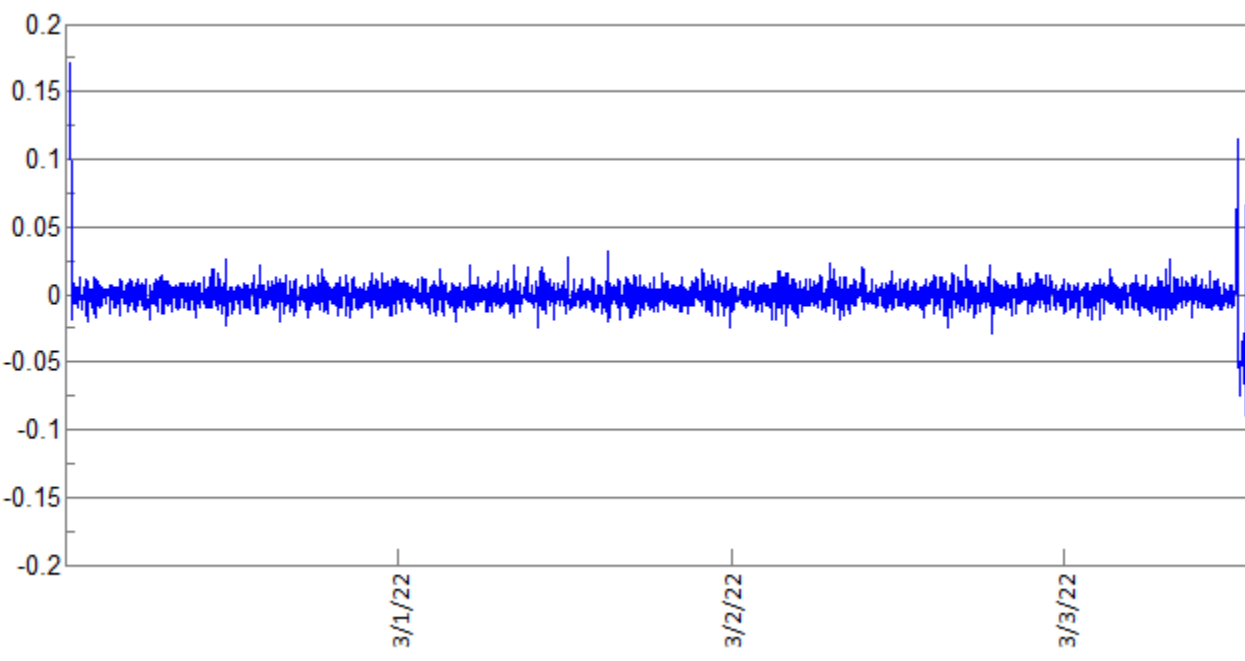
Tank 5 - Level (Feet)



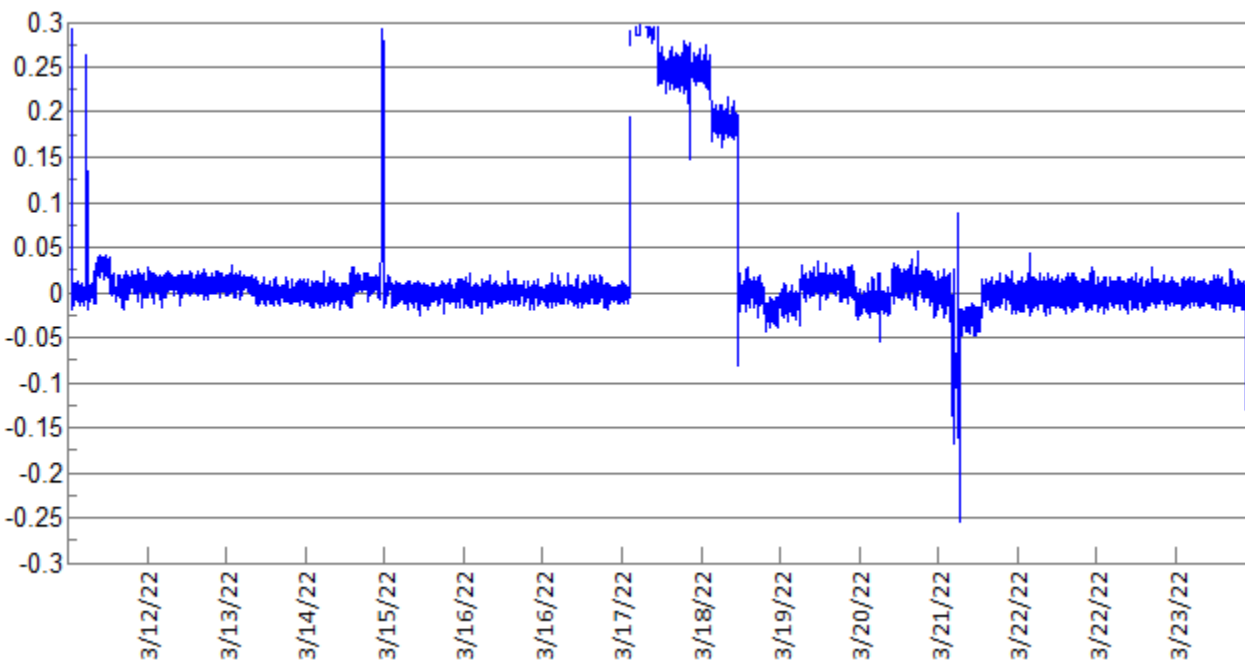
Tank 5 - Pressure (IWC)



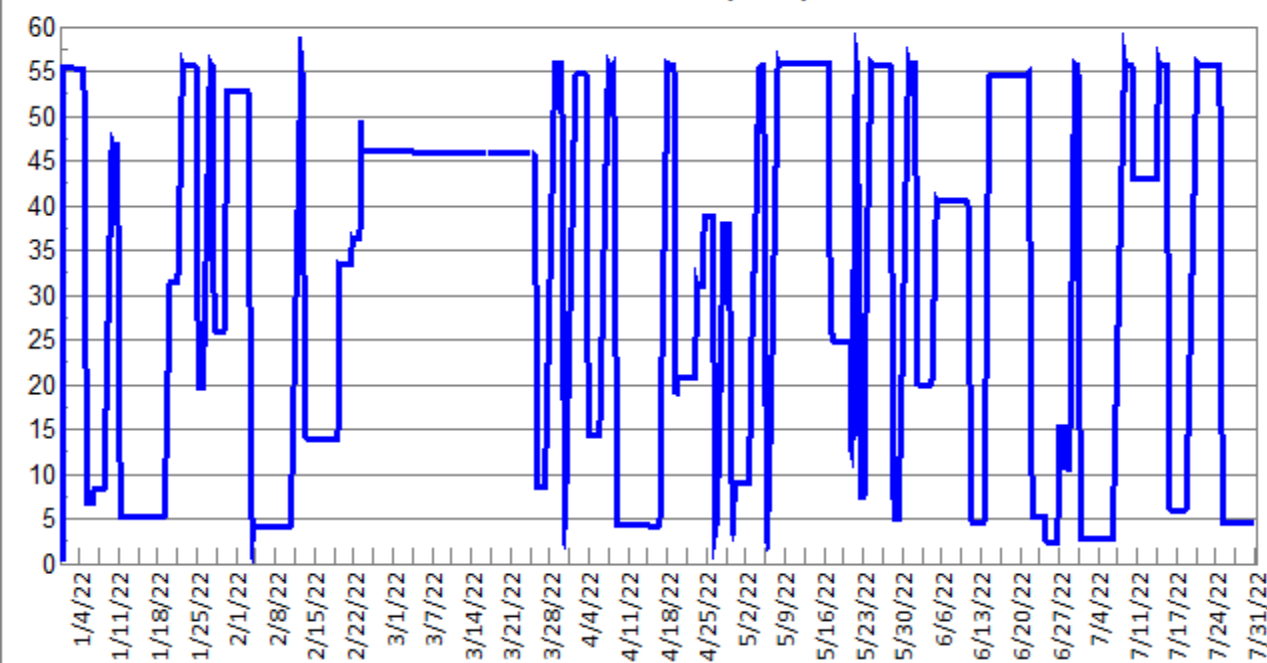
Tank 5 - Pressure (IWC)



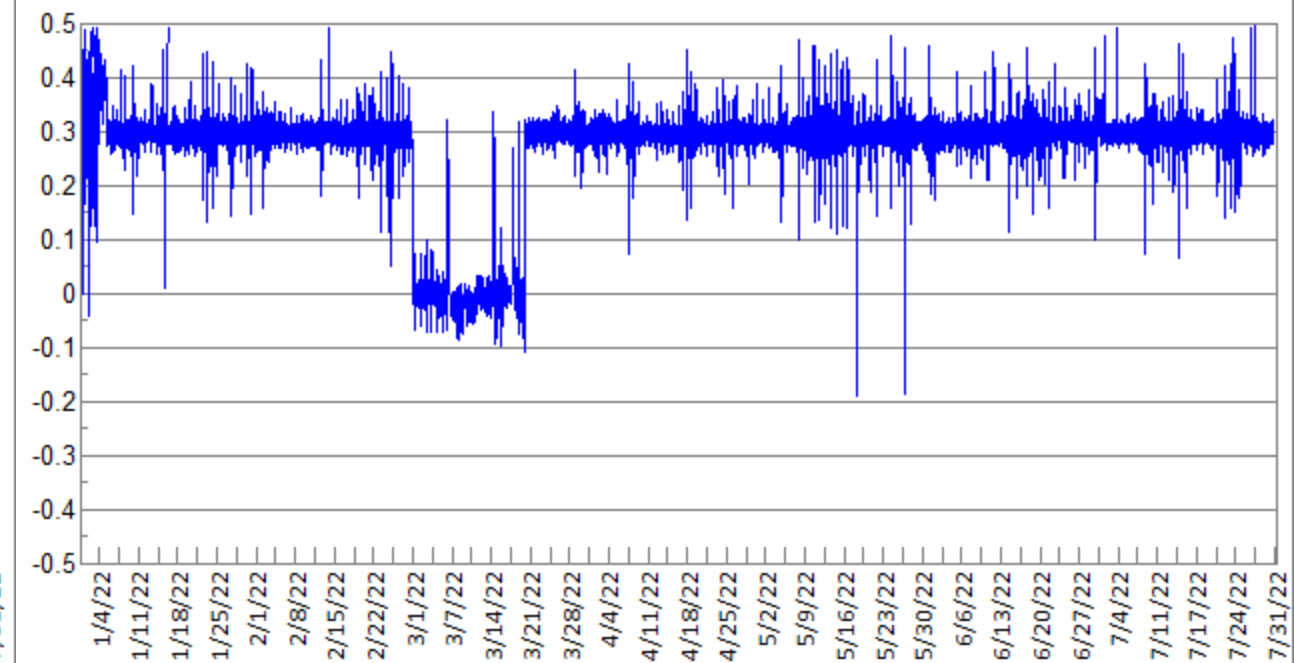
Tank 5 - Pressure (IWC)



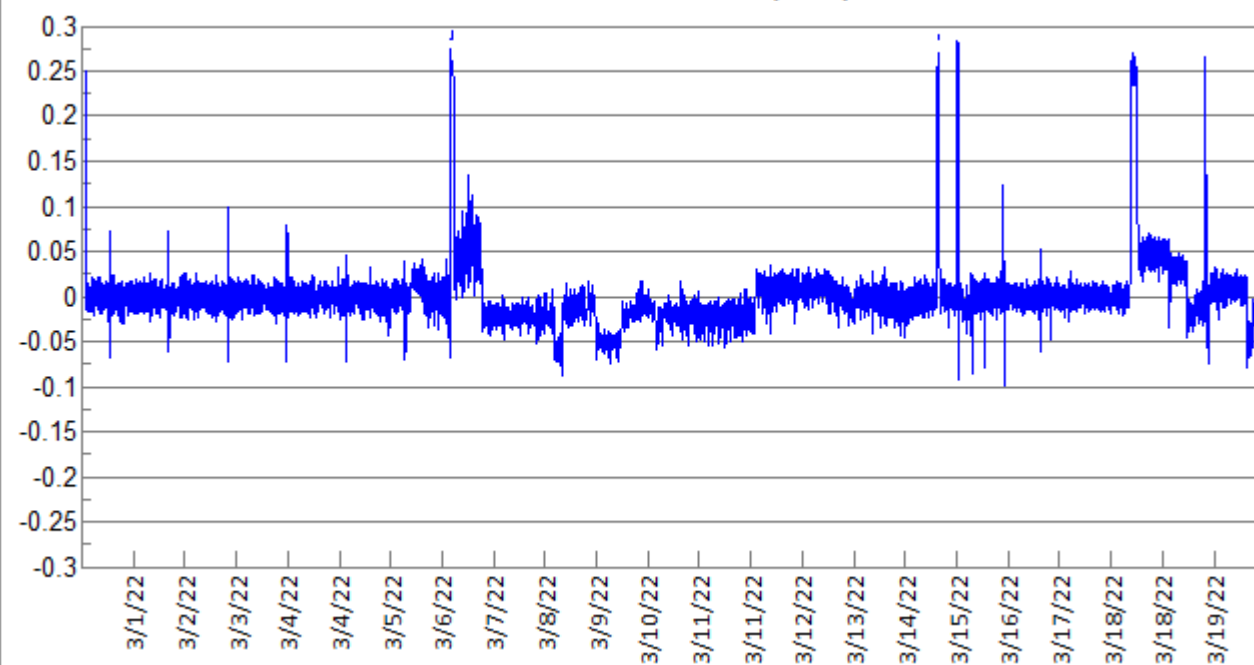
Tank 6 - Level (Feet)



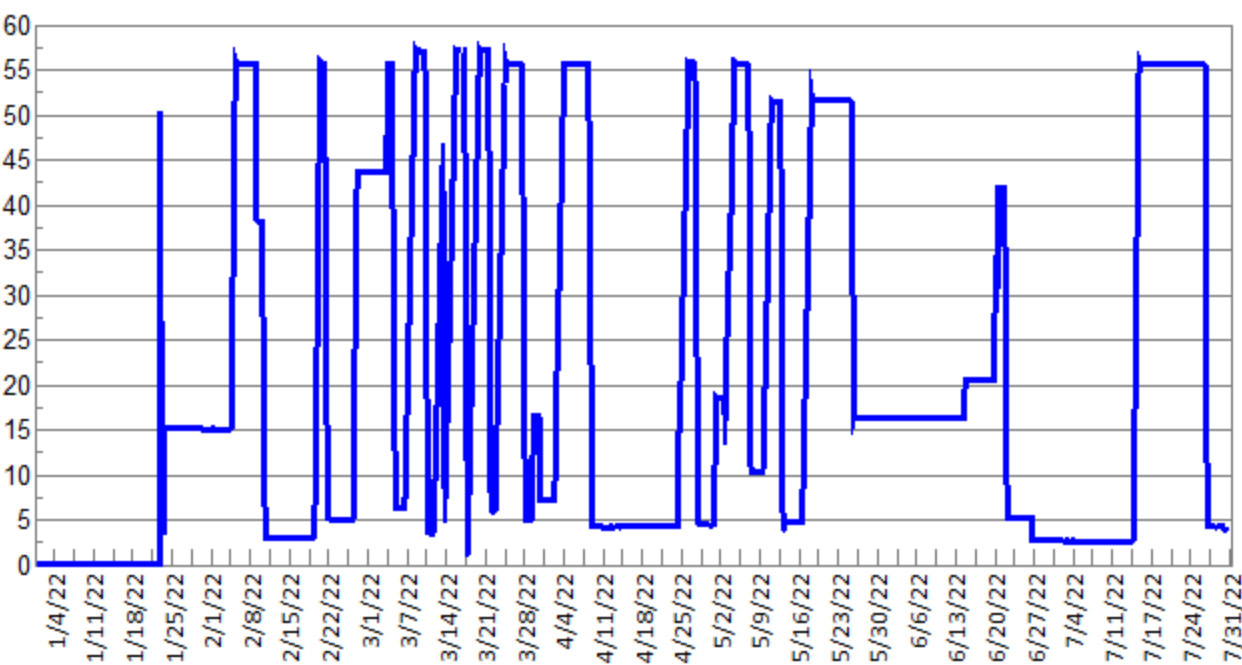
Tank 6 - Pressure (IWC)



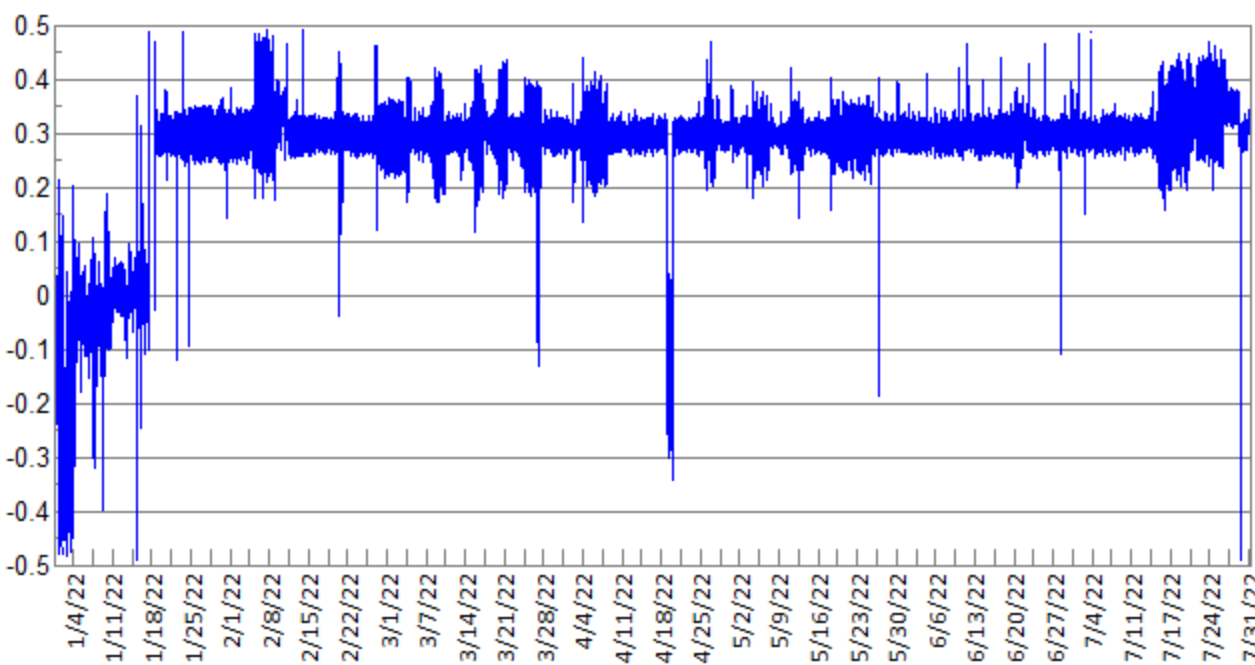
Tank 6 - Pressure (IWC)



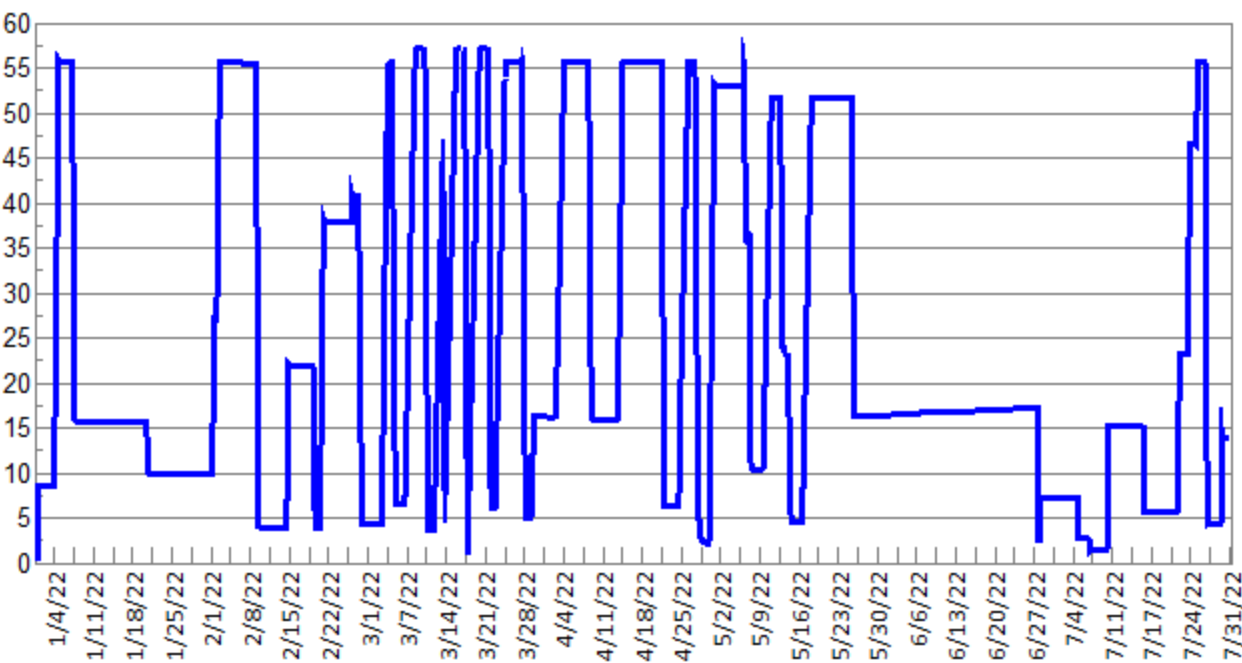
Tank 7 - Level (Feet)



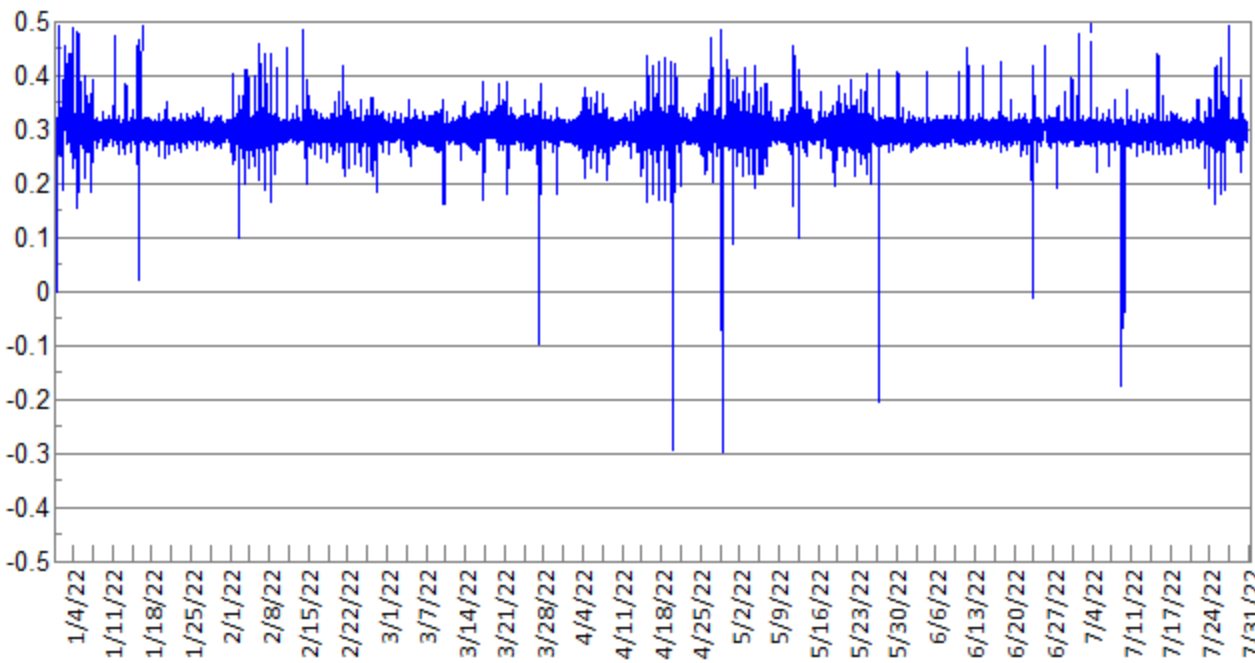
Tank 7 - Pressure (IWC)



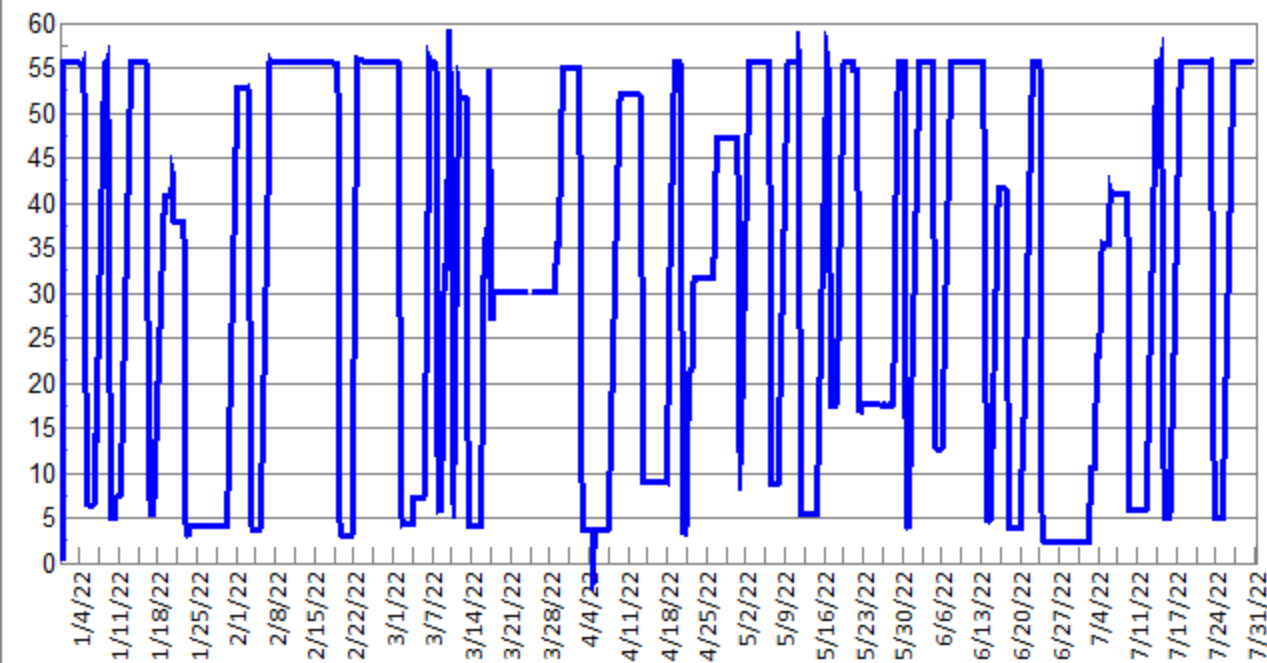
Tank 8 - Level (Feet)



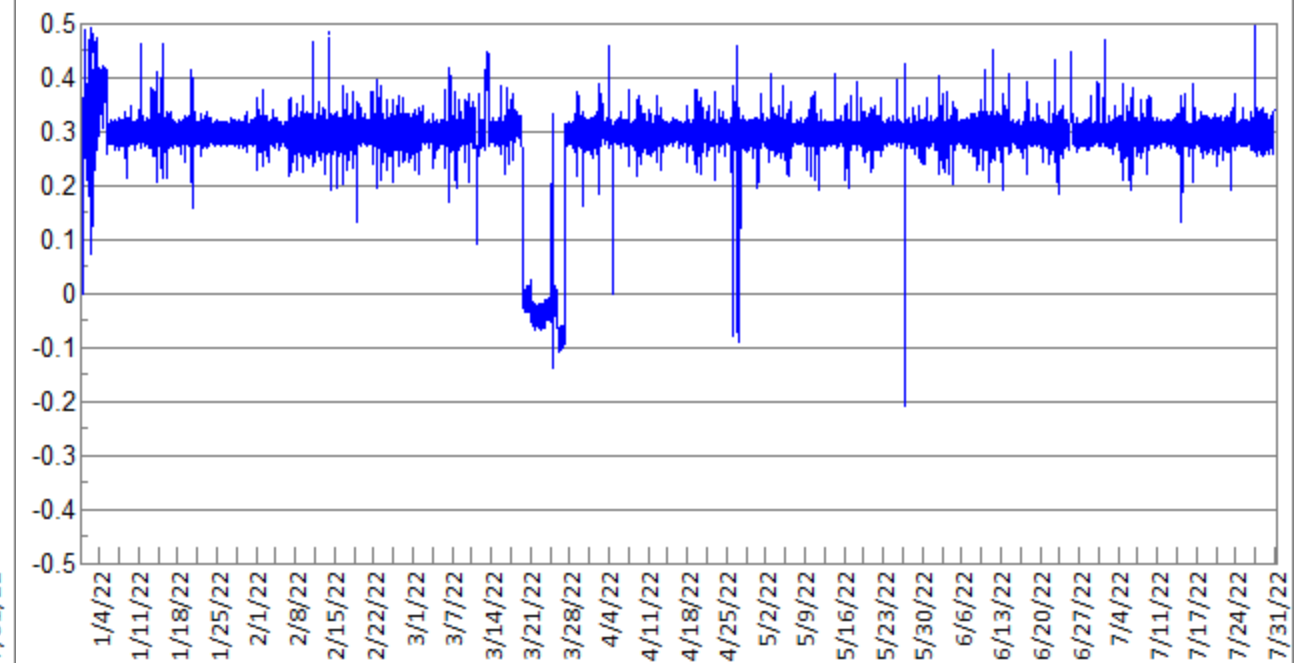
Tank 8 - Pressure (IWC)



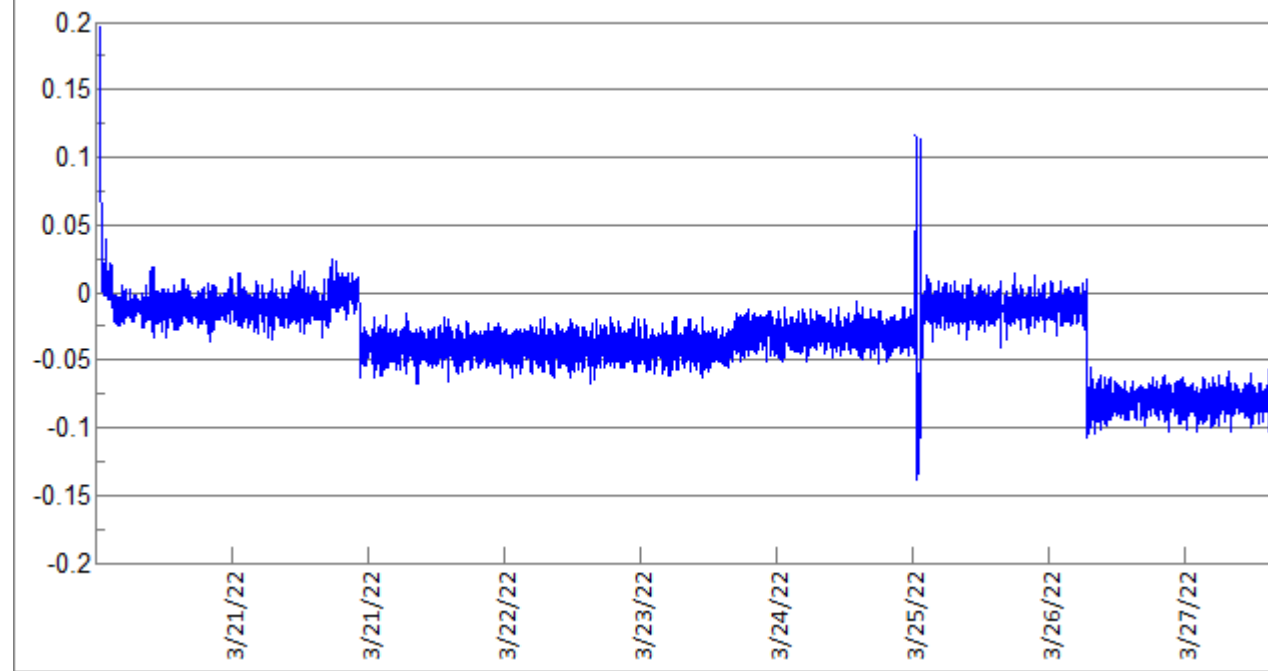
Tank 9 - Level (Feet)



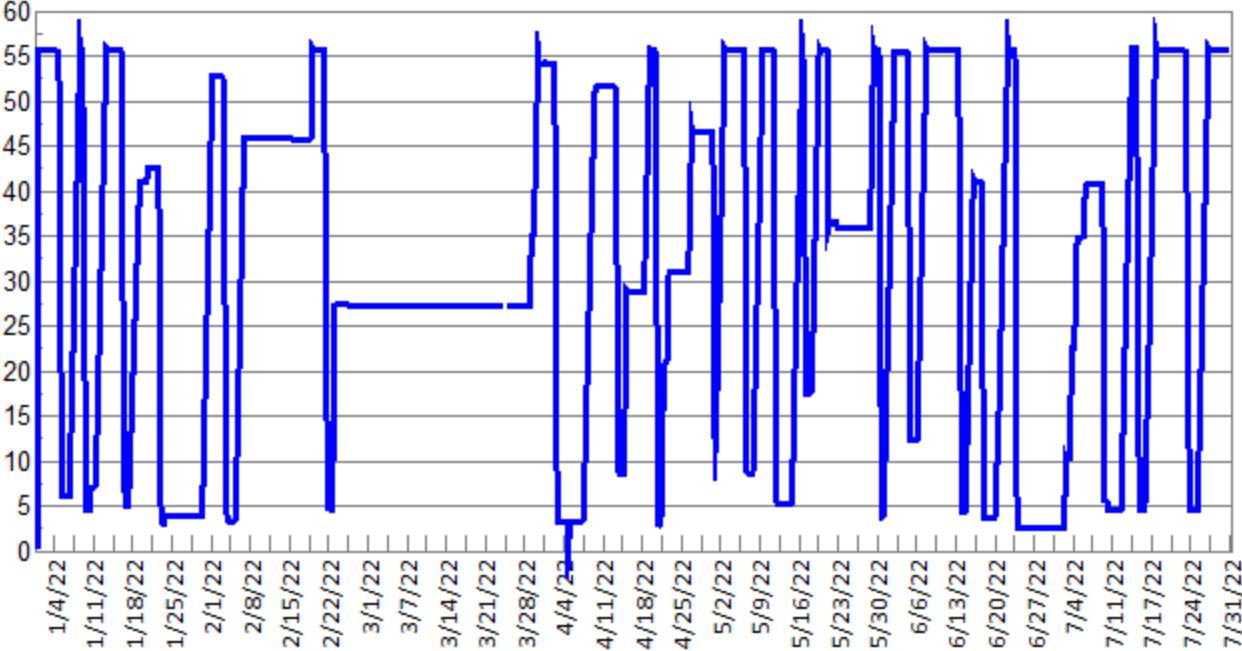
Tank 9 - Pressure (IWC)



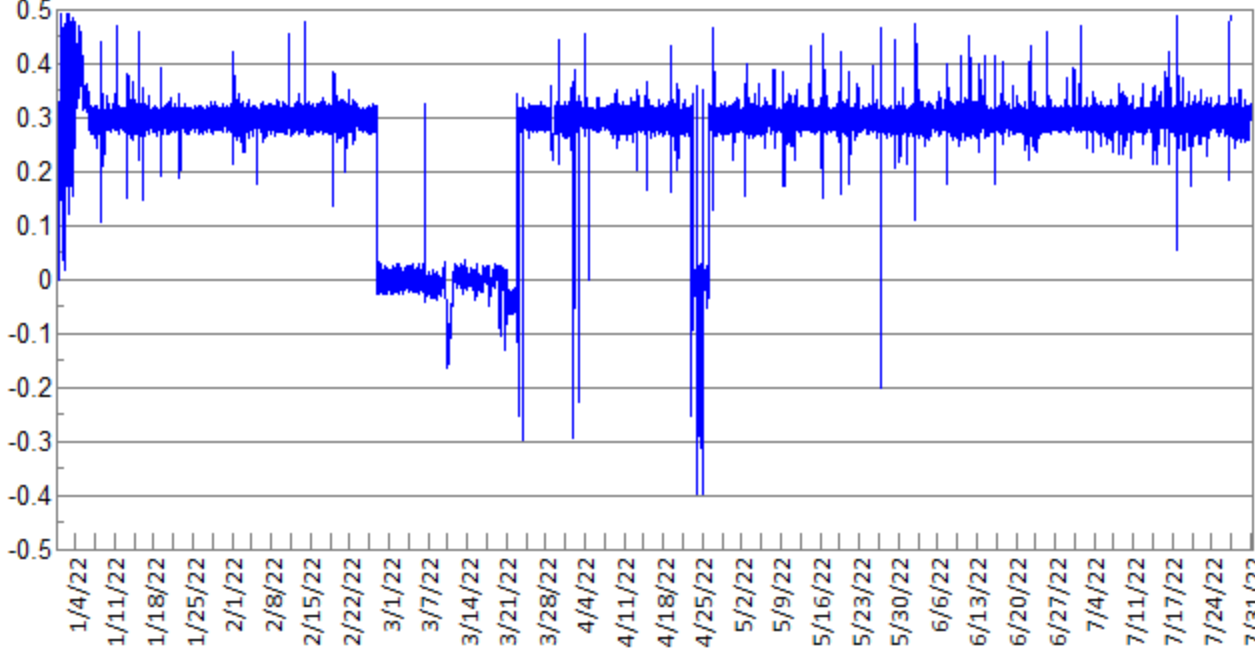
Tank 9 - Pressure (IWC)



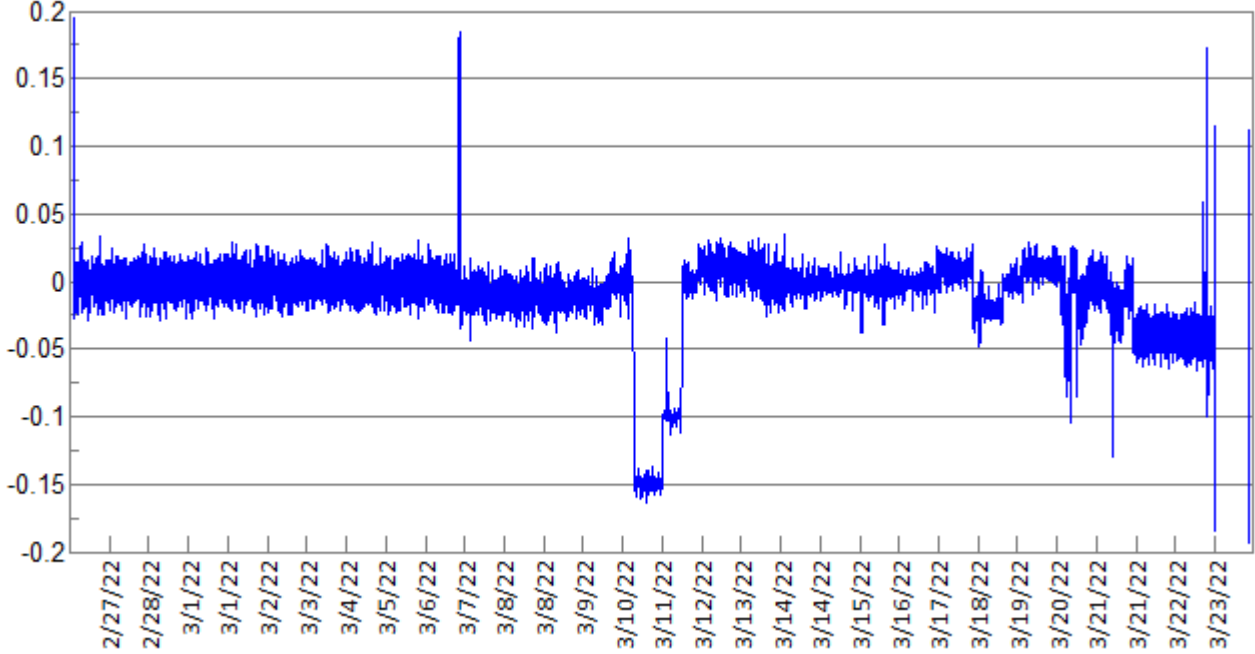
Tank 10 - Level (Feet)



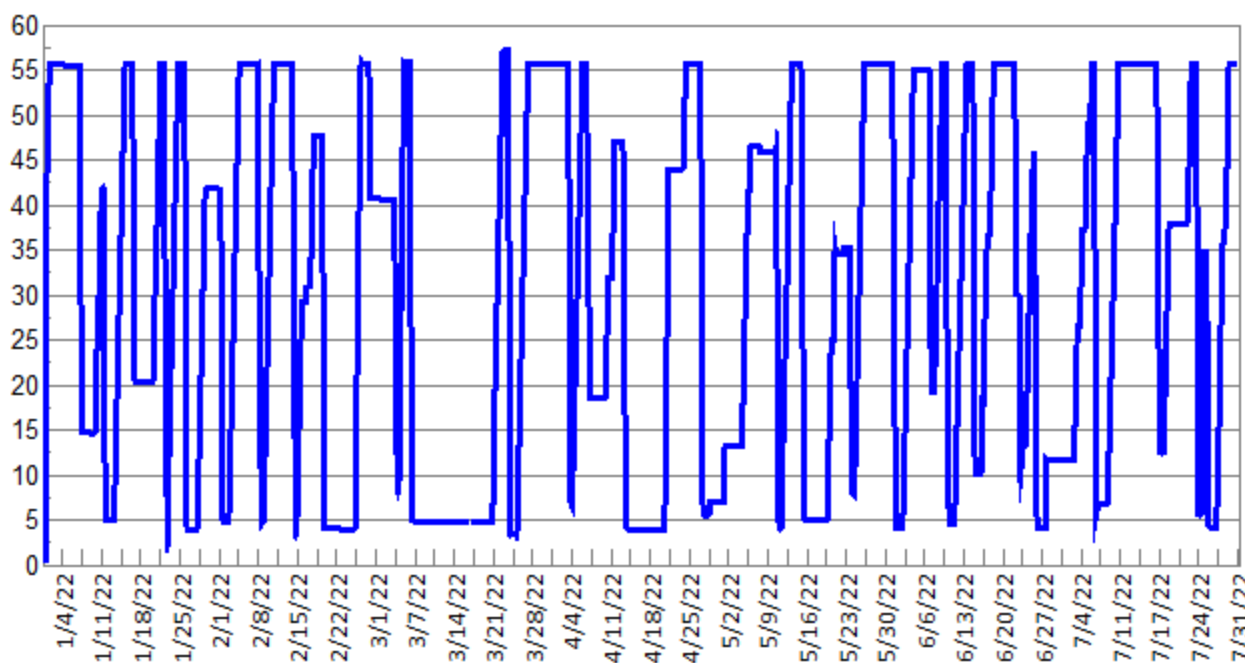
Tank 10 - Pressure (IWC)



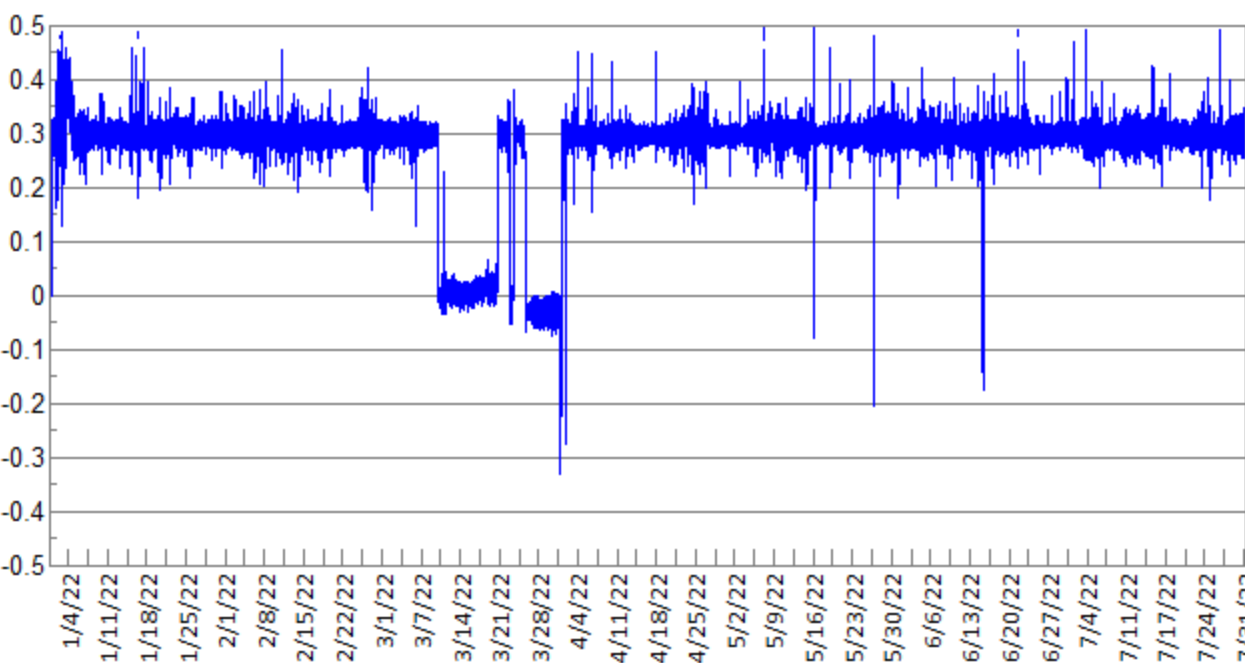
Tank 10 - Pressure (IWC)



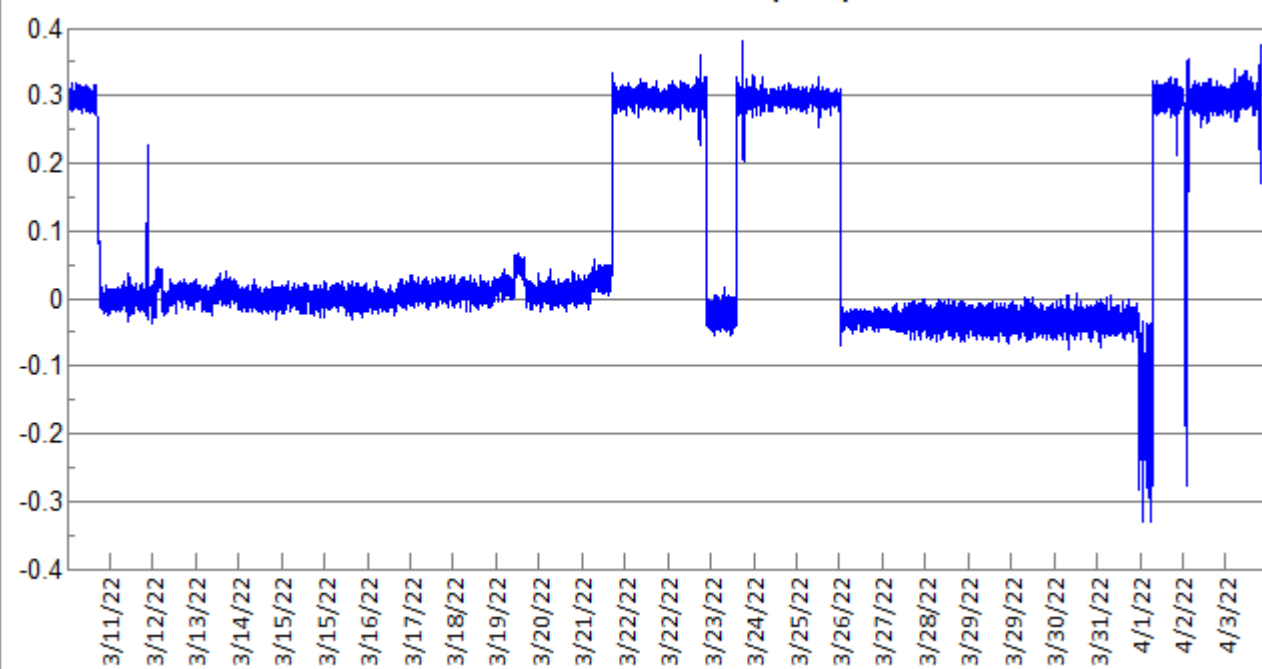
Tank 11 - Level (Feet)



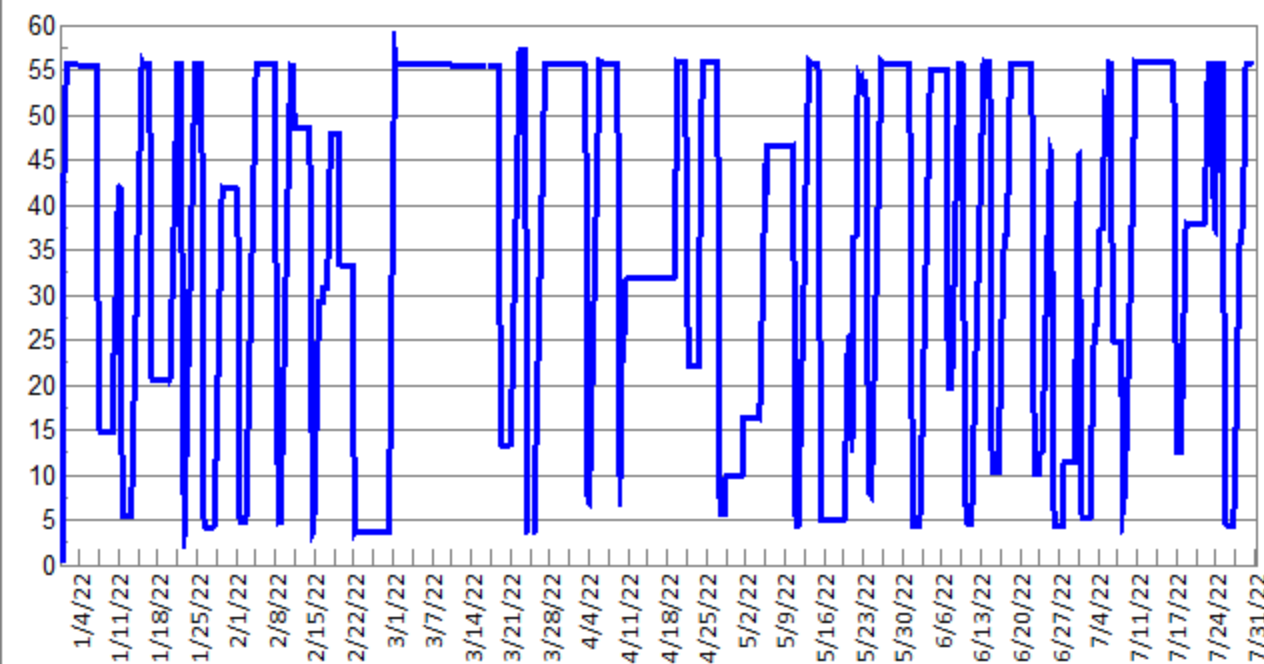
Tank 11 - Pressure (IWC)



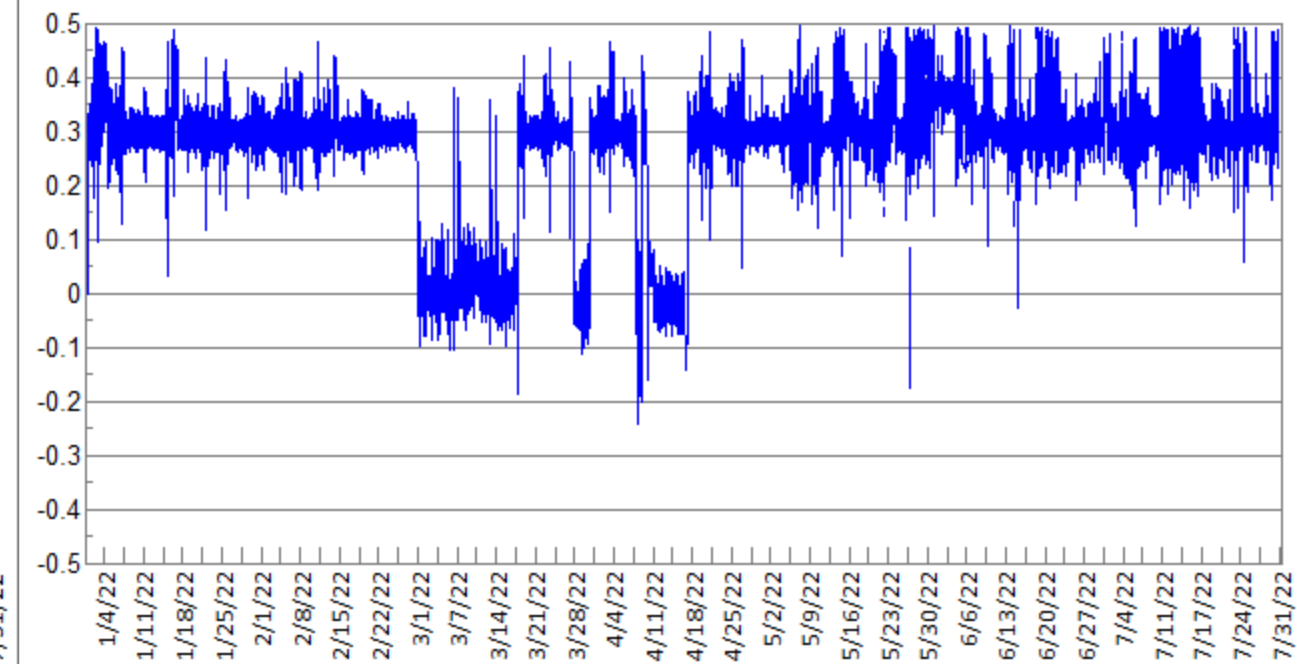
Tank 11 - Pressure (IWC)



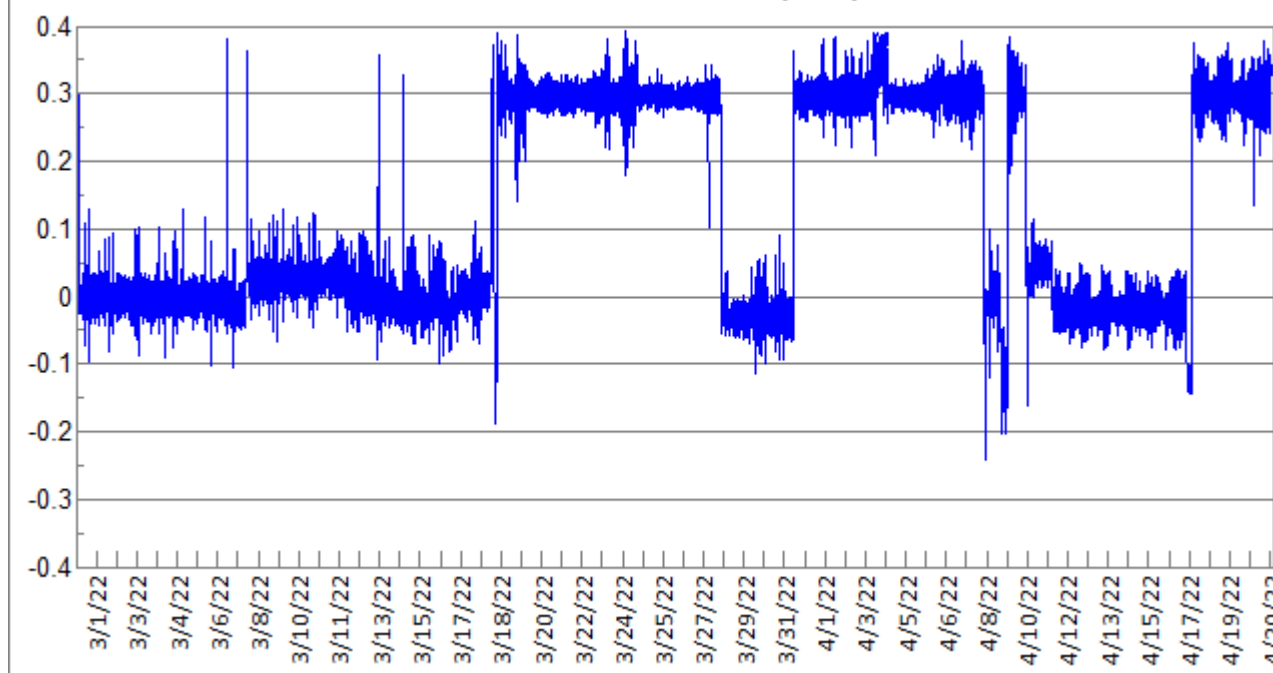
Tank 12 - Level (Feet)



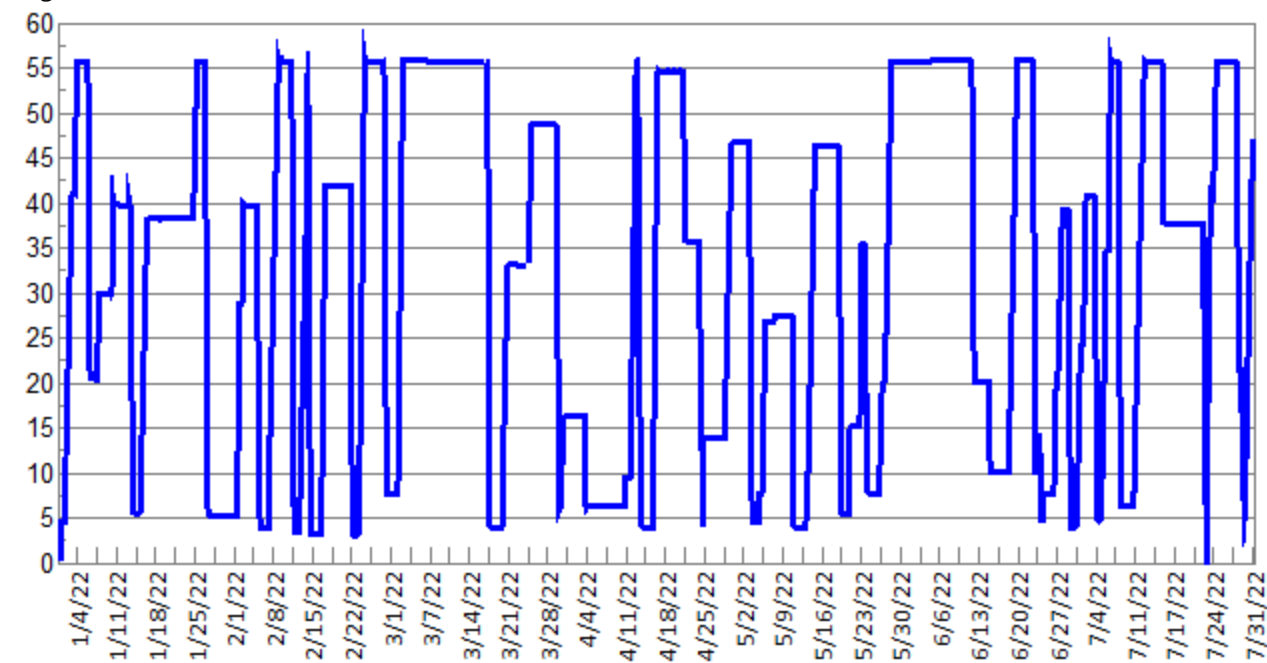
Tank 12 - Pressure (IWC)



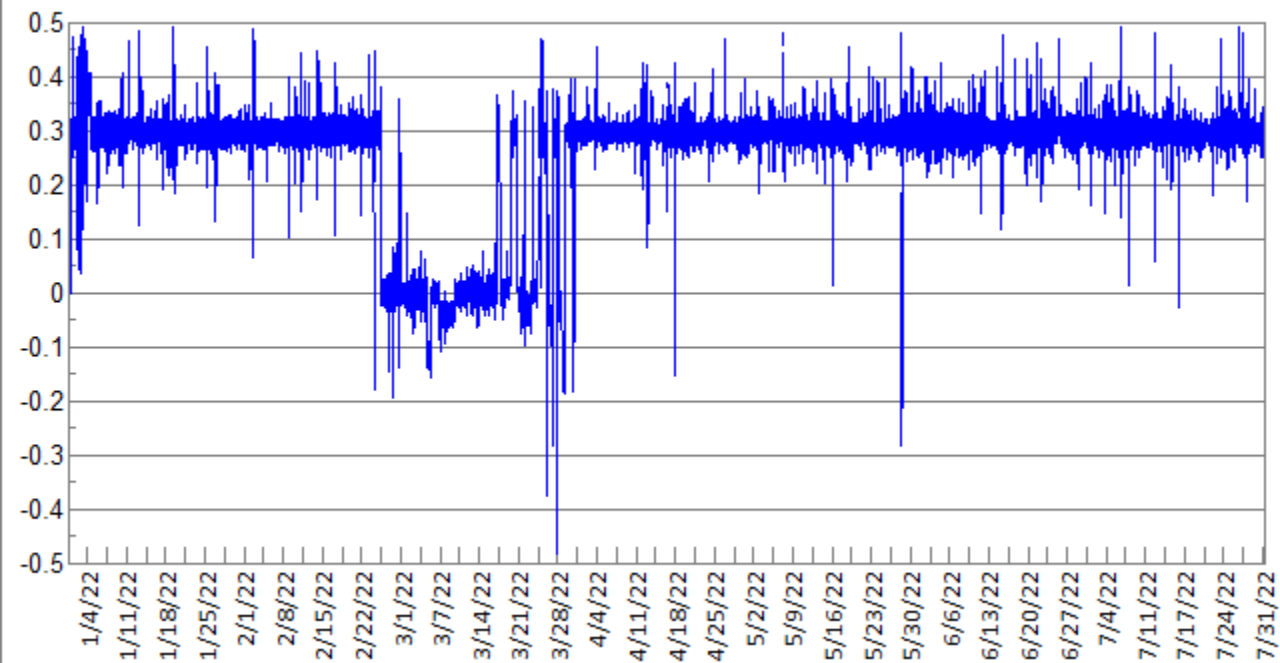
Tank 12 - Pressure (IWC)



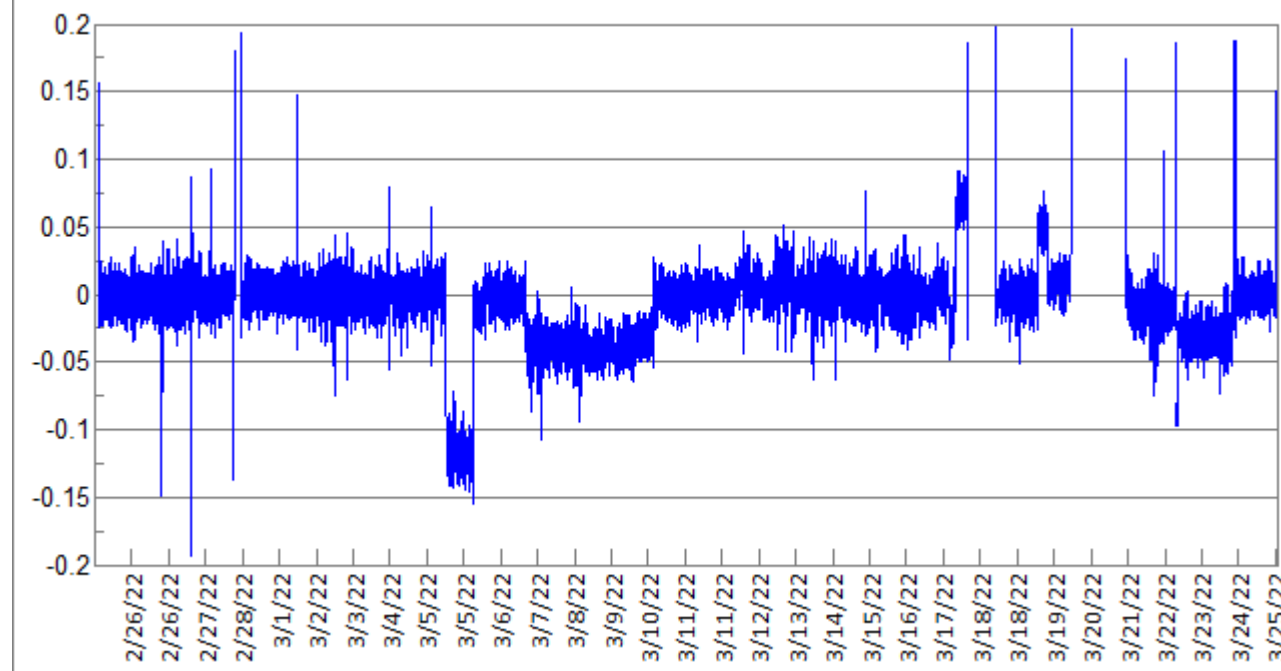
Tank 13 - Level (Feet)



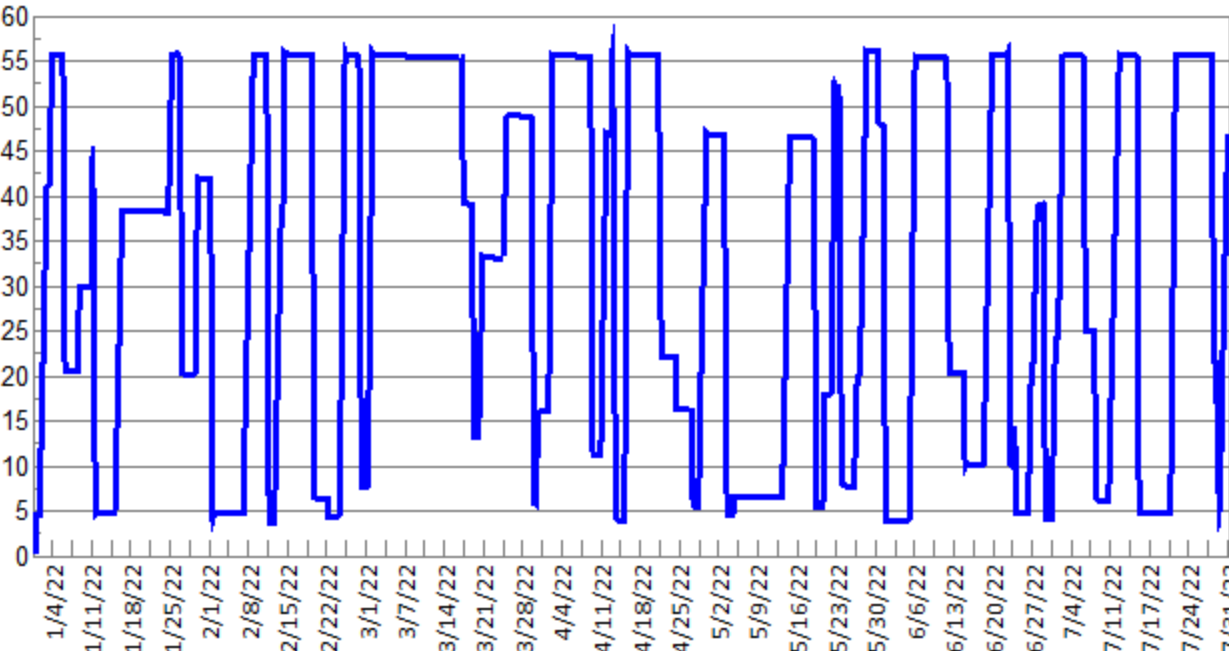
Tank 13 - Pressure (IWC)



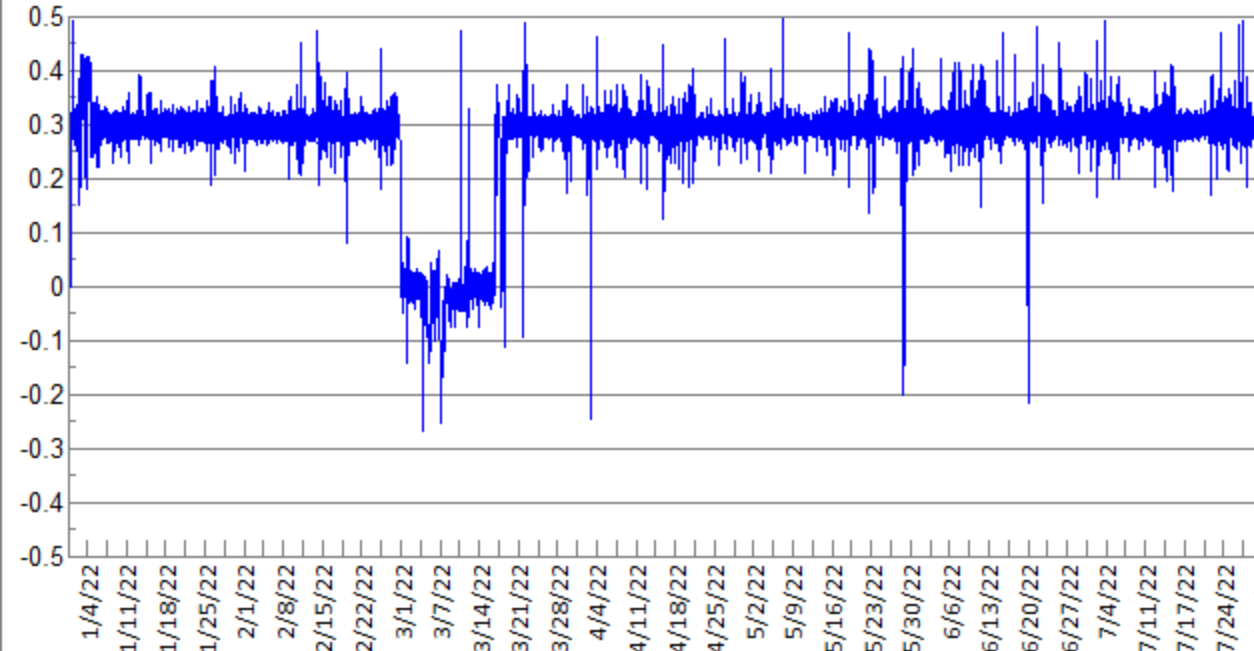
Tank 13 - Pressure (IWC)



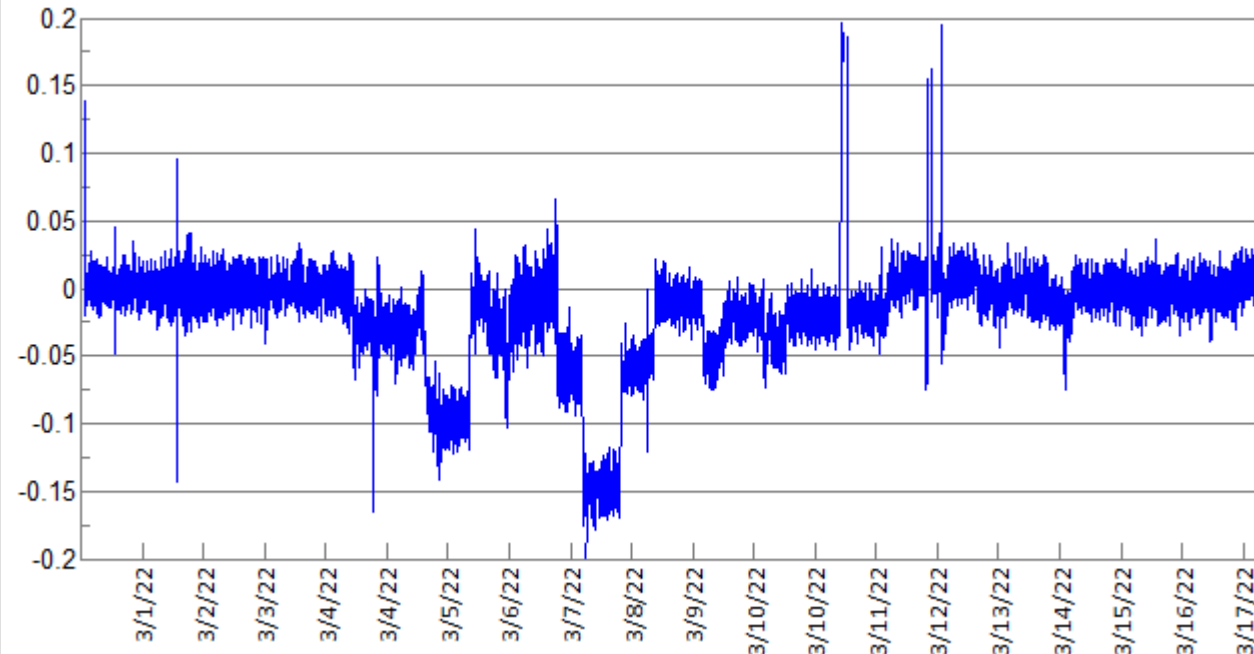
Tank 14 - Level (Feet)

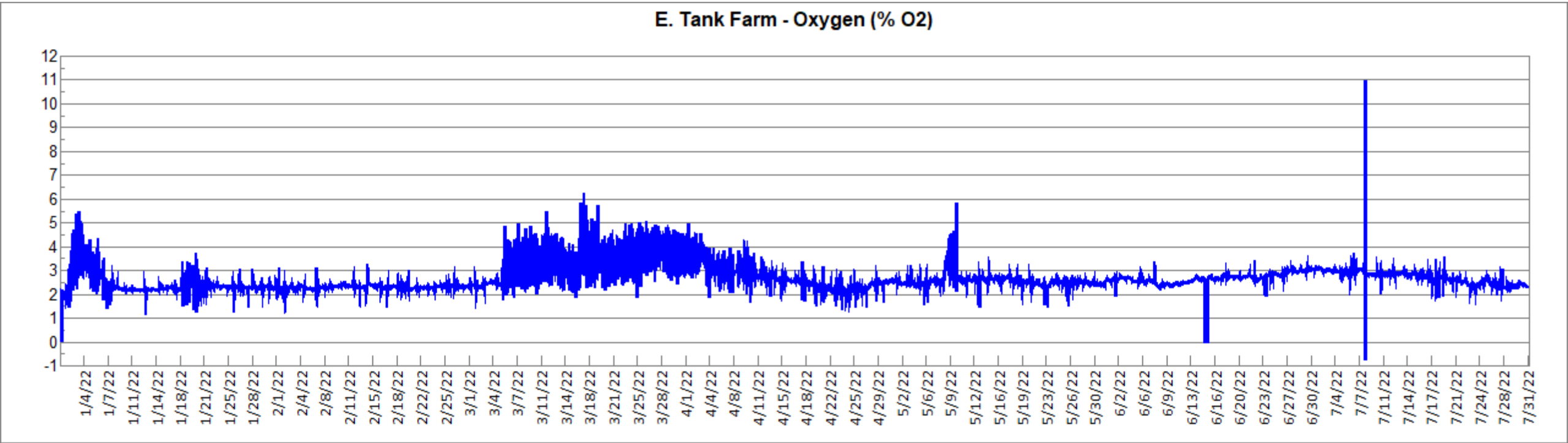


Tank 14 - Pressure (IWC)



Tank 14 - Pressure (IWC)





NOTE:
X-axis shows time (date)
Y-axis shows oxygen percentage in the VMT Tank Farm

Appendix C

Input/Outputs Data from TANKS 5.0 Model

Tank Inputs

tankType	{"tanTyp":"Vertical Fixed Roof Tank"}
tankIdentification	{ "tankID":"Valdez Example 1", "tankDescription":""," "tankCity":"Valdez", "tankState":"Alaska", "company":"None"} {"loc":"Seattle, WA", "houAvgMinAmbTem":{"Jan":37.6,"Feb":37.8,"Mar":39.7,"Apr":42.8,"May":48,"Jun":52.4,"Jul":56.4,"Aug":56.5,"Sep":52.9,"Oct":46.5,"Nov":40.5,"Dec":36.8,"Ann":45.7}, "houAvgMaxAmbTem":{"Jan":46.4,"Feb":49.4,"Mar":52.4,"Apr":57.2,"May":63.7,"Jun":68.5,"Jul":75.1,"Aug":74.8,"Sep":69.5,"Oct":58.6,"Nov":50.3,"Dec":45.4,"Ann":59.3}, "avgWinSpe":{"Jan":8.5,"Feb":8.3,"Mar":8.5,"Apr":7.8,"May":7.6,"Jun":7.6,"Jul":7.2,"Aug":6.9,"Sep":6.7,"Oct":7.2,"Nov":8.1,"Dec":8.7,"Ann":7.8}, "avgDaiTotInsFac":{"Jan":316,"Feb":595,"Mar":882,"Apr":1329,"May":1678,"Jun":1842,"Jul":1951,"Aug":1679,"Sep":1235,"Oct":671,"Nov":356,"Dec":267,"Ann":1067}, "avgAtmPre":14.47}
location	{ "sheLen":""," "sheHei":40," "sheDia":250," "maxLiqHei":15," "avgLiqHei":10," "minLiqHei":""," "tanHea":""," "maxHeaTem":""," "avgHeaTem":""," "minHeaTem":""," "heaCyc":""," "rooTyp":"Flat", "vacSet":-0.03," "preSet":0.03," "vapSpaPre":0," "tanIns":"Not Insulated", "tanConRooSlo":""," "tanDomRooRad":""," "conDev":"No Control Device", "conEff":""," "tanSha":"Cylinder", "bulTemMet":"AP-42 Calculation", "bulTem":""," "sheLen2":""," "bottomShape":"flat", "bottomSlope":""," "liqHeelType":"full", "liqHeelHeight":3," "selSupRoo":""," "numCol":""," "effColDia":""," "intSheCon":""," "priSea":""," "secSea":""," "seaFit":""," "decTyp":""," "tanCon":""," "decCon":""," "decSea":""," "decConWid":""," "decConLen":""}
tankChar	{ "accHatTyp":""," "accHatCou":""," "colWelTyp":""," "colWelCou":""," "unsGuiPolTyp":""," "unsGuiPolCou":""," "sloGuiPolTyp":""," "sloGuiPolCou":""," "gauFloWelTyp":""," "gauFloWelCou":""," "gauHatTyp":""," "gauHatCou":""," "vacBreTyp":""," "vacBreCou":""," "decDraTyp":""," "decDraCou":""," "decLegTyp":""," "degLegCou":""," "fixLegTyp":""," "fixLegCou":""," "rimVenTyp":""," "rimVenCou":""," "ladWelTyp":""," "ladWelCou":""," "ladSloGuiTyp":""," "ladSloGuiCon":""," "decLegPonTyp":""," "degLegPonCou":""," "decLegCenTyp":""," "degLegCenCou":""}
tankFit	

customOrganicLiquids	{}
customMixedOrganicLiquids	{}
customPetroleumLiquids	{}
customLocations	{}

Tank Outputs

Tank ID	Valdez Example 1
Tank Type	Vertical Fixed Roof Tank
Description	
City, State	Valdez, Alaska
Company	None
Emissions Type	Total VOC
Annual Standing Losses (lb/yr)	243176.7205
Annual Working Losses (lb/yr)	2981.353693
Annual Total Losses (lb/yr)	246158.0742
January Standing Losses (lb/yr)	6449.792332
January Working Losses (lb/yr)	190.1371315
January Total Losses (lb/yr)	6639.929464
February Standing Losses (lb/yr)	9882.592019
February Working Losses (lb/yr)	200.4417155
February Total Losses (lb/yr)	10083.03373
March Standing Losses (lb/yr)	15080.57845
March Working Losses (lb/yr)	214.6519767
March Total Losses (lb/yr)	15295.23043
April Standing Losses (lb/yr)	21553.28597
April Working Losses (lb/yr)	238.8916563
April Total Losses (lb/yr)	21792.17763
May Standing Losses (lb/yr)	29599.94154
May Working Losses (lb/yr)	272.1402743
May Total Losses (lb/yr)	29872.08182
June Standing Losses (lb/yr)	33089.59928
June Working Losses (lb/yr)	298.2589541
June Total Losses (lb/yr)	33387.85823
July Standing Losses (lb/yr)	40440.48228
July Working Losses (lb/yr)	328.7892149
July Total Losses (lb/yr)	40769.27149
August Standing Losses (lb/yr)	35572.77972
August Working Losses (lb/yr)	321.8935029
August Total Losses (lb/yr)	35894.67323
September Standing Losses (lb/yr)	24907.51699
September Working Losses (lb/yr)	288.9212431
September Total Losses (lb/yr)	25196.43823
October Standing Losses (lb/yr)	13400.68395
October Working Losses (lb/yr)	237.7045651
October Total Losses (lb/yr)	13638.38852
November Standing Losses (lb/yr)	7412.42507
November Working Losses (lb/yr)	203.358353

November Total Losses (lb/yr)	7615.783423
December Standing Losses (lb/yr)	5787.042936
December Working Losses (lb/yr)	186.1651056
December Total Losses (lb/yr)	5973.208042

Appendix D

Alyeska Letter (GL60146) dated March 7, 2025



P.O Box 196660

ANCHORAGE, ALASKA 99519-6660

TELEPHONE (907) 787-8700

March 7, 2025

Letter No. 60176
File 7.14.02

Donna Schantz
Executive Director
Prince William Sound Regional Citizens' Advisory Council
130 S. Meals, Ste. 202
Valdez, AK 99686

Attention: Donna Schantz, Executive Director

Subject: Response to Draft Report on VOC Emissions from the Snow Removal Incident at Alyeska's VMT in Early 2022, Dr. Ranajit Sahu, December 2024

Dear Ms. Schantz:

Thank you for sharing with us the Draft *Report on Volatile Organic Chemicals (VOC) Emissions from the Snow Removal Incident at Alyeska's Valdez Marine Terminal East Tank Farm in Early 2022*, dated December 2024, prepared by RCAC's consultant Dr. Ranajit Sahu (report). We appreciate your allowing us the opportunity to review and provide our own perspective concerning its analyses, findings and conclusions. As always, we value RCAC's feedback to assist us in ensuring the safe operation of the VMT and TAPS.

Alyeska has reviewed Dr. Sahu's report, and respectfully disagrees with many of its calculations and conclusions. The report recites and appears to rely upon several factual inaccuracies, including misstating PVV set points and incorrectly calculating the time-period during which PVVs were damaged before being plugged or repaired. Of particular significance is that the report inaccurately describes the operation and dynamics of the VMT's tank and vapor control system, which is fundamental to understanding how Alyeska maintained safe operations and mitigated impacts during these unprecedented events. We also note that the report does not include the modeling inputs and outputs, or other data relied upon by Dr. Sahu. In summary, we believe that the report makes unsupportable assumptions and overestimates the total volatile organic chemicals (VOC) tank emissions that may have occurred during the event. The report also disregards or discounts certain critical factors and conditions that do not support the conclusions drawn.

Thank you for the opportunity to provide feedback on this report. Alyeska looks forward to additional discussions with you.

Please direct all written correspondence to:

Andres Morales
Emergency Preparedness & Response
Alyeska Pipeline Service Company
P.O. Box 196660, MS 575
Anchorage, AK 99519

If you have any questions regarding this submittal, please contact Andres Morales at (907) 787-8303.

Sincerely,

A handwritten signature in blue ink, appearing to read "Andres Morales", followed by a long horizontal line.

Andres Morales
Emergency Preparedness and Response Director
Alyeska Pipeline Service Company

Briefing for PWSRCAC Board of Directors – May 2025

INFORMATION ITEM

Sponsor: Joe Lally and the Legislative Affairs Committee

Project number and name or topic : 4400 and 4410 – Federal and State Government Affairs Update

1. **Description of agenda item:** Staff and the Council's State lobbyist Gene Therriault and Washington, D.C. legislative monitors Roy Jones, along with Genevieve Cowan and CJ Zane from Blank Rome Government Relations, will report on developments and prospects in Juneau and Washington, D.C., related to PWSRCAC legislative priorities.
2. **Why is this item important to PWSRCAC:** Many issues of vital importance to the Council and its mission are debated and decided in Juneau and Washington, D.C. The Legislative Affairs Committee works to advance legislative priorities that are consistent with our mission, OPA 90, and our contract with Alyeska Pipeline Service Company.
3. **Previous actions taken by the Board on this item:** LAC was created by the Board in 1991, and has operated ever since.
4. **Summary of policy, issues, support, or opposition:** Not applicable.
5. **Committee Recommendation:** Not applicable.
6. **Relationship to LRP and Budget:** Program 4400 - Federal Governmental Affairs, 4410 – State Government Affairs, and 2700 - Legislative Affairs Committee are all in the approved FY2025 budget with a combined budget total of \$150,900.
7. **Action Requested of the Board of Directors:** None, item is for information only.
8. **Attachments:** None.

Briefing for PWSRCAC Board of Directors – May 2025

INFORMATION ITEM

Sponsor: Maia Draper-Reich and the
Information and Education Committee

Project number and name or topic: 3500 - Community Outreach Program

1. **Description of agenda item:** This is an information item to provide the Board an update on PWSRCAC outreach events, as well as work accomplished by the Fishing Vessel Program Community Outreach (3410), Youth Involvement (3530), and Internship (3903) projects during FY2025.
2. **Why is this item important to PWSRCAC:** The Community Outreach program and related IEC projects help achieve the Council's mission through increasing public awareness and sharing the Council's work with a variety of audiences. The different types of programs and events also increase communications with member entities and individuals in the Exxon Valdez oil spill region. This work helps maintain regional balance and foster partnerships. This is an update about community outreach activities provided by the Council over the past year.
3. **Previous actions taken by the Board on this item:** None.
4. **Summary of policy, issues, support, or opposition:** According to OPA 90 and the Council's contract with Alyeska, community outreach fulfills the following requirements:

OPA 90:

- Provides regional balance, broadly representative of communities and interests in the region.
- Provides advice to regulators on the federal and state levels.
- Provides advice and recommendations on policies, permits, and site-specific regulations relating to the operation and maintenance of terminal facilities and crude oil tankers.
- Provides advice and recommendations on port operations, policies, and practices.
- Fosters partnerships among industry, government, and local citizens.

Alyeska Contract:

- Provides 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.
- Increases public awareness of subjects listed above.
- Provide local and regional input into the design of appropriate 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. **Committee Recommendation:** IEC reviews updates on Community Outreach efforts and projects at each committee meeting. This is an informational item to the Board only; no action is recommended by the committee at this time.
6. **Relationship to LRP and Budget:** Program 3500 - Community Outreach, Project 3410 - Fishing Vessel Program Community Outreach, Project 3530 - Youth Involvement, and Project 3903 - Internship are in the approved FY2025 budget with a combined budget total of \$133,810.
7. **Action Requested of the Board of Directors:** None. This item is for information only.
8. **Attachments:** None.

Briefing for PWSRCAC Board of Directors – May 2025

INFORMATION ITEM

Sponsor: Donna Schantz, Robert Archibald, and Amanda Bauer

Project number and name or topic: 5053 - Addressing Risks and Safety Culture at the VMT

1. **Description of agenda item:** This is an information item related to the April 2023 PWSRCAC-sponsored report "[Assessment of Risks and Safety Culture at Alyeska's Valdez Marine Terminal](#)" (the Report) and the current status of the Report recommendations. This presentation will also offer some suggested modifications to the current recommendations for Board consideration.

2. **Why is this item important to PWSRCAC:** In 2021-2022, PWSRCAC received a significant number of concerns from, at that time, current and former VMT employees. In the spring of 2022, the VMT had the oil storage tank vent damage incident, which a number of the concerns were connected to, that resulted in the release of vapors from the tanks. The vapor release was a consequence of damage from substantial and unremoved snow and ice on top of the tanks. In 2022, the Council retained Billie Garde to review and investigate the employee concerns and information provided to PWSRCAC.

As a result, Ms. Garde prepared the Report to identify whether "there is a current level of unacceptable safety risk to the Valdez Marine Terminal (VMT), its workforce, the community of Valdez, and the environment." The Report concluded that "the information reviewed supports a well-founded concern that the current state of VMT operations, maintenance, and management present a real risk of a serious accident or incident in the near future. The recommendations contained herein support in-depth assessments of the processes, as actually implemented by Alyeska, to safely operate and maintain the VMT, while managing the risks inherent in its activities."

Since the issuance of the Report, Alyeska has responded with a series of updates and information to the Board and staff on what actions it took in response to the Report. Alyeska has now closed its response to the Report. In addition, regulators have responded to some of the findings and some government actions remain ongoing.

This update will advise the Council Board on the status of actions taken in response to the Report's recommendations, continued risks to operations at the VMT emerging from the Report, and an update on recommendations to mitigate said risks.

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

Meeting	Date	Action
Board	4/5/2022	Authorized a transfer of \$50,000 from the contingency fund to a new project #5053 titled VMT System Integrity and Safety Culture Issues and authorized the Executive Director to enter into a sole source contract with Ms. Billie Garde to

500.104.250501.GardeUpdate

Addressing Risks and Safety Culture at the VMT 4-8

		assist with work under project 5053 VMT System Integrity and Safety Culture Issues.
Board	12/20/2022	Authorized a budget modification from the contingency fund to project 5053: System Integrity and Safety Culture Issues in the amount of \$5,000; and authorized a \$5,000 increase to the agreement with Billie Garde for graphic design/publishing services, bringing the total contract amount for project 5053 to a not to exceed amount of \$55,000.
Board	4/14/2023	Accepted the report titled "Assessment of Risks and Safety Culture at Alyeska's Valdez Marine Terminal" by Billie Garde as meeting the terms of contract 5053.22.01.
Board	9/21/2023	Authorized a FY2024 budget modification moving \$15,000 from the contingency fund to project 5053 and authorized a professional services agreement with Billie Garde in the amount of \$15,000 to assist staff in following up on the recommendations contained in the report titled "Assessment of Risks and Safety Culture at Alyeska's Valdez Marine Terminal."

4. **Summary of policy, issues, support, or opposition:** Alyeska expressed appreciation to the Council regarding the openness around the Report, especially that a draft was provided, and adjustments that Alyeska requested were made. Alyeska conveyed to the Council that they took the Report seriously, and they formed a team to look into the different themes identified. Alyeska also created a Management Action Plan (MAP) and has reported to the Council on several occasions as to specific actions taken. Alyeska's MAP close-out report is included as an attachment.

5. **Committee Recommendation:** None.

6. **Relationship to LRP and Budget:** Work associated with this project was included in the FY2025 budget under contract 5053.25.01, for a retainer not to exceed \$25,000.00.

7. **Action Requested of the Board of Directors:** None, item is for information only.

8. **Attachments:**

- a) Recommendations from the PWSRCAC report titled "[Assessment of Risks and Safety Culture at Alyeska's Valdez Marine Terminal](#)" (Pages 7 and 8 of the Report).
- b) Alyeska's Management Action Plan Closeout Report, October 2024.

RECOMMENDATIONS

The following recommendations are made to the PWSRCAC Board of Directors for their consideration to help (1) ensure the safety and environmental integrity of the VMT, its employees, and the community of Valdez; and (2) protect the integrity of Prince William Sound. These recommendations also reflect concern for the potential consequences of any major event, given the ramifications of any disruption of Alyeska's ability to meet its obligation to safely load oil tankers at the VMT.

1. Recommend that the PWSRCAC request Congress to initiate a GAO audit to determine the adequacy of present regulatory oversight of Alyeska's VMT operations by federal agencies with responsibility over the VMT, including compliance with the Federal Grant of Right-of-Way and Stipulations, and the State Lease. The audit should also:
 - identify any gaps in regulatory oversight created by the changes in recent years within federal agency responsibilities;
 - determine if the TAPS Improvement Plan, submitted to Congress in 1994 following the 1993 Oversight Committee hearings, and the Updated Plan in 1997, remains a commitment to Congress with expected conformance;
 - encompass a detailed review of the Alyeska Quality and Audit departments, their independence, resources, effectiveness, and reliability; and,
 - consider legislation that requires Agency coordination at the VMT.

(VMT operational integrity is particularly important now because an incident or accident could interrupt the flow of oil from the Alaska North Slope, thus endangering U.S. energy supplies.)

2. Recommend that the PWSRCAC request the federal Occupational Safety and Health Administration (OSHA) conduct or commission a full independent audit of applicable VMT systems for compliance with PSM. This audit should have a particular emphasis on the PSM elements of Process Hazard Analysis, Compliance with Standards, Hazard Identification and Risk Analysis, Management of Change (MOC), Audits, and the adequacy of the Quality Assurance/Quality Control (QA/QC) programs.
3. Recommend that the PWSRCAC request Alyeska and the TAPS Owners to commission an independent full assessment of the Alyeska safety management systems against the American Petroleum Institute (API) Pipeline Safety Management System 1173, and identify any gaps between the current program capabilities and a compliant program. Once the audit is completed and recommendations are made, the recommendations should address a specific timeline for actual completion of the necessary changes to ensure safe operations. To be meaningful, Alyeska must agree to actually take action to respond to any findings and provide the resources to do so.¹

¹ Ensure that any assessment include a review of the current Alyeska Audit, Compliance, Risk Assessment, and QA/QC departments, and their procedures and processes, to ensure that these departments have sufficient resources, authority, independence, reporting structure, and historical knowledge, to provide meaningful oversight on all maintenance and operations activities at the VMT, as contemplated by API 1173.

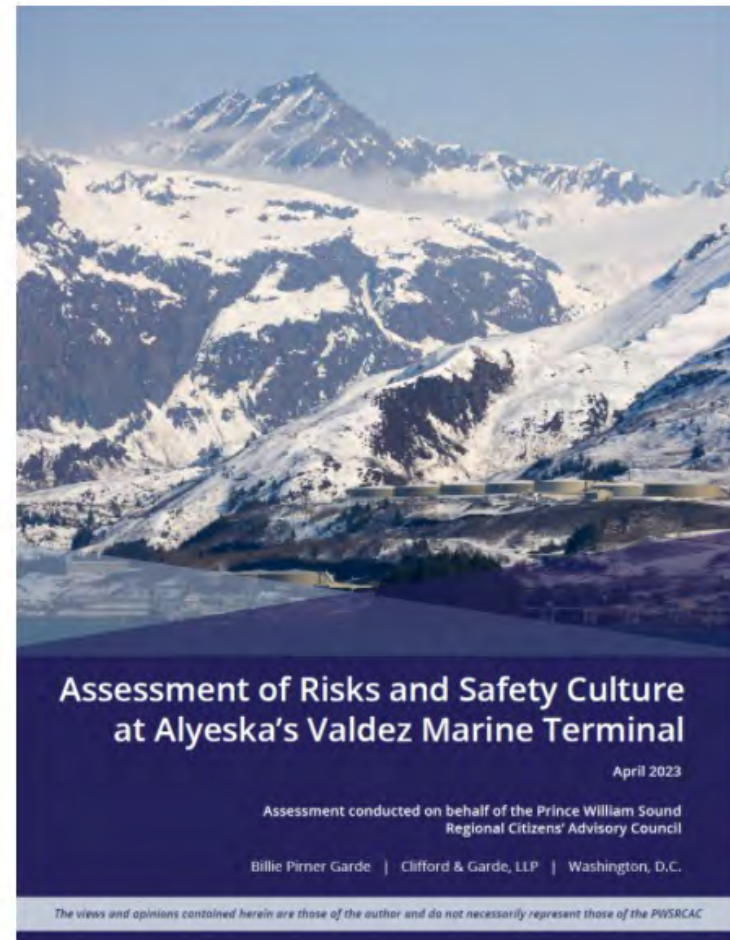
4. Recommend to Alyeska and the TAPS Owners that they commission an immediate independent audit to be conducted of all deferred maintenance at the VMT, including any deferred work listed on all backlog lists. This audit should determine if the risk ranking of deferred maintenance is consistent with all compliance requirements. It should also review any requested or required formal Process Hazard Analyses and Work Orders requesting the same. Finally, the audit should determine if the risk rankings of identified issues are being inappropriately downgraded, such that there is an inadequate process for managing the reality of hazards between initial identification and repair or replacement.
5. Recommend to Alyeska that it provide mandatory training for all supervisory and management personnel on their responsibilities to promote a strong safety culture, uphold a compliance culture, and to not tolerate harassment, intimidation, retaliation, or discrimination (HIRD). (This training should also be a mandatory part of new manager orientation and be provided on at least a biennial basis to all managers.)
6. Consider the establishment of a PWSRCAC Human Factors advisory committee to advise the Council on the status of the risks to operations and maintenance of the VMT created by Human Factor risks, as recognized by PSM requirements and industry experts, such as the loss of institutional knowledge, staffing, transition issues, fatigue, training, and Safety Culture issues.²
7. Consider the establishment of an appropriate CI protocol for PWSRCAC for the handling of any employee concerns it may receive from concerned VMT employees or contractors in the future.

² Pursuant to the implementing of regulations, the OPA 90, Section 5002(d)(6)(C), (F)(ii), and (G) the Council clearly has the authority to “create additional committees ... as necessary to carry out the above functions...” In 1994, the Council had a Human Factors subcommittee to study the Human Factors that contribute to maritime accidents in Alaska waters. New risks are presenting themselves which require similar study and recommendations regarding Human Factors that contribute to process safety accidents.

Risk & Safety Culture Assessment

Management Action Plan Closeout Report

October 2024



Assessment

- Followed 2022 snow incident at the VMT
- Raised concerns about safety culture and management system, deferred maintenance, process safety, audit and more
- Recapped the history of oversight, safety concerns and the creation of the Open Work Environment on TAPS

Alyeska Response Approach

- Be accountable: Focus on review and improvement
- Look at VMT and TAPS for improvements
- Address the Report's three recommendations to Alyeska, and look for learning opportunities
- Use the MAP process to understand issues, recommend changes, and take action

Management Action Plan primary areas and actions

Alyeska Safety Management System (AMS) – ✓ review past assessments; ✓ simplify AMS documentation; ✓ develop company-wide metrics and assessment process; ✓ revamp SMS understanding and training; ✓ determine timing for future API assessment; ✓ assess opportunities for human factors integration.

Process Safety Management – ✓ clarify and clearly define program; ✓ review and revamp PSM training (SMEs and workers); ✓ review past audits for systemic issues; ✓ assess and trend past performance.

Maintenance Backlog and Engineering Query – ✓ define and assess current TAPS-wide backlog; ✓ assess priority for safety critical systems; ✓ review past maintenance audits for systemic issues; ✓ develop metrics and method to share status TAPS-wide.

Open Work Environment/Employee Concerns Program – ✓ assess manager/supervisor training; ✓ assess ECP reporting structure; ✓ assess Alyeska compliance with 1993 TAPS Improvement Plan.

Audits – ✓ maintenance audit; ✓ Process Safety Management (PSM) audit; ✓ internal safety programs audit; ✓ review past audits for completion/corrective actions.

Training – ✓ needs assessment of leadership training, including executives, directors, managers and front-line supervision; ✓ companywide training.

Stakeholder Engagement – ✓ internal and external communication plans.

Alyeska Safety Management System (AMS)

Report recommendation #1: *Independent safety management system assessment per API RP 1173*

What we found

- Updates to program were needed.
- Metrics discussions identified as a missing program component.
- Assessment methods need refresh.
- Additional training and communications are needed.
- Some implementing documents had redundancies, unclear hierarchies and opportunities for simplification.

What we've done

- Initiated monthly metrics review meetings.
- Developed management system implementing document review process.
- Initiated AMS training for all employees.
- Conducted review of human factors.
- Reviewed all past assessments for relevant actions.

What continues

- Ongoing metrics refinement and technology updates to include data structure framework, dashboard, and reporting tool.
- Continue to build on assessment, training, communications, and implementing document refinement work.
- Document review and simplification effort resourced and targets were included in companywide Performance Contract.
- API 1173 assessment is planned and budgeted for 2025.
- Developing human factors program for TAPS; phased implementation will begin in 2025 or 2026.

Process Safety Management

What we found

- Updates to program were needed.
- Metrics discussions identified as a missing program component.
- Assessment methods need refreshed.
- Assessment of training and communication warranted

What we've done

- Reviewed APSC documentation and OSHA PSM requirements.
- Conducted 3rd party audit of PSM program with ABS.
- Corrective actions from the PSM audit were completed in a timely manner, none outstanding as of October 2024.
- Conducted 3rd party assessment of VMT Vapor Recovery System.
- Adjusted boundaries of PSM program to include East Tank Farm and Ballast Water Tank headspace and Power Vapor boilers as recommended by ABS.
- Developed integrated PSM program that describes system boundaries and methods of compliance.
- Compiled list of tag numbers associated with IPLs.
- Developed database queries that returned IPL tag numbers and associated PMs.

What continues

- Complete alignment of APSC documentation regarding PSM, including a PSM Compliance Manual, by December 2024.
- Confirm equipment associated with safety critical IPLs has appropriate PM, target completion by December 2024.
- VMT Operations and Maintenance teams will complete training on PSM program by December 2024.

Maintenance Backlog & Engineering Query

What we found

- Legacy engineering work orders did not have a priority score.
- Maintenance backlog did not have common definition or established targets.
- Safety critical equipment not identified in work management system.
- No critical equipment maintenance (which are included in the MMS system's PR category) was found in the maintenance backlog.

What we've done

- Evaluated and prioritized all unscored engineering work orders.
- Closed engineering work orders that did not have sufficient basis or were already completed.
- Maintenance backlog definition and targets were established for each area.
- Maintenance backlog metrics developed and TAPS-wide target of 8-week average backlog included in 2024 Performance Contract.
- Assigned resources for PMCR backlog reduction resulting in reduction of overall open PMCRs and time to approval.
- Identified safety critical equipment in work management system.
- MOC procedures were updated to address gaps, streamline the process and provide additional training.

What continues

- Develop plan to action high priority engineering work orders.
- Improvements underway to better manage engineering work order prioritization and disposition.
- Identify and evaluate opportunities within the PMCR process to efficiently identify and manage PM changes.
- Continue backlog metric refinement.

Open Work Environment/Employee Concerns Program

What we found

- Employees understand and support OWE; strong compliance of initial and recurring annual training for management (>99%).
- More support in creating safe speak up culture needed.
- ECP reporting structure best practice at executive level.
- Alyeska met commitments to 1994, 1997 TAPS Improvement Plan.

What we've done

- Update of OWE training ongoing.
- ECP to continue direct report to GC, dotted line report to Alyeska President.
- Reviewed and verified Alyeska meets commitments to 1994, 1997 TAPS Improvement Plan.
- Conducted OWE survey in 3Q, topline results to workforce later this year.
- Added clarity around mission, vision, goals, charter; addressing culture through leadership work sessions, open forums and discussions with the workforce.

What continues

- Leadership continues to actively address workforce morale and the future direction of the company.
- Proactively manage OWE/ECP, promptly complete ECP investigations, and increase proactive intervention process.

Audits

Report recommendation #2: *Independent deferred maintenance audit and process safety (PSM) audit of the VMT*

What we found	
<ul style="list-style-type: none"> • Corrective actions were generally effective and implemented, however, in some instances, sustained and effective closure could not be confirmed. • Corrective actions were not always implemented within the timeframe originally committed. 	<ul style="list-style-type: none"> • No critical equipment maintenance was improperly prioritized and planned. • PSM audit identified that VMT has implemented a PSM program aimed at meeting the requirements of the PSM regulation.
What we've done	
<ul style="list-style-type: none"> • Prioritized outstanding audit corrective actions and actioned to closure. • Increased frequency of review of past due and upcoming commitments. • Broadened the audience reviewing past due commitments. 	<ul style="list-style-type: none"> • Created an escalation process for approval of extension of due dates for audit corrective actions. • Safety program, maintenance and PSM audits completed as part of the 2023 Audit Plan; corrective actions entered into MAC with closure date of no later than 1Q 2025.
What continues	
<ul style="list-style-type: none"> • Monitor status of past due audit related corrective actions monthly through metrics process. 	<ul style="list-style-type: none"> • Extension of original commitment dates for audit-related corrective actions requires at least Vice President and President approval.

Training

Report recommendation #3: *Alyeska to provide mandatory initial and biennial OWE and culture training for management*

What we found

- Current learning system not fully serving needs of organization; underutilized and not integrated.
- Data and records not well organized or easy to access.
- Change management not prioritized for system changes.
- OWE/HIRD training required w/in 90 days of employment (99.9% compliance); employee (98% compliance) & line manager refresher training (96% compliance) in place.

What we've done

- Engaged with vendors to increase training offerings of technical and non-technical classes in 2024.
- Initiated RFP for new HR system including a Learning Management System (LMS). Vendor selected in 2024.
- Training data cleanup project begun and progressing.
- Made revisions to AMS-034 – Employee Issue and Concerns Resolution Process.
- Updated annual HR training (HR196/194).
- Leadership intensive sessions held around TAPS in Q1 2024 for all Alyeska leaders.

What continues

- Progress replacement of HR system, including learning system for late 2025/early 2026 implementation.
- Addressing interim data & training record improvements
- Providing more training opportunities for employees.

Stakeholder Engagement

What we found

- An established “No surprises” communication strategy for internal/external stakeholders.

What we’ve done

- Monthly meetings with RCAC staff to update status/actions from MAP.
- Regular updates/talking points for managers and supervisors.
- Regular updates with elected officials/regulators.
- Presentations at RCAC board meetings from September 2023 – September 2024.
- Engaged with GAO regarding audit

What continues

- Stakeholder updates as needed.

Conclusion

Upon receiving a copy of the Report, Alyeska Leadership initiated a hard look into Alyeska's safety culture, technical capacity, process and policy, and the safety concerns brought forward. Issues were further clarified through communication with employees, PWSRCAC and other stakeholders.

This Management Action Plan accomplished several objectives. The work reviewed and confirmed Alyeska has the policies, procedures, and resources in place to safely operate the Trans Alaska Pipeline System. This work also identified several areas for improvement.

Alyeska leadership leveraged the Report as an opportunity for self-assessment and refocus, listening carefully to the issues raised by employees and stakeholders and then taking appropriate action. This action will continue, along with a commitment to ongoing evaluation and improvement.

Alyeska leadership recognizes that a strong safety culture and Open Work Environment can be eroded if not cared for and takes concentrated focus and support to sustain. Alyeska's executive leadership is steadfast in its commitment to a healthy culture and to operational excellence.

Briefing for PWSRCAC Board of Directors – May 2025

ACTION ITEM

Sponsor: Danielle Verna and the Scientific Advisory Committee

Project number and name or topic: 6560 - Peer Listener Manual Distribution

1. **Description of agenda item:** The Board is being asked to accept the distribution plan and outreach materials for the Peer Listener Manual finalized by Agnew::Beck Consulting in April 2025. The Peer Listener Manual is an appendix to the Council's "Coping with Technological Disasters – A User-Friendly Guidebook." Originally developed in the 1990s, the Peer Listener Manual has recently been updated and revised to reflect our current understanding of mental health and community resiliency. In this project, a distribution plan was developed and outreach tools were created to aid Council staff and others when sharing and broadening the reach of the manual within our region and beyond. These outreach tools include a one-page version of the manual, a rack card, social media posts, and an audio version of the manual. Project Managers from Agnew::Beck will present the plan and outreach materials, and will be available to answer questions.

2. **Why is this item important to PWSRCAC:** The Peer Listener program was a flagship social sciences program of the Council when it was first offered in the 1990s, and at the time was cutting edge in its acknowledgement of the pervasive impacts of technological disasters in a community. The extensive human impact of a major oil spill continues to be largely overlooked in contingency planning and response structures. The Council recognizes the importance of helping local residents cope with the sociological effects of an oil spill. The fields of peer-to-peer support and mental health have evolved substantially since the original manual was developed. The revised manual builds on the latest understanding of active listening and informal support needs and benefits. The intended outcome of the Peer Listener program is resilient communities with strong social support systems in place before an incident occurs. In order for this to happen, community members must be aware of the manual and how to use it.

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

Meeting	Date	Action
Board	9/21/2023	The Board accepted the "Peer Listener Training Manual" by Agnew::Beck Consulting, Inc., dated August 1, 2023, as meeting the terms and conditions of Contract 6560.23.01, and for distribution to the public.
Board	5/2/2024	The Board adopted the FY2025 budget as presented during the Budget Workshop on April 25, 2024, to include this project.

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

5. **Committee Recommendation:** The Scientific Advisory Committee recommended the Board of Directors accept these materials as revised at its meeting on March 20, 2025.

Report Acceptance: Peer Listener Manual Distribution Plan 4-9

6. **Relationship to LRP and Budget:** Work associated with this project was completed under contract 6560.25.01 with a not to exceed amount of \$32,885.
7. **Action Requested of the Board of Directors:** Accept the Peer Listener Manual distribution plan and outreach materials prepared by Agnew::Beck Consulting, Inc. dated April 2025, as meeting the terms and conditions of contract number 6560.25.01, and for distribution to the public.
8. **Alternatives:** None recommended.
9. **Attachments:**
 - Peer Listener Manual Distribution Plan
 - Peer Listener Manual Article
 - Peer Listener Manual One Page Manual
 - Peer Listener Manual Rack Card
 - Peer Listener Manual Social Media Carousel Posts
 - Peer Listener Manual (audio version)
 - Peer Listener Moments (audio)

PWSRCAC Peer Listener Training Manual Distribution Plan

April 3, 2025

Agnew::Beck Consulting, Inc.

PWSRCAC Contract #6560.25.01

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

PWSRCAC Peer Listener Training Manual Distribution Plan

1 Overview/Background

After the 1989 Exxon Valdez oil spill (EVOS), social scientists working with impacted communities developed a Peer Listener Training Program to help build community resilience. Created in 1999, and revised in 2004 and 2023, the training was designed to teach peer listening techniques that allow community members to better support each other.

The Peer Listener Training Program has a corresponding manual, which is included as Appendix F in the Council's "Coping with Technological Disasters – A User Friendly Guidebook."

PWSRCAC aims to **promote distribution and accessibility of the Peer Listener Training Manual** for community members within the EVOS region, acknowledging that the manual may also be useful across a broader audience.

Distribution for previous versions of the manual included:

- Sharing with communities within the EVOS region
- A video series of the training produced on DVD and available online in 2010
- Adaptation and use in the Gulf of Mexico after the 2010 BP Deepwater Horizon oil spill
- PWSRCAC hosted a Train the Trainer event with the intention to seed more trainers in Alaska communities in 2016
- A blog post and article in The Observer newsletter highlighting the 2023 version:
<https://www.pwsrcac.org/observer/how-learning-to-listen-can-help-communities-heal-from-disasters/>

2 Goals

The intended outcomes of the Peer Listener Training Program are to:

1. Train community residents with active listening skills
2. Provide the tools and resources necessary to promote informal social support in response to traumatic events

Goals for this distribution plan:

- Build awareness about the Peer Listener Training Manual among EVOS region communities
- Increase knowledge about and use of active listening skills among audiences
- Secure the commitment of PWSRCAC member entities in sharing the manual

Goals for subsequent phases of the Peer Listener Program, pending funding availability and Board approval:

- Identify current barriers for participating in the Peer Listener Program
- Develop a support network for Peer Listeners
- Develop metrics to assess the effectiveness and reach of the program
- Assess the value and feasibility of partnering with other community-based organizations to achieve the goals of the Peer Listener Program

3 Audiences

Primary Audience

People aged 18+ years who live and/or work in the EVOS area

This audience is likely unaware of the Peer Listener Training Manual. This audience encompasses two categories to consider when developing products and messaging: those who lived through the oil spill and remember it, and those who did not.

Summary of demographic data regarding this audience (data tables are included in the appendix):

- The total population in the Chugach Census Area (Prince William Sound), Kodiak Island Borough, and Kenai Peninsula Borough is 79,685. Roughly 77% of this population is over age 18.
- The most frequently used language in the region is English, followed by Tagalog. This informs potential future translations of the manual or accompanying materials. Other languages spoken in-region less frequently (or not captured in census data) include: Spanish; Russian, Polish, or Slavic; Alutiiq (Sugcestun); Ahtna/Dena'ina (Dene); Eyak.
- Roughly 22% of this population has attained a bachelor's degree. To keep products accessible for a wide audience, writing should be at an eighth grade reading level.
- Having multiple variations of the manual (digital, audio, print) can increase access for those with hearing, vision, or cognitive impairments (approximately 1%-7% of the population has one or a combination of impairments, depending on the region).
- Most people have internet access and smartphones or other devices, meaning they will be able to access online versions of the manual under normal circumstances. However, some smaller communities and villages have limited internet access or bandwidth issues. During an incident, internet access would only become more limited. This emphasizes the need to distribute the manual before an incident occurs, and to ensure various formats of the manual exist (digital, audio, print).
- Specific commute times in each region can inform optimal times for radio PSAs (if utilized).

Secondary Audiences

This audience consists of people/groups who influence the primary audience now or in the future; people who can help distribute the manual; people beyond the EVOS region who should receive the communications campaign messages; or others who will also benefit from hearing the messages.

PWSRCAC Member Entities

The Council's member entities represent communities and interest groups that were affected by EVOS. This audience can be a critical partner in helping to distribute the manual. Board members could be asked to relay information and materials to their respective member entities.

- 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
- City of Whittier
- Chenega Corporation and Chenega IRA Council
- 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
- Tatitlek Corporation and the Tatitlek Village IRA Council

Potential Partners

The list below represents a wide range of potential partners that are not members of PWSRCAC. This audience could assist with distribution of the manual, may have an interest in building a resilient community, or could benefit directly from knowing about the manual. Not all partners need to be engaged for a successful distribution effort.

Additional organizations and groups within the region, especially those that work directly with people, can be added to this list at any time to develop a more comprehensive network of potential partners.

Native Entities

- [Chugachmiut Corp](#)
- [Kodiak Area Native Association](#)
- [Chugach Regional Resources Commission](#)
- [Koniag](#)
- [Old Harbor Alliance](#)

Local and Tribal Governments

- [Native Village of Eyak](#) (Cordova)
- Tribal Administrators
- [Qutekcak](#) Native Tribe (Seward)
- [Valdez Native Tribe](#)
- [Seldovia Village Tribe](#)
- Port Graham Village Council
- Nanwalek IRA Council

Chambers and Economic Development

- [Seward Chamber Economic Development Partners](#)
- [Valdez Economic Development Department](#)

- Valdez Convention and Visitors Bureau
- [Prince William Sound Economic Development District](#)
- [Kodiak Chamber of Commerce](#)
- Cordova Chamber of Commerce
- Greater Whittier Chamber of Commerce

Tourism Industry

- [Discover Kodiak](#)
- [Kenai Mountains - Turnagain Arm National Heritage Area](#)
- State of Alaska Marine Parks

Cultural Institutions, Religious Organizations

- [Copper Mountain Foundation](#) (annual festival)
- [Russian Orthodox Deanery](#)
- [Ilanka Cultural Center](#) (Cordova)
- [Alutiiq Museum](#)
- [Chugach Heritage Foundation](#)
- [Cordova Museum & Historical Society](#)
- [Cordova Arts](#)
- [Kodiak Arts Council](#)
- [Kodiak History Museum](#)
- [Kodiak Area Mentor Program](#)
- [Kodiak Churches](#)
 - [Kodiak Filipino Bible Church](#) – connect with Filipino-American Association
 - [Kodiak Christian Fellowship](#)

Education Institutions

- University of Alaska - [PWS College](#), [Kodiak College](#), [Kenai Peninsula College](#)
- Chugach School District
- Cordova City School District
- Kenai Peninsula Borough School District
- Kodiak Island Borough School District
- Valdez City School District

Libraries

- In-region libraries
- [Cordova Library](#)
- [Kodiak Public Library](#)
- [Kodiak Public Library Association Little Library network](#)
- State libraries

Healthcare/Social Services/Mental Health Providers

- Counseling centers
- Community health centers
- Hospitals
- Providence hospitals - [Kodiak Island Medical Center](#), [Valdez Medical Center](#)
- [Cordova Community Medical Center](#)

- [Sound Alternatives](#), behavioral health at CCMC in Cordova
- [Ilanka Community Health Center](#) (Eyak)
- [Kodiak Community Health Center](#)
- [Cordova Public Health Center](#)
- [Cordova Family Resource Center](#)
- Emergency Assistance and Food Bank of Valdez
- [Salvation Army Cordova Extension](#)

Fishing Industry

- [Alaska Sea Grant](#)
- [Kodiak Regional Aquaculture Association](#)
- Valdez Fisheries Development Association

Environmental Research and Education

- [Copper River Watershed Project](#)
- [Prince William Sound Science Center](#)
- [Oil Spill Recovery Institute](#)
- [Prince William Sound Stewardship Foundation](#)
- Alaska SeaLife Center
- Kachemak Bay National Estuarine Research Reserve
- Alaska Fisheries Science Center
- Friends of Kachemak Bay
- [Kodiak Archipelago Leadership Institute](#)

Local/State Emergency Management

- Emergency/first responders
- [Kodiak Fire Department](#)
- [Cordova Fire Department](#)
- [Bayside Volunteer Fire Department](#)
- Village Public Safety Officers ([Chugachmuit](#), [KANA](#))
- Oil and hazardous substances
- State emergency operations center

Federal Entities

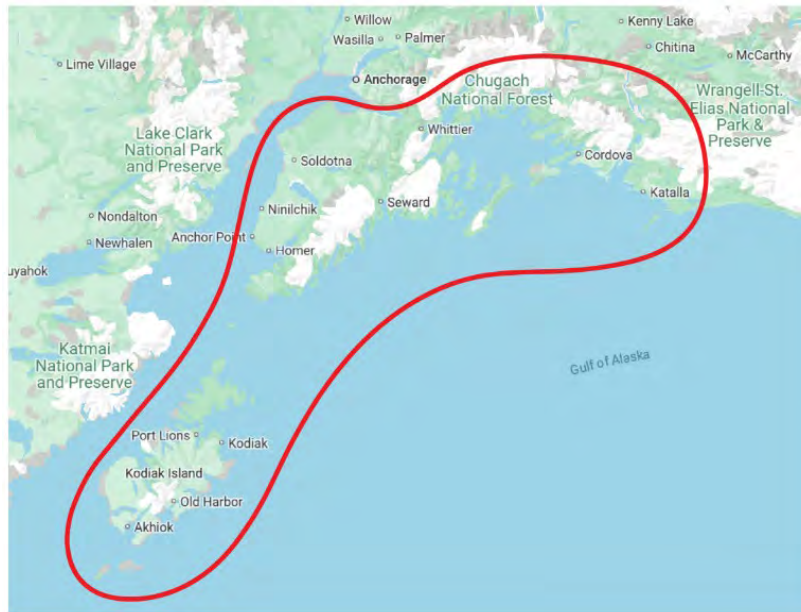
- United States Forest Service – Chugach National Forest
- Bureau of Land Management
- National Park Service – Kenai Fjords National Park
- United States Fish and Wildlife Service – Alaska Maritime National Wildlife Refuge, Kenai National Wildlife Refuge, Kodiak National Wildlife Refuge
- [Coast Guard Air Station Kodiak](#)
- [Coast Guard Base Kodiak](#)
- US Coast Guard Marine Safety Unit Valdez

Other

- [Cook Inlet Regional Citizens' Advisory Council](#)
- [Alaska Aerospace Corporation](#)
- [KANA CEDS committee representatives](#)

Geographic Location

This map shows the general area where the primary audience is located.



4 Key Messages Per Specific Audience

Key Messages	Primary Audience <i>People aged 18+ years who live and/or work in the EVOS area</i>	Secondary Audiences <i>PWSRCAC Member Entities and Potential Partners</i>
What do you want the audience to know ?	How to find the peer listener manual or learn more information about active listening.	How to share the manual with their communities.
What do you want the audience to feel - what perception do you want to create?	Everyone can learn skills that will be useful in helping and supporting their community in times of need.	Building social supports and learning peer listening skills is an important step in preparing communities to be resilient in the face of technological disasters.
What do you want them to do ?	Read the manual, learn and practice active listening skills.	Support the project and share the manual with their communities.

5 Products

Products in development

Agnew::Beck developed:

- Audiobook of the manual available for download or listening (MP3).
- “Peer Listening Moments”: series of 3-minute audio segments that are motivational and/or instructional in nature. They include information from the manual and some audio clips and quotes from interviews on Project Jukebox. For radio and online platforms.
- Toolkit of products that partners can use to share information in their communities:
 - Short article for e-newsletters, websites to promote the manual
 - Social media content (e.g., communication tips from the manual)
 - Consolidated, one-page version of the manual (two-sided)
 - Rack card with QR code directing to webpage/resources for meetings or events
 - One-page manual or the rack card can be used on bulletin boards (grocery store, etc.)
- All native files will be shared with PWSRCAC once finalized. Print files were developed in Adobe Illustrator and raw audio files were edited in Audacity.

PWSRCAC to develop:

- Print copy of the manual to distribute (in booklet form)
- Landing webpage update for the manual (as needed)
- E-pub version of the manual

Potential future products to develop

This list includes products that could be developed in future phases, along with rough time estimates for product creation to inform future cost estimates.

- E-book or other accessible digital document [40 hours]
- Translation of the manual into languages other than English [50 hours]
- Newspaper opinion editorial or feature [15 hours]
- Self-directed presentation/learning tool (e.g., prezzi) [60 hours]
- Recorded webinar training [100+ hours]
- Video tutorial [100+ hours]
- Podcast: series of 4 or 8 episodes, 15-minutes or longer episodes, for radio and online [100+ hours]
- A Peer Listener Video

6 Products: Details and Development

Select products should be posted prior to distributing other products. For this plan, the audio version of the manual and the main webpage should be posted or updated **prior** to distributing social media content, print copies of the booklet, or the toolkit of materials, since all these materials direct to the webpage.

PWSRCAC would be responsible for the coordination and cost of printing physical materials and for hosting digital materials.

Product	Who (development)	Due date (development)	Due date (publication/ distribution)	Details and Notes Format (digital, print, radio, etc.) size/dimensions, quantity
Audiobook of manual	Agnew::Beck	April 3, 2025	June 2025	MP3 for digital access; potential additional formats
Audio segments "Peer Listener Moments"	Agnew::Beck	April 3, 2025	Summer 2025	MP3 for digital access on website and other audio platforms. WAV for radio publication (radio station KCHU requested a pilot episode for quality screening). Files should be 2:59 or 3:00 minutes to play between programs on radio. Quantity: (3-5) 3-minute segments <i>Note: Radio station has enthusiasm for emergency management and community resiliency content.</i>
Social media content	Agnew::Beck	April 3, 2025	Summer 2025	Digital, 1080x1080 Quantity: 3 carousel posts
Toolkit of products	Agnew::Beck, PWSRCAC	April 3, 2025	Summer 2025	Short article: digital distribution One-page manual: digital and print, 8.5"x11" Rack card: print, 4"x9", quantity: ____ *Can be housed on PWSRCAC website as a link to a folder (e.g., on Google Drive) or other downloadable formats.
Print copies of the manual (booklet)	PWSRCAC	June 2025	Summer 2025	Print, 8.5"x11", quantity: ____ Create new cover. Format for booklet printing. Staple saddle stitch for binding.
Webpage	PWSRCAC	June 2025	June 2025	Digital. PWSRCAC website. Upload toolkit files that can be downloaded. Embed MP3 audio files from SoundCloud or Spotify, or link to files on YouTube Music, Dropbox, etc.

7 Distribution

Council staff will be responsible for contacting and interfacing with partners to distribute the toolkit; coordinating with relevant organizations for media buys, printing, uploading, or otherwise distributing the manual; attending or coordinating outreach events.

Distribution Channels

Below is an initial list of distribution channels that may be utilized in the scope of this project, though not all will be used. Additional details can be added as needed (e.g. specific events).

Press	Online	Print	Internal Communications	In-Person
<ul style="list-style-type: none"> • PSAs • Radio • Newspaper • Media channels 	<ul style="list-style-type: none"> • Websites • E-newsletter • Social media • Audio platforms 	<ul style="list-style-type: none"> • Flyers (one-page manual or rack card) 	<ul style="list-style-type: none"> • Meetings • Emails • Newsletters 	<ul style="list-style-type: none"> • Counseling centers • Libraries • Festivals • Conferences • Other events
<ul style="list-style-type: none"> • KCHU (Public radio PWS) • KVAK (Valdez) • Cordova Times • KLAM & KCDV (Cordova) • Kodiak Daily Mirror <p>Kodiak Public Broadcasting</p> <ul style="list-style-type: none"> • KMXI 100.1 FM (HD) • KODK 90.7 FM <p>Kodiak Island Broadcasting</p> <ul style="list-style-type: none"> • KVOK Commercial 98.7 FM • HOT 101.1 FM (HD signals) <p>Turquoise Broadcasting – <i>Homer stations on translators in the Kodiak community</i></p> <ul style="list-style-type: none"> • KPEN 102.7 FM • KBAY 107.9 FM • KWWV 104.9 FM • KGTL 620AM <p>Homer Public Radio – <i>Available to fishermen on north side of Afognak island</i></p> <ul style="list-style-type: none"> • KBBI 890AM 	<ul style="list-style-type: none"> • PWSRCAC and partner websites, social media • Recommend hosting audio products on Spotify, YouTube Music, and possibly Apple Podcasts (all free to host). Or, can pay monthly fee for a platform that hosts and distributes for you (Podbean, Lisbyn, Soundcloud) 	<ul style="list-style-type: none"> • Grocery store (bulletin boards) 	<ul style="list-style-type: none"> • Make announcement, share materials and toolkit with partner entities at meetings 	<ul style="list-style-type: none"> • Copper Mountain Festival • Valdez Gold Rush Days • Cordova Iceworm Festival • Copper River Delta Shorebird Festival • Cordova 4th of July • Copper River Salmon Jam • Cordova Fungus Festival • Eyak Sobriety Celebration • Kodiak Crab Fest • Islander Book Shop

Timeline

Distribution can be completed in phases during summer 2025 through fall 2025 (the final timeline would be dependent on staff capacity and how quickly PWSRCAC would like to distribute materials). Once all materials have received Board approval:

- Phase 1 can begin with posting all materials to the PWSRCAC website, printing any physical materials, uploading audio products to hosting platforms, and planning for attendance at in-person events throughout 2025-2026.
- Phase 2 would include toolkit distribution to member entities with a request that they share and distribute the manual within their own networks.
- Phase 3 would include social media outreach, coordinating with radio stations for distribution of audio segments, and outreach to potential partners in order to reach more audiences.

8 Evaluation

How will you know if you have succeeded and met your objectives? How are you going to evaluate your success? What performance indicators and evaluation measures will you use?

External

- Have you achieved your objectives (e.g., create awareness, etc.)?
- What was the reach of distribution?
 - How many toolkits were distributed?
 - Did you reach the right audience?
 - Do people feel more prepared to support their community in times of crisis?
- Did you use the right tools?

Internal

- Did you reach the right people within the organization?
- Did they understand what the message was - did they do what needed to be done?
- Did you use the right tools?

Web and Social Media Metrics

- Number of manual or toolkit downloads from website
- Number of page views where manual is housed (can be tracked with site analytics – check stats before posting new materials, then check at regular intervals throughout distribution to track usage)
- Media reach for Facebook or other social channels
- Media engagement: likes, shares, follows, click throughs
- Number of listens or ratings for audio products (can track on hosting platforms)
- Requests for information

Print Materials

- Number of print materials distributed (manual, one-page manual, and rack card)

9 Appendix

Demographic Data

Source: U.S. Census Bureau, U.S. Department of Commerce. American Community Survey, ACS 5-Year Estimates Subject Tables, 2023.

Total Population	Chugach Census Area (PWS)	Kodiak Island Borough	Kenai Peninsula Borough
79,685	6,964	12,878	59,843

Source: Table S0601

Gender (total population)	Chugach Census Area (PWS)	Kodiak Island Borough	Kenai Peninsula Borough
Men	54%	54%	52%
Women	46%	46%	48%

Source: Table S0601

Ages	Chugach Census Area (PWS)	Kodiak Island Borough	Kenai Peninsula Borough
Under 18 years	22%	24%	22%
18 years and over	78%	76%	78%
18 to 64	65%	64%	59%
65 years and over	13%	13%	19%

Source: Table S0601

Race	Chugach Census Area (PWS)	Kodiak Island Borough	Kenai Peninsula Borough
White	79.1%	50.9%	79.1%
Black or African American	0.6%	0.6%	0.6%
American Indian and Alaska Native	6.4%	11.4%	6.4%
Asian	1.8%	22.1%	1.8%
Native Hawaiian and Other Pacific Islander	0.3%	0.1%	0.3%
Some other race	1.7%	1.0%	1.7%
Two or more races	10.1%	14.0%	10.1%
Additional Race Characteristics			
Hispanic or Latino origin (of any race)	5.2%	8.2%	4.3%

Source: Table S0601

Languages in households	Chugach Census Area (PWS)	Kodiak Island Borough	Kenai Peninsula Borough
English only	2,199	3,323	21,672
Other language in home	480	1,285	2,126
Tagalog	91	703	254
Limited English	28	312	38

Source: Table B16002

Industry by Occupation	Chugach Census Area (PWS)	Kodiak Island Borough	Kenai Peninsula Borough
% of Population Employed 16 years+	50%	51%	43%
Educational services, and health care and social assistance	21%	25%	9%
Public administration	13%	11%	10%
Manufacturing	6%	17%	5%
Retail trade	9%	10%	1%
Transportation and warehousing, and utilities	10%	7%	10%
Arts, entertainment, and recreation, and accommodation and food services	7%	7%	6%
Agriculture, forestry, fishing and hunting, and mining	11%	6%	1%
Professional, scientific, and management, and administrative and waste management services	6%	7%	3%
Other services, except public administration	6%	4%	6%
Construction	6%	3%	27%
Finance and insurance, and real estate and rental and leasing	3%	1%	8%
Information	3%	1%	5%
Wholesale trade	0%	1%	9%

Source: Table S2405

Bachelor's Degrees Reported	Chugach Census Area (PWS)	Kodiak Island Borough	Kenai Peninsula Borough
% of Population with a Bachelor's Degree	23%	20%	23%
Science and Engineering	33%	39%	39%
Science and Engineering Related Fields	15%	13%	10%
Business	12%	13%	11%
Education	8%	10%	10%
Arts, Humanities, and Other	31%	25%	25%

Source: Table B15012

Access

Disability	Chugach Census Area (PWS)	Kodiak Island Borough	Kenai Peninsula Borough
Hearing	7.2%	3.1%	6.5%
Vision	3.2%	1.0%	3.1%
Cognitive	6.7%	3.8%	6.0%
Ambulatory	6.0%	3.6%	6.6%
Self-Care	2.1%	1.9%	2.3%
Independent Living	2.6%	2.9%	5.5%

Source: Table S1810

Connectivity	Chugach Census Area (PWS)	Kodiak Island Borough	Kenai Peninsula Borough
Has a device	98%	97%	94%
Desktop/laptop	88%	83%	79%
Smartphone	94%	94%	89%
Tablet	73%	74%	57%
Internet subscription	94%	92%	87%
High speed, non-cellular	82%	70%	53%
Cellular data plan	85%	87%	78%
No internet	6%	8%	13%

Source: Table S2801

Time of Departure for Commute	Chugach Census Area (PWS)	Kodiak Island Borough	Kenai Peninsula Borough
7:00 to 7:29 a.m.	5%	18%	13%
7:30 to 7:59 a.m.	28%	19%	18%
8:00 to 8:29 a.m.	19%	9%	13%
8:30 to 8:59 a.m.	9%	5%	7%
9:00 to 9:59 a.m.	7%	7%	9%

Source: Table B08011

Article

Partners can use any of this content, along with any shareable materials such as the one-page manual, to promote the Peer Listener Training Manual. It could be used for e-newsletters or other channels for promotion and distribution.



Resilient Communities Start with Good Listeners

Be prepared to help your community after a disaster. Learn to be a better listener with the Peer Listener Training Manual so you can support your friends, family, and neighbors through the healing process.

What is Peer Listening? Communicating our feelings to others is an important part of coping with, and healing from, any crisis situation. Peer listening is an active form of listening: listeners use empathy and caring to reflect the thoughts and feelings of the speaker back to them.

What are Peer Listeners? Peer listeners are members of the community who have been through the same disaster and have learned how to actively listen. They can informally support others who want to share their thoughts, feelings, and experiences without judgement. *Peer listeners are not therapists or social workers.*

Learn peer listening skills in the Peer Listener Training Manual, as well as:

- The difference between natural disasters and human-caused disasters, and how the effects differ.
- How individuals can build better listening skills and provide support for their neighbors.
- Where to find additional help when needed.

Find the Peer Listener Training Manual developed by the Prince William Sound Regional Citizens' Advisory Council here: **www.pwsrcac.org/peer-listening**

Resilient communities start with **GOOD LISTENERS.**



Be prepared to help your community.

This is a quick guide for those who want to help after their community has been through a disaster by being a Peer Listener. The Peer Listener Training Manual teaches additional active listening skills so you can support your friends, family, and neighbors through the healing process.

What are Peer Listeners?

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Remember that integral to being a peer is having gone through the same experience. This means that you are going through the healing process too. Only you will know how much time and energy you can give while still taking care of yourself. It is equally important that you are prepared to seek help when the problems you encounter are overwhelming.

What is Peer Listening?

Communicating our feelings to others is an important part of coping with, and healing from, any crisis situation.

Peer listening is an active form of listening: listeners use empathy and caring to reflect the thoughts and feelings of the speaker back to them.

What Peer Listeners Do:

- 1 Listen to someone's story to help them process the situation.
- 2 Provide information about community resources and encourage seeking additional help if needed.
- 3 Respect and try to understand emotions.
- 4 Recognize the additional stress and unique needs of disaster survivors.
- 5 Learn communication skills.
- 6 Encourage self-advocacy and decision-making.



Learn more in the Peer Listener Training Manual, including:



- The difference between natural disasters and human-caused disasters, and how the effects differ.
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- Where to find additional help when needed.

www.tinyurl.com/Help-Your-Community



Communication Tips

- 1 **Stop talking.** You can't listen while you are talking.
- 2 **Get rid of distractions.** Avoid fiddling with things, such as your cell phone.
- 3 **Tune in to the other person.** Try to understand their viewpoint, assumptions, needs, and how all three fit into their beliefs.
- 4 **Concentrate on the message.** Listen to how they say what they say. The speaker's attitudes and emotional reactions may convey as much—or more—meaning than the words they use.
- 5 **Paraphrase and ask for confirmation** about what you think the speaker means and wants.
- 6 **Look at the other person.**
- 7 **Avoid hasty judgment.** Hear the speaker out. Plan your response only after you have confirmed that you understand what the speaker is meaning.
- 8 **Give the other person the benefit of the doubt.**
- 9 **Leave your personal emotions aside.**
- 10 **Share responsibility for communication.** When you don't understand, ask for clarification. Don't give up too soon or interrupt. Give the speaker time to express what they have to say.
- 11 **Work at listening.** Hearing is passive; our nervous system does the work. Listening is active; it takes mental effort and attention. When you reply to the speaker, repeat some of what they told you using their words.

"Knowing we are not alone gives us courage."

Responses and Phrases to Avoid

As a peer listener, be aware that some commonly used phrases are far less helpful in crisis situations than they appear on the surface.

Don't use...

Why?

✗ "I know what you mean."

While it's a peer listener's role to empathize, it's important to let the speaker have their own experience.

✗ "Everything will be alright" or "It's God's Plan."¹

These phrases can minimize real feelings and cause the speaker to feel shame for sharing them.

✗ "You should..."

As a peer listener, your focus is to listen and empower, not direct or rescue.

✗ "Calm down"

Telling someone in crisis to calm down rarely has the intended effect. A peer listener should offer a safe place for a speaker to explore their feelings.

✗ "What were you thinking?" or "Why would you do that?"

Even if spoken in a warm and inviting tone, these phrases might sound like judgment.

¹Cherry, K. (2023 May 15). Toxic Positivity – Why it's harmful and what to say instead. Verywell Mind. <https://www.verywellmind.com/what-is-toxic-positivity-5093958> and Cleveland Clinic. (2021 April 15). Why 'Good Vibes Only' isn't always a good thing. Health essentials. <https://health.clevelandclinic.org/why-good-vibes-only-isnt-always-a-good-thing/>

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Phrases to Avoid

As a peer listener, be aware that some commonly used phrases are far less helpful in crisis situations than they appear on the surface.

Don't use...
✗ "I know what you mean."

Try instead...
"It sounds like you've been feeling..., is that right?"

Why? While it's a peer listener's role to empathize, it's important to let the speaker have their own experience.

Don't use...
✗ "You should..."

Try instead...
"What options do you see from here?"

Why? As a peer listener, your focus is to listen and empower, not direct or rescue.

Don't use...
✗ "Calm down"

Try instead...
"This is a lot. Is there anything you'd like to focus on?"

Why? Telling someone in crisis to calm down rarely has the intended effect. A peer listener should offer a safe place for a speaker to explore their feelings.

Don't use...
✗ "What were you thinking?" or "Why would you do that?"

Try instead...
"You were under a lot of stress at that time."

Why? Even if spoken in a warm and inviting tone, these phrases might sound like judgment.



Peer Listening is for **Everyone**

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after a disaster.**

Learn to be a better listener so you can support your friends, family, and neighbors through the healing process.

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www.tinyurl.com/Peer-Listening-Skills

**Flip to learn
communication tips!**

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- 5 Paraphrase and ask for confirmation** about what you think the speaker means and wants.
- 6 Look at the other person.**
- 7 Avoid hasty judgment.** Hear the speaker out. Plan your response only after you have confirmed that you understand what the speaker is meaning.
- 8 Give the other person the benefit of the doubt.**
- 9 Leave your personal emotions aside.**
- 10 Share responsibility for communication.** When you don't understand, ask for clarification. Don't give up too soon or interrupt. Give the speaker time to express what they have to say.
- 11 Work at listening.** Hearing is passive; our nervous system does the work. Listening is active; it takes mental effort and attention. When you reply to the speaker, repeat some of what they told you using their words.



Peer Listening is for **Everyone**

Be prepared to help your community after a disaster.

Learn to be a better listener so you can support your friends, family, and neighbors through the healing process.

What is Peer Listening?

Communicating our feelings to others is an important part of coping with, and healing from, any crisis situation. Peer listening is an active form of listening: *listeners use empathy and caring to reflect the thoughts and feelings of the speaker back to them.*

Learn peer listening skills in the **Peer Listener Training Manual**, as well as:

- The difference between natural disasters and human-caused disasters, and how the effects differ.
- How individuals can build better listening skills and provide support for their neighbors.
- Where to find additional help when needed.



**Flip to learn
communication tips!**

www.tinyurl.com/Peer-Listening-Skills

Communication Tips

- 1 Stop talking.** You can't listen while you are talking.
- 2 Get rid of distractions.** Avoid fiddling with things, such as your cell phone.
- 3 Tune in to the other person.** Try to understand their viewpoint, assumptions, needs, and how all three fit into their beliefs.
- 4 Concentrate on the message.** Listen to how they say what they say. The speaker's attitudes and emotional reactions may convey as much—or more—meaning than the words they use.
- 5 Paraphrase and ask for confirmation** about what you think the speaker means and wants.
- 6 Look at the other person.**
- 7 Avoid hasty judgment.** Hear the speaker out. Plan your response only after you have confirmed that you understand what the speaker is meaning.
- 8 Give the other person the benefit of the doubt.**
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- 11 Work at listening.** Hearing is passive; our nervous system does the work. Listening is active; it takes mental effort and attention. When you reply to the speaker, repeat some of what they told you using their words.

PWSRCAC Peer Listener Training Manual Distribution and Outreach Materials

The following materials have been created by Agnew::Beck Consulting, Inc. for PWSRCAC Contract #6560.25.01

1. Peer Listener Manual Distribution Plan
2. Peer Listener Manual Article
3. Peer Listener Manual One-Page Flyer (two options)
4. Peer Listener Manual Rack Card (two options)
5. Peer Listener Manual Social Media Posts
6. Peer Listener Manual Audio Training (audio file)
7. Peer Listener Moments (five options, audio files)

Audio files may be accessed at the following link: [Audio Files](#)

Briefing for PWSRCAC Board of Directors – May 2025

ACTION ITEM

Sponsor: Roy Robertson
Project number and name or topic: 7520 – Preparedness Monitoring, 2024 Drill Monitoring Report

1. **Description of agenda item:** Staff will provide a briefing on the 2024 Drill Monitoring Annual Report that summarizes the drills and exercises that were attended by PWSRCAC staff in 2024. Staff is requesting Board acceptance of this annual report.
2. **Why is this item important to PWSRCAC:** PWSRCAC staff monitors drills and exercises as much as possible. OPA 90 and the PWSRCAC/Alyeska Contract address the requirements for drill monitoring activities by PWSRCAC. These reports are important for tracking the history of spill preparedness and response by Alyeska/SERVS/PWS Shippers and tracking lessons learned to avoid the recurrence of the same problems in the prevention and response systems in place. These reports have proven to be valuable tools in improving the prevention and response system, assisting contingency plan workgroups, and in planning large drills.
3. **Previous actions taken by the Board on this item:** The Board accepts the annual drill monitoring reports while the OSPR Committee accepts the individual reports throughout the year.
4. **Summary of policy, issues, support, or opposition:** See above.
5. **Committee Recommendation:** The OSPR Committee reviewed this report at its March 11, 2025 meeting and recommended acceptance of the 2024 Annual Drill Monitoring Annual Report.
6. **Relationship to LRP and Budget:** Project 7520 - Preparedness Monitoring is in the approved FY2025 budget and annual work plan with a total budget amount of \$42,300. This is an ongoing program.
7. **Action Requested of the Board of Directors:** Accept the 2024 Annual Drill Monitoring Report for distribution to the public.
8. **Alternatives:** None recommended.
9. **Attachments:** Draft 2024 Annual Drill Monitoring Report.



Prince William Sound RCAC Annual Drill Monitoring Report 2024

**Prepared by: Roy Robertson
Prince William Sound Regional Citizens' Advisory Council**

2024 Exercise Report Index

Date	Report Number	Description
2/27/24	752.431.240227.AdventureTowEx.pdf	Polar Adventure Emergency Towing Exercise
4/23/24	752.431.240423.OSRBPortValdez.pdf	OSRB-4 Readiness Exercise in Port Valdez
4/27/24	752.431.240427.EnterpriseTowEx.pdf	Polar Enterprise Emergency Towing Exercise
5/08/24	752.431.240508.VMTimtFieldEx.pdf	Valdez Marine Terminal IMT and Field Exercise
5/31/24	752.431.240531.OWchampionUJ.pdf	Tug Champion U/J Exercise in Port Valdez
6/14/24	752.431.240614.ContenderUJex.pdf	Tug Contender U/J Exercise in Port Valdez
6/26/24 7/17/24	752.431.240626.DuckFlatsEx.pdf	Valdez Duck Flats Deployment Trainings
7/12/24	752.431.240712.VMTosrbD58ex.pdf	OSRB-1 Drainage 58 Deployment Exercise
7/16/24	752.431.240716.FVrespTrainings.pdf	SERVS Spring Fishing Vessel Training Notes
7/26/24 8/02/24	752.431.240724.SGHdeploy.pdf	Solomon Gulch Hatchery Deployments
7/31/24	752.431.240731.VMTwLEquipEx.pdf	Valdez Marine Terminal Wildlife Equipment Exercise
9/29/24	752.431.240929.FallFVtrainings.pdf	Whittier VOO Training and Operational Readiness Exercise
10/15/24	752.431.241015.AndMarShipperEx.pdf	Andeavor/Marathon Shipper's Exercise
11/01/24	752.431.241101.OWujTactic.pdf	Tug Challenger U/J Exercise in Port Valdez

2024 Exercise Summary

Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) staff observed and wrote fourteen exercise and training reports in 2024.

Tanker Towing Exercises

PWSRCAC staff observed two tanker emergency towing exercises in 2024. The Prince William Sound Shippers and SERVS conduct at least one emergency towing exercise per quarter each year. Both emergency towing exercises that PWSRCAC observed were performed by Polar Tankers and went well with no issues observed.

Open-Water Response Exercises

Four open-water oil recovery exercise reports were developed by staff in 2024. Three of the escort tug U/J deployments and the Oil Spill Recovery Barge (OSRB) deployment in Port Valdez were observed.

Nearshore Response and Sensitive Area Protection Exercises

During the annual fishing vessel trainings in the spring and fall of 2024, SERVS conducted operational readiness exercises (ORE) that usually focused on nearshore response tactics but also included OSRB deployments in Cordova. Staff wrote one report on these nearshore OREs from Whittier. The annual fishing vessel training also focuses primarily on nearshore tactics for the on-water day because that is where most of the vessels will be used in a response. SERVS also conducted several trainings and deployments for the Valdez Duck Flats and the Solomon Gulch Hatchery. These are two of the key sensitive area protection (SAP) sites in Port Valdez for the Valdez Marine Terminal's oil discharge contingency plan. Staff attended two of these training deployments at Solomon Gulch Hatchery and two at the Valdez Duck Flats. SERVS also conducted five geographic response strategy (GRS) sites in the Knight Island area over Labor Day weekend 2024, but staff was unable to attend.

Valdez Marine Terminal Drills

The Valdez Marine Terminal (VMT) conducted three exercises specific to the terminal in 2024 that staff observed. There were three equipment deployment exercises, one that focused on Drainage 58 at the VMT. This is the route identified at the VMT that a worst-case spill from the tank farm would likely take to reach the water of Port Valdez. Alyeska also conducted a sensitive area protection deployment by booming Saw and Seal Islands near Berth 5 at the Valdez Marine Terminal (VMT). In late July, Alyeska set up and demonstrated their new oiled wildlife stabilization modules at the VMT. These are state of the art units that will be used in an oil spill response to initially treat and stabilize oiled sea otters and birds prior to moving them to longer care facilities.

Annual Prince William Sound Shipper's Exercise

The annual Prince William Sound Shipper's exercise was conducted by Marathon and Andeavor in October of 2024. This exercise was primarily conducted at the SERVS Valdez Emergency Operations Center (VEOC) and was mostly performed in person, moving away from the more recent trend of also using a virtual command post using the Teams platform. The scenario was a spill of approximately 140,000 barrels of ANS crude oil near Busby Island in the Valdez Arm. The exercise included transitioning from Alyeska to Marathon management and developing salvage, lightering, and transit plans for the stricken tanker. This was a well-conducted exercise.

SERVS Annual Fishing Vessel Training

PWSRCAC staff attends in- and out-of-region annual fishing vessel trainings. Normally, 400+ contracted fishing vessels participate in SERVS' program and trainings in Kodiak, Homer, Seward, Whittier, Cordova, and Valdez. These trainings were changed during the pandemic, with the addition of more online components and a reduced number of on-water exercises. In 2023, Alyeska recognized the value of the hands-on stations that allow all the vessel crews to see and be instructed on how to run the various spill response equipment at different stations prior to going out on the water and brought the hands-on stations and instruction back into the program. The 2024 trainings were more traditional with the pre-pandemic versions except for the classroom portion of the trainings that are still being conducted online.

Suggestions for Future Exercises

The list of exercises and other suggestions below is not meant to be an exhaustive list of all areas that need further focus and attention, but PWSRCAC would suggest it is a good place to begin. It should be noted that many of the concerns and exercise issues that PWSRCAC have noted through the years have remained consistent across time.

Barge Allison Creek and Valdez Star

Alyeska has been replacing older barges that have reached their life since the marine services transition in 2018. In 2024, the Allison Creek barge was replaced by a new barge with the same name. This barge's primary function is to provide secondary storage for oil recovered by the Valdez Star. When the new Allison Creek arrived, an exercise was conducted to include the barge into the contingency plans. Unfortunately, PWSRCAC staff were not available to observe that exercise. More deployments of the Allison Creek and the Valdez Star need to be connected to provide training to the crews that are responsible for operating those vessels. The new barge has more infrastructure on its deck. This will increase the wind area which will in turn affect maneuverability of the Valdez Star when hipped up to the new barge. The Valdez Star needed a workboat to help turn the old Allison Creek barge during certain maneuvers and conditions. This is likely to still be the case, so this tactic should be practiced, allowing the vessel crews to become more proficient with maneuvering these vessels in various conditions.

Operating in Darkness and Dense Fog

Operating in darkness and foggy situations has been included in this list for many years because much of the winter in Alaska is darkness, and long periods of fog or reduced visibility due to weather is not uncommon for the Prince William Sound area in either summer or winter. It has been over five years since an exercise was conducted during darkness or low light conditions. Operating safely in darkness and low light condition is a skill that mariners should practice and while the ECO tugs routinely operate at night they haven't been practicing deploying and operating the OSRBs and working with other vessels such as the ones in the SERVS fishing vessel program.

Recognizing that darkness and limited visibility are a reality, PWSRCAC suggests that more training and exercise activity take place in darkness or periods of limited visibility and include more fishing vessels and their respective crews so proficiency of working in the dark is improved. In addition, the ECO tug fleet has specific capabilities (FLIR cameras and Rutter Radar spill processing) that allow them to better see oil in limited visibility. More exercises using this improved technology should be conducted with the use of targets on the water for the tugs to practice tracking and positioning the barges effectively.

The PWS Tanker Plan calls for nearshore recovery operations to occur for twelve hours a day even during winter when there are only six hours of daylight. In the past there have

been a few exercises to work on tactics for oil recovery in the nearshore environment. Operating in reduced visibility presents risks to vessels, crews, and equipment that must be addressed to safely perform recovery operations during these times. Specific tactics for operating in these low visibility conditions are not included in the current response plan. Structured exercises should be conducted to determine what tactics can and should be used to safely recover oil during darkness or fog.

Tanker Towing / Tanker Arrest Exercises

SERVS and the Prince William Sound Shippers have committed to quarterly emergency towing exercises quarterly throughout the year. This practice is much better than the previous process of performing the towing exercises primarily during the summer because of the variable conditions that happen seasonally. These exercises provide valuable training that is required for the tug crews and is beneficial to the tanker crews.

An improvement to the quarterly schedule would be to rotate shipping companies and their vessels through these exercises. It appears that Polar Tankers volunteers for these exercises much more often than the other shipping companies. The exercises do require extra time on the transit out but each of the tanker crews should participate in these exercises for the training benefit. There are at least four exercises per year and four tanker companies. There would be a training benefit to having each shipping company participate in one towing exercise each year. Having the tug crews working with the different ships would be an improvement to their training.

Large and Small Vessel Decontamination

SERVS demonstrated their small vessel decontamination process during the Crowley Alaska Tankers drill in May 2022. While the basic function of getting oil off the boat was demonstrated, the process used would have resulted in releasing some oil into the water and eventually out of containment. The process used by SERVS needs to be refined and practiced in additional exercises. It has been many years since large vessel decontamination has been demonstrated and that was with a past contractor that is no longer in business.

Fishing Vessels

The SERVS Fishing Vessel Program is the backbone of the oil spill response system in Prince William Sound. In 2023, Alyeska changed its fishing vessel training from the pandemic years to include both a day of hands-on station training and an on-water day in addition to the online Hazwoper class training. This modification was an improvement from the previous year because it provided all the vessel crews the ability to learn the specifics of the equipment and systems that could be expected to use during a spill response.

Often during the SERVS spring and fall annual fishing vessel program training, the weather will hinder the vessels that participate in the training from going out and exercising with the response equipment. When this situation occurs, SERVS conducts radio exercises in the harbor where they are conducting the training. The old process that SERVS used was to simulate the activities that would have occurred that day over the radios with the vessels. This includes simulating the loading of the equipment from the barge to the vessel and the first day of a response. PWSRCAC suggested that format of the Radio Days be changed to reflect activities that would occur in a response further into the response that rarely get practiced. Alyeska took this suggestion and developed two new scenario-based exercises to use during times when the conditions do not allow the boats to safely deploy equipment on the water. This new format was used once in Cordova during the fall fishing vessel training, to the appreciation of the vessel crews participating in the exercise that day. There were some tweaks to the process that were identified after the first run, but SERVS' new format has greatly improved this part of their training. More of these exercises should be conducted when conditions do not allow the boats to be out on the water using their assigned equipment.

Dispersant/ISB related

Alyeska and the PWS Shippers have switched contractors for aerial dispersant applications when they are needed and approved. The new contractor is MSRC, based out of Washington State, and they replaced the Anchorage-based Lynden. There are still some questions about the ability of the MSRC planes and how this new system should be exercised. The new MSRC 737 dispersant aircraft was brought to Anchorage in June 2023 and PWSRCAC was provided a tour of the aircraft. MSRC has three 737s and they are the first jet aircraft to be approved for dispersant applications. Polar Tankers and ConocoPhillips recently announced that one of the MSRC jets will be coming to Valdez in May of 2025 during their planned PWS Shipper's exercise.

Dispersant, SMART monitoring, and ISB-related exercises usually are practiced as individual components, and this separation of components may not reflect how these tactics would be employed in a real event. For example, it's possible that both aircraft and tug-based dispersant spray system would be in play at the same time, and both these efforts would need SMART monitoring from a vessel on the water as well as spotter aircraft.

- The MSRC dispersant system should be exercised to verify the overall system including the spotter plane, aircraft and spray system, and dispersant monitoring capabilities.

- Council suggests that, during an exercise or training, more of the various components of dispersant application be run simultaneously and managed as they could occur in a real event, versus as separate components.

Open-Water Response

The SERVS open-water oil recovery task forces consist of four Oil Spill Response Barges (OSRB), the skimming vessel Valdez Star, and potentially the escort tugs deploying their onboard equipment.

The four open-water Oil Spill Response Barges (OSRB), despite minor differences, are now all essentially standardized. This consistency across platforms allows crews to transfer between barges easier, make training back-up personnel easier, and simplify working with the contracted FV fleet.

Specific open-water-related suggestions:

- Over the last few years, the open-water response barges and Valdez Star have been primarily exercised during the day and generally for short durations of only a few hours. During the winter months there are more hours of darkness than daylight and the fishing vessel crews working with these skimming platforms need to practice working in hours of darkness to become proficient.

Valdez Marine Terminal

In a broad sense, PWSRCAC would suggest that all tactics in the VMT technical manual be exercised in a 5-year plan cycle and that exercises take place over a variety of seasons and conditions.

Specific VMT-related suggestions include:

- In 2022, Alyeska put a lot of effort in planning and preparing for the secondary containment exercise for the total loss of a tank. This was a valuable effort and allowed Alyeska to think through how such a response could be conducted. However, that exercise was a tabletop presentation. Components of that response should be tested in the field to confirm those proposed actions could work if needed.
- Continue with the multi-day Duck Flats training and conduct a similar intensive training for the Solomon Gulch Hatchery. The current training for the deployment of the Duck Flats by Alyeska is excellent and should continue. Much attention has been given to the Duck Flats deployment over the past several years, and Council staff have observed the proficiency level of responders increase. The connection of boom ends under tension in particular has been a responder safety concern, and

SERVS has done a good job addressing this topic. Continue this work on the Duck Flats, but also conduct a similar training for the Solomon Gulch Hatchery.

Sensitive Area Protection & Nearshore Response

There is a difference between nearshore response and sensitive area protection components in spill response. The missions of these two elements are not the same, though response equipment, vessels, asset management, and training are very similar and overlap. Nearshore response systems should be designed to intercept and recover oil, as that oil gets close to shore, by working the leading edge of the spill. The mission of the sensitive area protection function is to get out ahead of the spill, and boom sensitive areas prior to oil reaching or threatening those areas. The management and logistical support for both of these operations can be challenging and complex, but it's important to realize that they have different goals despite similar and/or shared resources and management.

Sensitive Area Protection

- The testing for the various GRS sites throughout Prince William Sound has been excellent and these exercises should continue.

Nearshore Response

Nearshore response exercises will always be high on the Council's priority list simply because of the sheer volume of fishing vessels associated with this response area. The crews of all these vessels need to be proficient with the equipment, and equipment does continue to change over time.

- The nearshore response will likely be one of the large response areas during a major oil spill response. Over the last few years, PWSRCAC staff have noticed the number of turnovers in the response crews for SERVS, TCC, and in the fishing vessel captains and crews. As new crews begin participating in the spill response program and the older more experienced and many times original program participants leave the program, more focused and functional area training will be needed to maintain operational proficiency. The newer people need more exercises to learn and become proficient with the response tactics and response equipment.
- The PWS Tanker Contingency Plan notes that nearshore will perform recovery operations for twelve hours a day, which means it's inevitable that many of those hours will require operating in reduced visibility during winter months, or foggy days in summer. As nearshore operations generally do not take place during these situations, we do not have very good benchmarks regarding what operations can safely be conducted, or how to adjust tactics accordingly. More exercises are needed to refine these limited visibility nearshore parameters.

Unannounced Exercises

Unannounced drills provide the best measure of a plan holder's ability to respond at a point in time and at a moment's notice. These drills have the ability to test areas of a response that cannot easily be tested otherwise, such as personnel readiness and resupply capabilities. There could even be unannounced aspects to a known event, such as verifying responders have proper PPE once they arrive on scene or discussing what an elevated and unsafe air read would mean for responders and given process, etc.

- No-notice exercises are valuable and should be continued periodically to help ensure readiness. SERVS uses these types of exercises to good effect to monitor their rapid response fleet. ADEC used to require unannounced exercises more frequently for both the Prince William Sound Tanker and the VMT oil spill contingency plans. In fact, it was not uncommon to have three-day exercises that were unannounced that focused on certain response elements. These exercise frequently identified areas or procedures within the response system that were forgotten or just fail to be effective. As mentioned above, turnover of personnel within all the organizations involved in the Prince William Sound response system has only increased the likelihood of failures to the processes that are rarely (if ever) exercised.

Briefing for PWSRCAC Board of Directors – May 2025

ACTION ITEM

Sponsor: Donna Schantz and the Board of Directors

Project number and name or topic: 2100 – Board Committee Appointments

1. **Description of agenda item:** Appointments are made annually to four of the standing Board and ad hoc committees; the Finance Committee, the Long Range Planning Committee (LRPC), Board Governance Committee (BGC), and Legislative Affairs Committee (LAC). The purpose of this agenda item is to solicit interest and appoint members to the following committees:

Finance Committee: By resolution, the Finance Committee must be seated at the time the operating budget is adopted. The committee will be comprised of the newly elected Treasurer, who shall chair the committee, and at least three members of the Board of Directors. The most recent Finance Committee was comprised of Mako Haggerty (Treasurer), Robert Archibald, Wayne Donaldson, Angela Totemoff, and Jim Herbert. Once appointed, the Finance Committee will be charged with: reviewing interim financial reports and proposed budgets; meeting with the independent auditor at least annually to review the scope of each year's annual audit and the findings of such audit; meeting with PWSRCAC's management and financial staff to review internal controls and to develop additional interim reporting methods to assist the Board; and assisting staff and/or auditors with the drafting of the annual financial statements and notes. Estimated time commitment is 4-5 meetings per year.

Long Range Planning Committee: The Board approves the annual process for Long Range Planning and budgeting. The process begins with the appointment of Board members to the LRPC each year in May. At least three members of the Board of Directors are desired to serve on the committee, as well as the chairs of all five technical committees. The most recent LRPC was comprised of Directors Robert Archibald, Amanda Bauer, Elijah Jackson, and Aimee Williams; Cathy Hart from the IE Committee; and the five technical committee chairs. Estimated time commitment is 5-6 meetings per year, including the December and January in-person workshops. The LRPC is an ad hoc committee and as such, is not included as a Standing Committee in PWSRCAC Bylaws.

Board Governance Committee: BGC is responsible for the organizational health and effectiveness of the Board. Its responsibilities include Board development, which includes training new Board members, as well as ongoing development of Board job descriptions. The BGC is also responsible for annually reviewing the Council's bylaws and practices, and recommending any changes it deems appropriate related to

Board structure or operations. By way of example, the BGC should periodically review the manner in which meetings are conducted, the responsibilities of the Board officers, and the use of both standing and ad hoc committees. The BGC shall assist the President of the Board by recommending action in appropriate circumstances on issues regarding individual Board members, including their participation, or lack thereof with regard to Council's activities. Per its Charter, the BGC shall consist of at least three Board members. The most recent BGC was comprised of Dorothy Moore, Mike Bender, Luke Hasenbank, and Robert Beedle. Estimated time commitment is 2-4 meetings per year, as needed.

Legislative Affairs Committee: The LAC monitors developments in the Alaska State Legislature and on a federal level, recommends action to be taken to the full PWSRCAC Board of Directors, and, as directed by the Board, communicates PWSRCAC positions and concerns to lawmakers. The Committee's work is supported by outside contractors to monitor pertinent state and federal matters. LAC should consist of at least three Board members. The most recent LAC was comprised of Dorothy Moore, Robert Archibald, Mako Haggerty, Robert Beedle, Dave Janka, Kirk Zinck, and Elijah Jackson. Estimated time commitment is one meeting every other week throughout the State legislative session. In addition, two Board members are budgeted to travel to Juneau and Washington, D.C., for legislative outreach visits.

2. **Why is this item important to PWSRCAC:** Members of the Board of Directors have a responsibility to oversee various tasks of the Council. It is important that each of these committees be staffed with Board member appointees annually to ensure sufficient Board participation and direction.

3. **Action Requested of the Board of Directors:** Appoint Board members to the following committees:

- Finance Committee (Treasurer and at least three Board members).
- Long Range Planning Committee (at least three Board members), the five technical committee chairs, and consideration of approving volunteer Cathy Hart.
- Board Governance Committee (at least three Board members).
- Legislative Affairs Committee (at least three Board members).

4. **Alternatives:** None proposed.

5. **Attachments:**

- A. Excerpts from PWSRCAC Bylaws on Standing Committees
- B. Resolution 03-03 Creating the Finance Committee
- C. Board Governance Committee Charter

Excerpts from PWSRCAC Bylaws Regarding Standing Committees

3.18.1 Creation of Committees. The Board may designate and appoint one or more standing or temporary committees, including an Executive Committee, from its own number and invest such committees with such powers as it may see fit, subject to such conditions as may be prescribed by the Board, these Bylaws and applicable law. The designation and appointment of any such committee and the delegation of authority thereto shall not relieve the Board or any individual Director of any responsibility imposed by law. The Board may also designate and appoint one or more standing or temporary committees that may include persons other than Directors, but it shall not delegate to any such committee any authority or responsibility imposed on the Board by law, the articles of incorporation or these Bylaws. Members may be appointed to the standing committees, other than the Executive Committee, by the Executive Committee or by Board poll. Such appointments shall be ratified at the next meeting of the full Board.

3.18.2 Authority Standing of Committees.

3.18.2.1 Executive Committee. The Executive Committee shall be composed of the officers of the corporation other than the Executive Director and a member at large and may include two additional members at large from the board of directors. Subject to limitations on authority imposed by the Board, the Executive Committee shall have and may exercise all of the authority of the Board, except that no such committee shall have the authority to (1) amend the Articles of Incorporation, (2) adopt a plan of merger or consolidation with another corporation, (3) authorize the sale, lease, exchange or mortgage of all or substantially all of the property and assets of the corporation, (4) authorize the voluntary dissolution of the corporation or revoke proceedings therefore, (5) adopt a plan for the distribution of the assets of the corporation, (6) amend these Bylaws, or (7) approve or substantially modify the corporation's budget and/or contractual commitments.

3.18.2.2 Board Governance Committee. The Board Governance Committee is responsible for the organizational health and effectiveness of the Board. Its responsibilities include Board development, which includes training new Board members, as well as ongoing development of Board position job descriptions. The Board Governance Committee also is responsible for annually reviewing the Council's Bylaws and practices and recommending any changes it deems appropriate related to Board structure or operations. By way of example, the Board Governance Committee should periodically review the manner in which meetings are conducted, the responsibilities of the Board officers, and the use of both standing and ad hoc committees. The Board Governance Committee shall adopt and abide by a Charter approved by the Board. The Board Governance Committee shall assist the President of the Board and chairs of the Council's committees, recommending action in appropriate circumstances, in issues regarding individual Board Members, including their participation or lack thereof with regard to council's activities.

3.18.2.3 Finance Committee. The responsibility of the Finance Committee is to assist the Board in carrying out its fiduciary responsibility to oversee the financial affairs of the organization and the annual independent audit of the Council's finances. The duties of the Finance Committee may include review and / or recommendation to the Board regarding acceptance or amendment of interim financial reports and proposed budgets. The Finance Committee will meet with the independent auditor at least annually to review the scope of the annual audits and audit findings, review internal controls, annual financial statements, the IRS Form 990, and review and provide guidance on risk management, insurance policies, property management, procurement, contracting policies, insurance, fiscal ethics and compliance programs, and overall fiscal governance. The Finance Committee shall be appointed to one-year terms by the Board at the May Board meeting or at the time the budget is adopted. The Committee shall be comprised of the Treasurer, who shall chair the Committee and at least three members of the Board of Directors. (Resolution 03-03).

3.18.2.4 Legislative Affairs Committee. The responsibility of the Legislative Affairs Committee is to advise the Board on state and federal legislative matters directly related to the PWSRCAC mission and its duties as set forth in the Oil Pollution Act of 1990 (OPA 90) and the contract with Alyeska Pipeline Service Company. The responsibilities of the Legislative Affairs Committee may include advising the Board on legislative priorities, relevant legislation and regulations, administrative actions, and department budgets. The Committee may produce informational materials on legislative priorities that educate and inform, make recommendation to the staff on administrative actions that advance legislative priorities, and participate in legislative visits to Juneau and Washington D.C. Committee members shall serve one-year terms and shall be appointed by the Board at the May Board meeting. The Committee shall be comprised of at least four Board members.

##



Regional Citizens' Advisory Council / "Citizens promoting environmentally safe operation of the Alyeska terminal and associated tankers."

In Anchorage: 3709 Spenard Road / Anchorage, Alaska 99503 / (907) 277-7222 / FAX (907) 277-4523

In Valdez: P.O. Box 3089 / 339 Hazelet Avenue / Valdez, Alaska 99686 / (907) 835-5957 / FAX (907) 835-5926

RESOLUTION 03-03

MEMBERS

Alaska State
Chamber of
Commerce

Alaska Wilderness
Recreation & Tourism
Association

Chugach Alaska
Corporation

City of Cordova

City of Homer

City of Kodiak

City of Seldovia

City of Seward

City of Valdez

City of Whittier

Community of
Chenega Bay

Community of
Tahitiak

Cordova District
Fishermen United

Kenai Peninsula
Borough

Kodiak Island
Borough

Kodiak Village Mayors
Association

Oil Spill Region
Environmental
Coalition

Prince William Sound
Aquaculture
Corporation

WHEREAS, Article 3.18.1 of the Bylaws of the Prince William Sound Regional Citizens' Advisory Council provides for the creation of committees by resolution of the Board of Directors; and

WHEREAS, the Board of Directors has determined that the creation of a Finance Committee will assist them in their fiduciary responsibility of overseeing the financial affairs of the organization.

NOW, THEREFORE, BE IT RESOLVED that a Finance Committee shall be created;

FURTHER RESOLVED, that the Finance Committee shall be comprised of the of the Treasurer who shall chair the committee and at least three members of the Board of Directors;

FURTHER RESOLVED, that the members of the Finance Committee shall be appointed to one-year terms by the Board of Directors at the May board meeting or the time the budget is adopted;

FURTHER RESOLVED, that the Finance Committee shall be charged with:

- (a) Reviewing interim financial reports and proposed budgets and making recommendations to the Board for acceptance or changes to the reports and budgets;
- (b) Meeting with the independent auditor at least annually to review the scope of each year's annual audit and the findings of such audits;
- (c) Meeting with PWSRCAC's management and financial staff to review internal controls and develop additional interim reporting methods to assist the Board;
- (d) Assisting staff and/or auditors with the drafting of the annual financial statements and notes.

President

Date: 9/25/03

Secretary

Board Governance Committee Charter

Prince William Sound Regional Citizens' Advisory Council

Purpose. The Board Governance Committee is responsible for the organizational health and effectiveness of the Board.

Responsibilities. The Board Governance Committee has the following responsibilities, as established by the Council Board:

- Adopt and abide by a Charter approved by the Board.
- Annually review the Council's Bylaws and practices, and recommend any changes it deems appropriate related to Board structure or operations. By way of example, the Board Governance Committee should periodically review the manner in which meetings are conducted, the responsibilities of the Board officers, and the use of both board-only standing and ad hoc committees.
- Board development recommendations, which includes training for new Board members, as well as ongoing development of Board position job descriptions.
- Assist the President of the Board and chairs of the Council's committees, recommending action in appropriate circumstances, in issues regarding individual Board Members, including their participation or lack thereof with regard to council's activities.

Membership, Quorum, and Terms of Service. The Governance Committee consists of at least three Board members appointed in accordance with Sec. 3.18.1 of the Council Bylaws.

Committee members are appointed annually. The Committee selects its own Chair annually from among the members of the Committee. A quorum consists of three members.

Accountability. The Governance Committee is accountable to the Board of Directors.

Responsible Staff Person. The Executive Director, or his or her designee, is responsible for the administration of the work of the Governance Committee.



Briefing for PWSRCAC Board of Directors – May 2025

INFORMATION ITEM

Sponsor: Linda Swiss, OSPR Committee, TOEM Committee, C-Plan Project Team, and the Secondary Containment Project Team

Project number and name or topic: 651 Update on Request for Adjudicatory Hearing on VMT C-Plan

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 [HERE](#).

The following is a timeline of actions since the plan was approved:

Date	Action
Nov 6, 2024	ADEC issues VMT C-Plan approval
Nov 26, 2024	PWSRCAC files Request for Informal Review
Dec 3, 2024	ADEC (SPAR) determines PWSRCAC's request has merit
Feb 24, 2025	ADEC (SPAR) issues final decision on PWSRCAC's request
March 1, 2025	Deadline for Alyeska to submit final report of secondary containment liner testing method to be used in satisfaction of COA #1A
March 26, 2025	PWSRCAC submits Request for Adjudicatory Hearing on ADEC's decision on Request for Informal Review
April 1, 2025	Deadline for Alyeska to submit a timeline outlining dates for key deliverables and project milestones, with completion of liner by November 2028 required
April 7, 2025	Acting ADEC Commissioner issues decision on Request for Adjudicatory Hearing
April 9, 2025	Acting ADEC Commissioner issues clarification on April 7, 2025 decision

ADEC's 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.*

Request for Adjudicatory Hearing on the VMT C-Plan 4-12

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, 2025, PWSRCAC submitted a Request for Informal Review to the SPAR Director on these conditions of approval that submissions to ADEC should go through public review, establish a schedule for completing liner inspections to the end of 2025, and requirements for corrective actions on liners. The SPAR Director has the ultimate responsibility to determine whether the request has merit.

On February 24, 2025, ADEC SPAR issued a final decision that required Alyeska submit a timeline outlining target dates for key deliverables and project milestones with completion of liner evaluation by November 2028 by April 1, 2025, and that work should begin by July 2026.

On March 26, 2025, PWSRCAC filed a Request for Adjudicatory Hearing to the Acting ADEC Commissioner asking that ADEC's conditions of approval should require any changes to schedules of inspections and corrective actions be subject to a major amendment and public review process; that the schedule for starting inspections of the liners should begin by 2025 for completion by 2028; and that corrective actions be required if liner does not meet "sufficiently impermeable" standard. Both Alyeska and the City of Valdez filed Requests for Adjudicatory Hearings on the secondary containment liner.

On April 7, 2025, the Acting ADEC Commissioner issued decisions to PWSRCAC, Alyeska, and the City of Valdez denying PWSRCAC's and Alyeska's hearing requests and allowing hearings on some of the City's requests. The Acting Commissioner granted PWSRCAC's request for a remand (meaning back to the SPAR Director) of her November 6, 2024 COA 1 decision. We believe this means the SPAR Director is tasked with either going back to the original COA 1 issued on November 6, 2024 or revising that COA. In addition, the Acting Commissioner directed that a public review take place, which was also part of PWSRCAC's request. The Acting Commissioner also directed the parties to confer on the issues related to the secondary containment liner.

Regarding the City of Valdez's request, the Acting Commissioner denied the City's hearing request on removing the 60% prevention credit for the secondary containment liner and vacated and remanded that decision back to the SPAR director for further consideration. On April 9, 2025, the Acting Commissioner clarified the decision on the prevention credit for the secondary containment liner by removing the word "vacated," and therefore only remanded this decision back to the SPAR director for further consideration.

2. **Why is this item important to PWSRCAC:** This item is 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

Request for Adjudicatory Hearing on the VMT C-Plan 4-12

increases. To date, visual inspections of the CBA liners in the East Tank Farm have shown areas where the liner integrity was compromised. 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 secondary containment 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	11/26/24	Authorized staff to request an informal review on the VMT C-Plan renewal on COA #1 on the VMT C-Plan renewal related to the secondary containment liner.
Board	3/19/24	Authorized Executive Director to request an adjudicatory hearing on COA #1 on the VMT C-Plan related to the secondary containment liner.

5. **Committee Recommendation:** The C-Plan Project Team, Secondary Containment Project Team, and the TOEM and OSPR Committees have been updated on this issue.

6. **Relationship to LRP and Budget:** Project 651 - Contingency Plan Review is in the approved FY2025 budget and annual work plan.

7. **Action Requested of the Board of Directors:** None, this item is for information only.



PRINCE WILLIAM SOUND REGIONAL CITIZENS' ADVISORY COUNCIL

**May 2025
Status Report**
As of March 18, 2025

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 2,000 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.

All editions can be found on our website: 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: Following the FY2025 tour in Whittier on September 30th, 2024, work on this project during the rest of this fiscal year involves staff, IEC, and partners working to

develop an alternative format for an event or events to deliver this information and outreach to the Kodiak community.

The IEC project team met on February 13, 2025 to brainstorm land-based options to accomplish this outreach in Kodiak. Maia consulted with Alyeska/SERVS staff about the generated ideas. The project team will meet at least two more times over the remainder of the fiscal year to continue to refine the event idea and develop plans for implementation in FY2026.

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:

December 18 – EVOS/PWSRCAC overview for WA Department of Ecology

- Online virtual presentation to Spill Prevention, Preparedness, and Response program staff of the Washington State Department of Ecology.
- 40 staff attended, asking some great questions, and several individuals expressed gratitude for our website, reports, and other work.

February 3-7 – Alaska Forum on the Environment

- The Council hosted an exhibitor booth with CIRCAC speaking with attendees from across the EVOS region and across the state.
- Outreach Coordinator Maia Draper-Reich, as a member of the event's planning committee, helped facilitate the Oil Spill Track of talks, which included sessions on inland oil spills, oil spill cleanup, and tools for prevention and response.



Shaylon Cochran (CIRCAC) and Maia Draper-Reich (PWSRCAC) at the shared exhibitor booth at AFE 2025. Photo by Jaina Willahan.

February 28-March 2 – Alaska Ocean Sciences Tsunami Bowl, Seward, AK

- Board member Jim Herbert and Maia served as competition officials for the annual quiz bowl event hosting high school teams from around the state including several from the EVOS region. They also connected with ocean science professionals from around the state.

March 27 – Chugach Regional Resources Commission's The Gathering, Anchorage AK

- The Council hosted a day-long workshop at the Gathering through SAC's social science project to connect with tribal members, partners, and community members of the EVOS region to gather input on future social science research.
- Davin Holen, Danielle Verna, Joe Lally, and Maia participated in the planning group for the event.
- Davin and Danielle will co-facilitate the workshop. Maia will run an exhibitor booth at the event.

April 14 – Community Visit to Ouzinkie

- At the time of this report, Maia is working with Board Member and Ouzinkie Mayor Elijah Jackson to set up a day trip to visit the community, ideally including a guest lesson in the school and a public reception.

April 15-17 - ComFish Alaska 2025, Kodiak, AK

- PWSRCAC will host a booth at this event to connect with the Kodiak and greater Alaska fishing community.

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: Three contracts are currently under way 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 and six summer projects are in the contracting process, as of this report, and will take place during the spring and summer months:

- Alaska Maritime National Wildlife Refuge - *"Tiġlaḡ in the Bay" School Program*
- Alaska Marine Conservation Council - *Kodiak Marine Science and Exploration Summer Program for Youth*
- Center for Alaskan Coastal Studies - *Continued Engagement of Youth as Environmental Stewards: High School Internships & Camp Opportunities*
- Copper River Watershed Project - *Copper River Stewardship Program: Into the Future: Copper River Watershed 2025*
- Fireweed Academy - *Ecological Stewardship for Kids: A Hands-on Application of History, Ecology, and Leadership*
- Kenai Mountains - Turnagain Arm National Heritage Area - *KMTA and PWSRCAC - Expanding Access to Equitable Coastal Outdoor Education*
- Prince William Sound Science Center - *Sound Connections: Building Bridges through Birding*

A request for proposals (RFP) is currently open for Youth Involvement projects taking place during the 2025/2026 School Year.

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 recently attended the Nonprofit Technology Network Conference in Baltimore, Maryland, on April 16-18, 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.pwsrccac.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 basic data is available:

- Desktop version: <https://lookerstudio.google.com/reporting/5acb0b03-619c-4b0d-ae5b-e13edeb08a50>
- New mobile-friendly dashboard: https://lookerstudio.google.com/s/I_MxdhAPly0

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. Educate stakeholders and the general public about the importance of oil 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. 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.

3903 – Internship

Objectives: Coordinate with regional secondary and/or higher education institutions to recruit students for internships and coordinate with other committees to help support students' education goals while meeting appropriate PWSRCAC project needs.

Accomplishments since last report: A budget modification to fund the FY2025 deferred 3903 Internship project at \$4,000 was voted on and passed by the Executive Committee (XCOM) on December 18, 2024.

These funds are for a stipend, travel costs, and conference fee for an intern working with PWSRCAC's Long-Term Environmental Monitoring Program (LTEMP). The intern will participate in the spring LTEMP field work, including preparations, and complete a work project connected to LTEMP. This internship will be co-supervised by PWSRCAC (Danielle Verna, Maia Draper-Reich) and PWS College via Professor (and IEC member) Amanda Glazier. PWSC is providing funding for tuition costs and facilitating academic credit for the internship.

The designated internship was advertised in December and the Council received one application from a PWS College student. The student, Timothy Derbidge, was interviewed and accepted for the internship. Timothy has begun work getting oriented to the Council and the Long-Term Environmental Monitoring project. Danielle, with input from SAC, has provided him with a partial data set from the LTEMP data to complete a project on. Timothy will also present a poster on his internship project at the PWSC Environmental Sciences Symposium in early May.

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:

Outstanding Requests for Information and Responses to Recommendations:

- Alyeska transmitted a number of documents related to PWSRCAC information requests on January 22, 2025. We thank Alyeska for their efforts in providing the requested documents and for their efforts to improve response times to PWSRCAC information requests.
- However, in this recent transmittal, Alyeska noted that a number of PWSRCAC information requests related to the 2023 Gantt Chart and 2023 Tank Bottom Processing Fire are "closed" as the "formal documents [requested by PWSRCAC] will not be provided."
 - PWSRCAC does not agree with Alyeska that being provided with written and verbal summary documents is an adequate substitute for the requested formal documentation. The receipt of formal documentation is necessary for PWSRCAC's work and to ensure staff and committee members have a technically informed understanding of Alyeska's verbal and written responses to PWSRCAC questions.

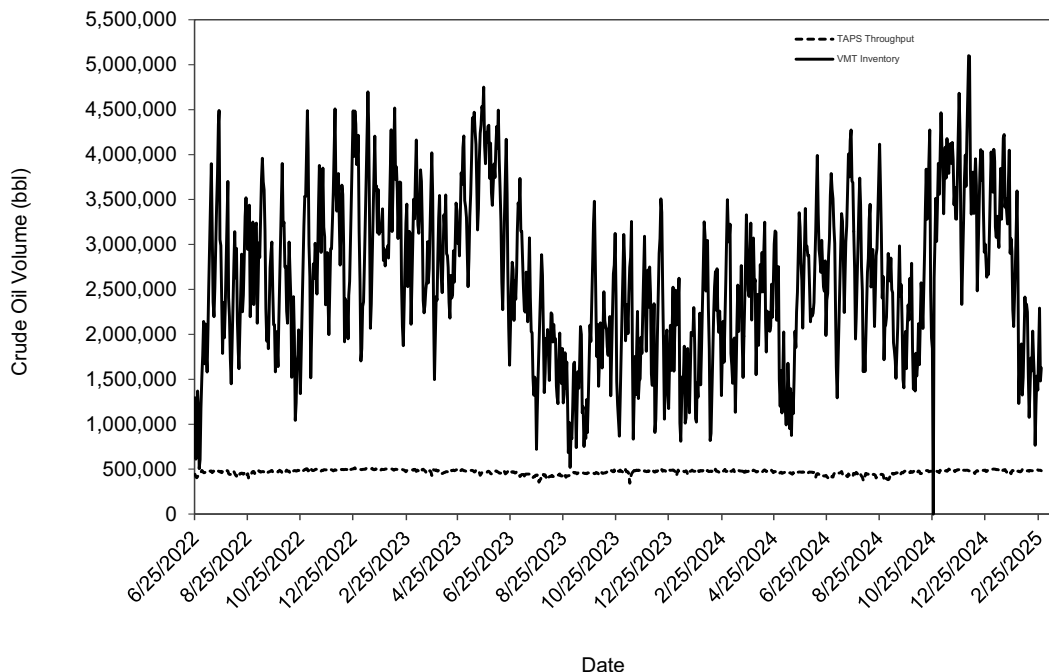
Tank Vent Damage Monitoring:

- Taku Engineering's Report "2022 Tank Pressure/Vacuum Pallet Damage: Crude Oil Storage Tank Headspace Gas Assessment" was transmitted to Alyeska on February 11, 2025, with a cover letter outlining the timeline associated with this report and asking Alyeska to provide the outstanding information requests needed to refine the report.

Attachments: Graphs depicting a variety of data related to the operation and environmental impacts of the Valdez Marine Terminal.

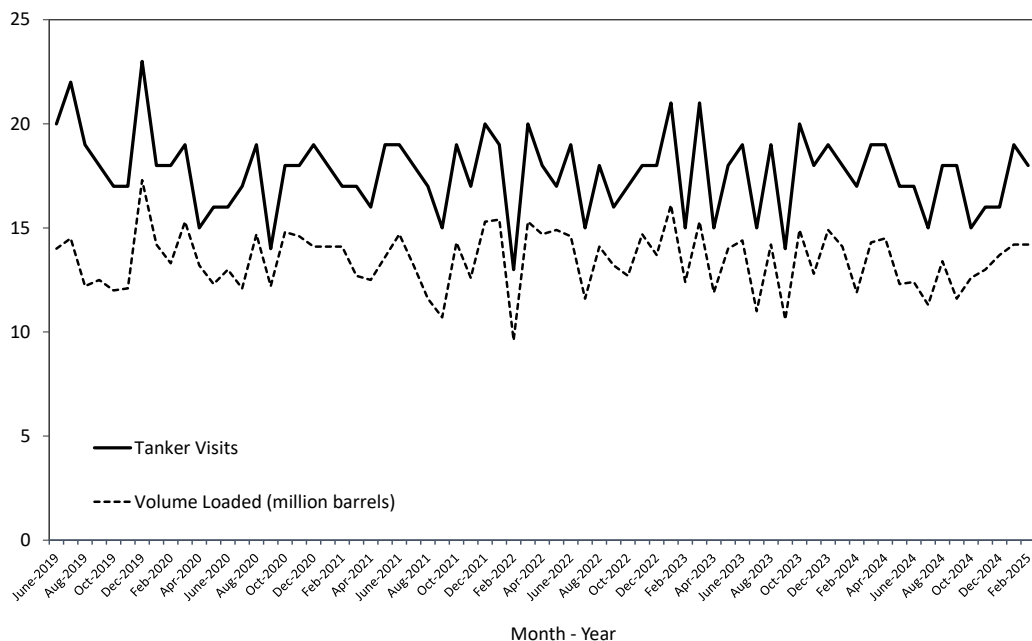
Daily Oil Inventory at the Valdez Marine Terminal and Trans-Alaska Pipeline Throughput

(Source: Alaska Department of Revenue - Tax Division, <http://tax.alaska.gov/programs/oil/production.aspx>)



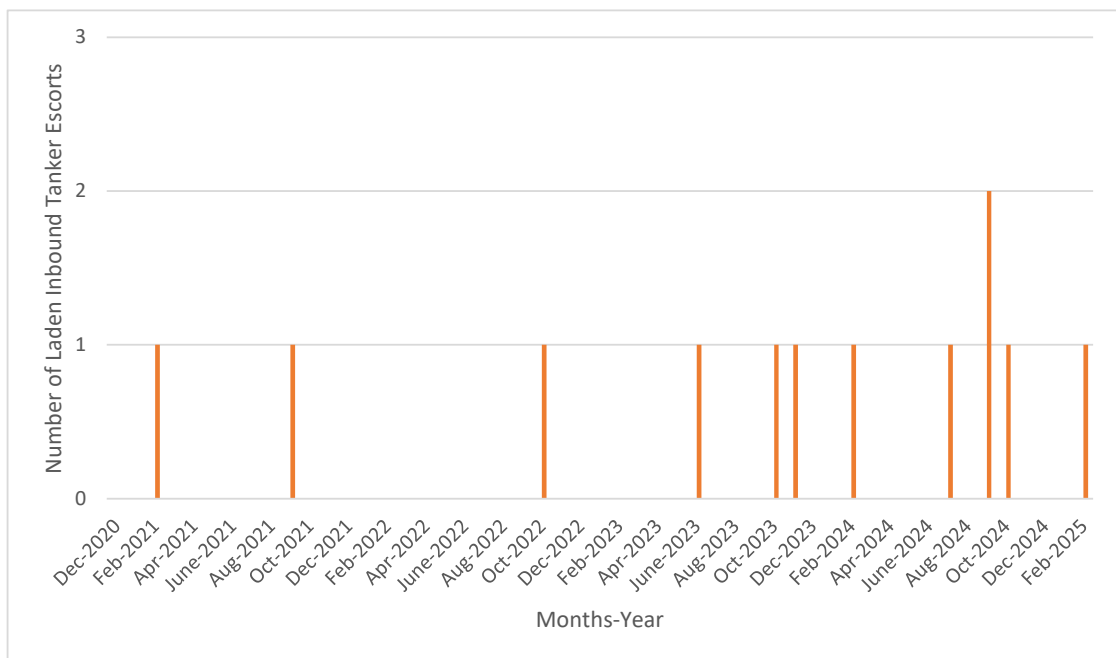
Number of tanker visits and crude oil volume loaded onto ships from VMT

(Source: Alyeska Pipeline Service Company. Partitioned by VMT vessel arrival date.)



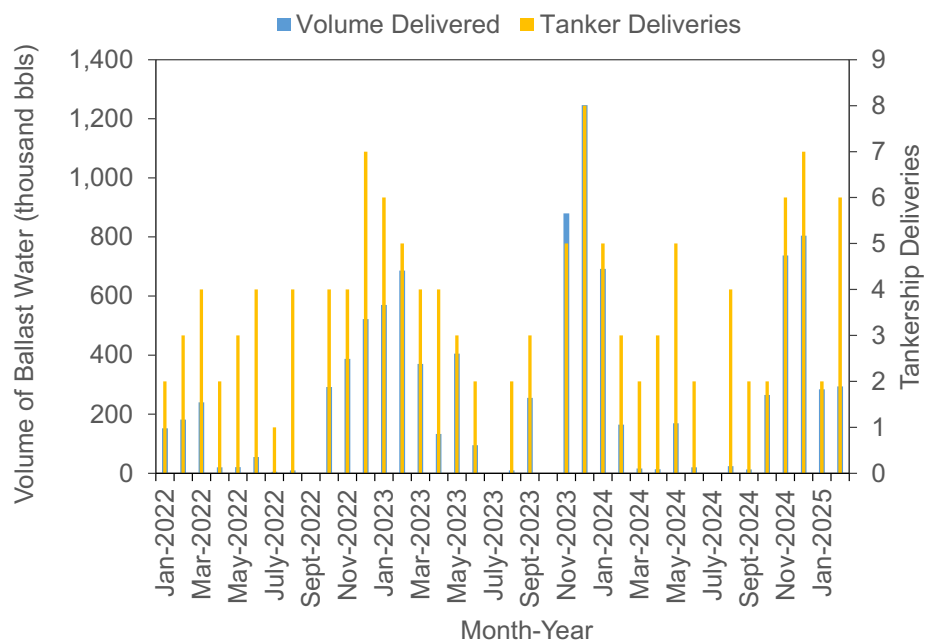
Inbound laden tanker escorts to VMT

(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: Follow up related to tracking and implementing recommendations identified in the Council-sponsored 2023 report, "Assessment of Risks and Safety Culture at Alyeska's Valdez Marine Terminal" is ongoing by Billie Garde, TOEM, and Council staff. A detailed outline of accomplishments will be provided by Billie Garde at this Board meeting.

5057 – Air Quality Review of VMT

Objectives: This project verifies 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 a report has been recommended as final by the TOEM Committee.

Dr. Sahu also reviewed and provided input for public comments related to Minor Permit: AQ0082MSS06 Alyeska Pipeline Service Company, VMT. These were submitted on March 24, 2025.

5081 – Ballast Water Tank 93 Maintenance Review

Objectives: This project entails performing a technical review of the maintenance of ballast water tank 93, during its out-of-service inspection and repairs in 2023.

Accomplishments since last report: Additional information for this project was received from Alyeska on January 22, 2025. Taku Engineering, the contractor for this project, is in the process of reviewing this information to draft a preliminary report.

5595 – Review of VMT Cathodic Protection System Testing Protocols

Objectives: This project seeks an independent review of current VMT CP protocols and data collection for the VMT crude oil storage tanks in order to verify that corrosion is being effectively mitigated by well-functioning cathodic protection systems.

Accomplishments since last report: Mears Group, Inc. was selected as the contractor for this project through the RFP process. A contract was drafted and signed in March 2025. Upon TOEM Committee recommendation, Taku Engineering, LLC, has been contracted as project support for institutional knowledge related to VMT CP protocols and data collection.

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: This project has been deferred to FY26.

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 the tests and resulting report is expected to be available six to nine months from the date that they received the sample. This project is still ongoing, as ECCC recently contacted us about the possible need to extend the timeframe until February 2025. We received a partial report from ECCC on February 28, 2025, indicating that some testing was still ongoing, and the report would be updated once the tests were completed. Staff is currently in the process of contracting with Merv Fingas of Spill Science to review the ECCC analysis and write a report on his findings. Once we receive the complete analysis from ECCC, we will provide it to Merv Fingas.

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 ARRT met on March 5 and covered updates on the Wildlife Protection Committee, Cultural Resources Committee, Science and Technology Committee, Statewide Planning Committee, Regional Stakeholder Committee Task Force, and Tribal

Committee/Task Force. Other topics included Alaska Oil Spill Response Organizations, EPA Consequence Management Advisory Team, U.S. Forest Service Alaska Resources, and Essential Fish Habitat Training.

PWSRCAC has offered to participate in the ARRT's Cultural Resources Committee and hopes to work on updates to the "Alaska Implementation Guidelines" for the 1997 National Programmatic Agreement.

Prince William Sound Area Contingency Plan (PWS ACP): The PWS AC Admin Subcommittee recently met to discuss updating the plan to conform to the new architecture of the area contingency plans. The public review is expected around spring 2025.

Arctic and Western Alaska (also known as Sector Western Alaska and U.S. Arctic) Area

Committee (AWA AC): There is a public comment period on updates to the AWA Area Contingency Plan to conform to the new architecture required by the USCG. The public comment period began on February 27, 2025, and comments are due on April 11, 2025. Job aids for the Regional Stakeholder Committee (RSC) and the RSC Liaison Officer are part of this review.

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:

Oil Search, doing business as Santos, recently filed an application for a new c-plan in Prince William Sound. Their Vessel Response Plan will be part of the PWS Tanker C-Plan and will cover spot charter vessel operations in Prince William Sound. Santos will become a member of the Response Planning Group whose members make up the Prince William Sound shippers. Comments were submitted on March 19, 2025.

VMT C-Plan:

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).*

The following is a timeline of actions since the plan was approved:

Date	Action
Nov 6, 2024	ADEC issues VMT C-Plan approval
Nov 26, 2024	PWSRCAC files Request for Informal Review
Dec 3, 2024	ADEC determines PWSRCAC's request has merit
Feb 24, 2025	ADEC issues final decision on PWSRCAC's request
March 1, 2025	Deadline for Alyeska to submit final report of secondary containment liner testing method to be used in satisfaction of COA #1A
March 24, 2025	Deadline to request an adjudicatory hearing on Request for Informal Review

On November 26, 2024, the Board approved filing a Request for Informal Review on COA #1 to include the following:

- A. 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).
- B. The COA should establish a schedule for completing inspections of the liners by the end of 2025 for completion by 2028.
- C. 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.

This informal review request was directed to ADEC’s Spill Prevention and Response (SPAR) Director Teresa Melville for resolution who determined in early December that our request had merit.

On February 24, 2025, SPAR Director Melville issued ADEC’s decision on our request for informal review available [HERE](#). Director Melville affirmed ADEC’s decision on COA #1A and 1C, and issued the following on COA 1B from ADEC’s approval:

COA No. 1 is changed to provide as follows:

- A. By April 1, 2025, APSC will submit to SPAR a timeline outlining target dates for key deliverables and project milestones, with completion of the liner evaluation by November 2028. This timeline may be included in the final selection report, which is due from APSC by March 1, 2025. The inspection work is permitted to commence upon approval or conditional approval of the method by the Division, and it must begin no later than July 31, 2026.
- B. The plan renewal application for the 2029 VMT ODPCP must be submitted to SPAR at least 365 days before the plan’s expiration date. Additionally, the renewal application should include a project summary of the inspection results, unless the plan has been previously updated through an amendment prior to the submission of the renewal application.

Meanwhile, March 1, 2025 was the deadline for Alyeska to select the testing method for evaluating the secondary containment liner evaluation. Through a public records request, on March 5, PWSRCAC received Alyeska’s report selecting a secondary containment liner testing method. Alyeska’s February 27, 2025 Memorandum Subject: VMT – East Tank Farm Secondary Containment System Final Evaluation Method Selection is available [HERE](#).

Secondary Containment: On behalf of Alyeska, WSP conducted the pilot study in the West Tank Farm using Geoelectric Leak Location (ELL) to evaluate buried portions of the liner in July.

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: Dr. Joe Scalia and Dr. Craig Benson reviewed WSP's report on the secondary containment pilot test, titled "ELL and ERT Survey at VMT SCS: Pilot Study, West Tank Farm," and drafted a report of their comments, titled "Review of Electrical Leak Location and Electrical Resistivity Tomography Pilot Study of the Secondary Containment System at the Valdez Marine Terminal West Tank Farm Conducted July 2024." This draft report was provided to both Alyeska and ADEC in advance of the March 1, 2025 VMT C-Plan conditional of approval deadline for Alyeska to submit their proposal to test the secondary containment liner of the East Tank Farm to ADEC. PWSRCAC received Alyeska's proposal to test the secondary containment liner of the East Tank Farm via a Public Records Request to ADEC, and Dr. Joe Scalia and Dr. Craig Benson were tasked with reviewing this proposal.

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 Nuchek camera was turned off in the middle of February based on limited usage and to preserve funds for FY25. Micro-specialties was unable to provide information on how often the website hosting the images was visited. The camera can be re-activated at any time.

Staff is working on a partnership with the Marine Exchange to combine our weather station with their AIS Transmitter at Cape St. Elias. Dr. Campbell of PWSSC will begin fabricating a new weather station this Spring.

Dr. Campbell will make a site visit to the Kokinhenik weather station this Spring to troubleshoot the issues with that station, which went offline January 30. He thinks the solar panels are occluded and will move them higher up on the station superstructure.

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 VMT Buoy is on-station and operating normally. It was off-line for a brief period when the voltage on the batteries dropped below their cut-off threshold.

Dr. Campbell of the Prince William Sound Science Center made an emergency site visit on February 8 to redeploy the Duck Flats buoy after it was pushed off station by ice and drifted past the SERVS dock. While attempting to lift the anchor, the line connecting the buoy to the anchor parted. The buoy was brought back to the new Small Boat Harbor in Valdez.

Global Diving and Salvage performed an underwater remotely operated vehicle (ROV) inspection of the VMT Buoy on March 3. Global delivered the inspection report to the project manager on March 18. After review, the report will be forwarded to Alyeska.

Project Manager John Guthrie and the OSPR Committee will explore the possibility of relocating the Duck Flats buoy to a position east of Naked Island in Prince William Sound.

Dr. Campbell will be in Valdez to service both buoys in April.

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 provide 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: Project Manager Jeremy Robida conducted outreach and participant invitation to a wide array of trustee agencies, Cordova-based stakeholders, and others with

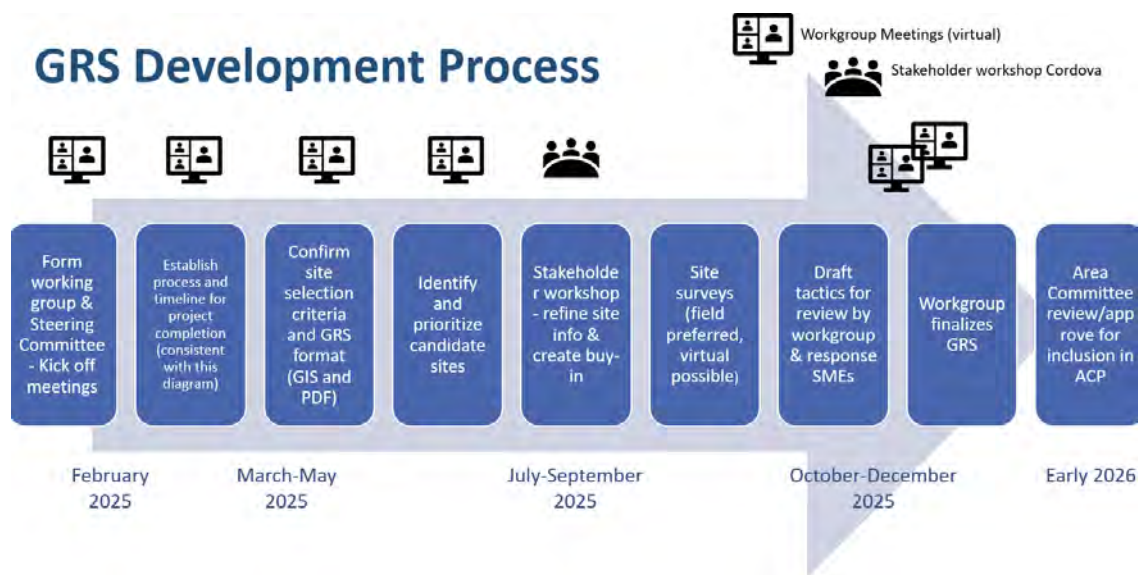
potential interest in the project. Approximately 75 entities/individuals were contacted ahead of the first workgroup meeting. Special thanks to PWSRCAC board members Dave Janka, Robert Beedle, Ben Cuttrell, Angela Totemoff, and Michael Vigil for helping identify entities/individuals.

Nuka Research and Planning Group (Nuka), Robida, and ADEC GIS staff met and spoke about how the completed Nuka-generated GRSs would be handed off and integrated into ADEC's GRS website. This conversation included a lot of technical detail not germane to the workgroup meetings. ADEC and Nuka will continue this dialogue, but the future transmittal seems straightforward and Nuka understands the various data fields that need to be populated in the back end of the GIS program.

The project steering committee (ADEC, USCG, Nuka, PWSRCAC) have been meeting prior to the workgroup meetings. This provides a chance to discuss prior workgroup meetings, plan future meeting agendas, divide up speaking and presentation duties, and generally stay ahead of the workgroup process. Thanks to ADEC and the USCG for the time invested and interest in the project.

There have been two workgroup meetings as of this status report, on February 18 and March 18. The meetings were well attended and a total of 43 and 41 attendees representing a wide variety of agencies, Cordova-specific groups such as the Copper River Watershed Project and the Native Village of Eyak, several who commercial fish on the Flats, and of course regulators like the USCG and ADEC. There was a lot of excitement among participants about the project, though many acknowledged the dynamic nature of the area. Workgroup meetings are expected to continue monthly.

Below is a graphic showing the anticipated project timeline.



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: Agnew::Beck Consulting has developed a distribution plan and outreach materials for the Peer Listener Manual. The Project Team provided extensive feedback on

draft deliverables and the suite of outreach materials chosen for development. The final deliverables will be presented to the Scientific Advisory Committee for review and then to the Board at the May meeting.

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 speeds exceed 45 knots (sustained) or wave heights exceed 15 feet. 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: The Seal Rocks Buoy is scheduled to be serviced in April. Once the wave sensor and anemometer are functional, project manager John Guthrie will make forecast comparisons as likely closure conditions occur.

Staff is still waiting for a response from NOAA about purchasing Wave Forecasts back to 1995. A decision will be made regarding project funds once historical forecast availability and price is determined by NOAA.

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: SERVS contracted vessel, 4th quarter availability numbers were shared with staff. The report, also shared with ADEC, indicates there were enough vessels available to satisfy the tanker contingency plan scenario needs. In October, a total of 332 vessels were available (62 Tier I and 270 Tier II), for November it was 335 total (59 Tier I and 276 Tier II), and for December it was 338 total (61 Tier I and 277 Tier II). Based on the December count, this 338 total count, breaks out as follows across the different ports:

- 160 vessels from Cordova (28 Tier I and 132 Tier II)
- 44 total from Homer (all Tier II)
- 44 total from Kodiak (all Tier II)
- 39 vessels from Valdez (26 Tier I and 13 Tier II)
- 26 vessels from Whittier (26 Tier I and 13 Tier II)
- 25 total from Seward (all Tier II)

This breakdown by port is in line with historical norms. As a reminder, Tier I and Rapid Response vessels are expected to report availability each week, and Tier 2 vessels report to Fishing Vessel administrators on a monthly basis. Approximately 279 vessels are needed for the tanker plan scenario: specifically six rapid response tier I, 50 Tier I, and 223 Tier II.

Spring SERVS training dates are shown below. Consult with your local FV administrator for specifics. Robertson intends to cover the Homer training event and Robida will cover Valdez.

3/30 - 4/4	Fishing Vessel Training Kodiak (3/30 travel, 3/31 setup, 4/1-4/2 classroom, 4/3-4/4 on water)
2nd Quarter	
4/3	VMT Equipment Deployment Mid Period Planning Meeting
4/5 - 4/10	Fishing Vessel Training Homer (4/5 travel, 4/6 setup, 4/7-4/8 classroom, 4/9-4/10 on water)
4/11 - 4/14	Fishing Vessel Training Seward (4/11 travel, 4/12 setup, 4/13 classroom, 4/14 on water)
4/15 - 4/24	Fishing Vessel Training Cordova (4/15 travel, 4/17 setup, 4/18-4/20 classroom, 4/21-4/23 on water)
4/24	ORE Cordova
4/25 - 4/29	Fishing Vessel Training Valdez (4/25 travel and setup, 4/26-4/27 classroom, 4/28-4/29 on water)
4/30	ORE Valdez

Dates for the California OSPR Biennial Oil Spill Response Technology Workshop were announced. This year's event will take place at Marathon's facility, in Carson, CA, May 27-30. This is the eleventh conference being held, and California OSPR is partnering with long-standing partner Chevron (who has historically been the only partner), as well as Marathon, Shell, and Phillips 66 this year. The Workshop will provide both virtual and in-person options for technical presentations and attendance, as well as a field demonstration day to interact with new tools and technologies. The agenda is still being finalized. Robida and Robertson have attended the event in the past and thought it was well run and worthwhile but will not be attending in person this year. Perhaps the virtual option will allow some participation though.

RSC job aids are out for public comment under the Arctic Western AK Area plan. The plan is undergoing a format change, with content rearranging not changing, other than RSC materials being added. Job aids such as this do not normally entail public comment, but since these job aids are expected to be incorporated across the four Area plans, a public comment period will be provided. Staff have yet to draft comments but anticipate offering a thank you regarding all of the work that went into developing these job aids. Developed materials closely reflect the PWS Area plan contents, and it was a good and productive task force process to participate in. Comments are due by April 11.

Robida continues to monitor and participate in GRS work led by the Arctic and Western Area plan GRS sub-committee. All GRSs have been digitized at this point and can be viewed in [NOAA's Emergency Response Mapping Application \(ERMA\)](#). Robida is planning to attend an upcoming training led by the Arctic Western AK Area plan GRS subcommittee group, which will address a phone app that can be used to submit potential GRS edits. These edits would be reviewed by the appropriate Area plan GRS subcommittee prior to acceptance, but the fact they're submitted digitally allows for them to go live in an instant. This streamlined update process was one of the main reasons for the move to a digital system.

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

Crowley Tankers California Emergency Towing Exercise – March 13, 2025: The Crowley Tankers California conducted an emergency towing exercise in central Prince William Sound on May 13th with tugs Contender and Challenger.

Tug Contender U/J Deployment Exercise – March 14, 2024: SERVS conducted a U/J deployment exercise with the tug Contender in Port Valdez. These are performed with the tug and the onboard workboat using the tug's boom and skimmer.

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 SERVS/PWSRCAC and ADEC/PWSRCAC communication meetings, and supporting maintenance for the NOAA weather stations.

Accomplishments since last report: The Project Manager is working with Senator Dunbar's office on a resolution showing support for the maintenance of National Data Buoy Center buoys in Prince William Sound and the Northern Gulf of Alaska.

The Project Manager attended the January Valdez Marine Safety Committee meeting where it was decided for the committee to remain as currently organized rather than move to a more formal Harbor Safety Committee model.

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, PWSRCAC's Environmental Monitoring Project Manager.

Accomplishments since last report: Contractor Natalie Kiley-Bergen presented her work at the POVTS meeting on February 4, 2025. She delivered the final draft report titled "Assessing the likelihood of non-indigenous species biofouling on vessel arrivals within the Exxon Valdez Oil Spill Region" to POVTS for consideration on February 25, 2025. POVTS recommended Board acceptance of the final report via e-mail poll on March 17, 2025.

Kiley-Bergen will make a presentation to the full board at the May board meeting in Valdez and seek Board acceptance of the final report.

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 Phase 1, Phase 2, and final synthesis reports were all accepted by the Executive Committee at the XCOM meeting on January 15. A contract for Phase 3 was approved at the XCOM meeting on January 15. A draft contract for Phase 3 was drawn up and delivered to the contractor.

Outreach to TAPS shippers and other stakeholders about their involvement in Phase 3 has begun.

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.

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.

Accomplishments since last report: Contractors from the Prince William Sound Science Center conducted marine bird surveys in Prince William Sound in and around the tanker lanes in September and November 2024. The Scientific Advisory Committee has reviewed and commented on the draft report. The final report will be presented to the Board at the May meeting. Data from the surveys has been uploaded to the Alaska Ocean Observing System and NOAA's Environmental Response Management Application.

9510 – Long-Term Environmental Monitoring Project

Objectives: Monitor the actual and potential environmental impacts of 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 tankers. This includes monitoring hydrocarbons in Prince William Sound and the Gulf of Alaska through marine sediments, mussel tissue, and passive sampling devices.

Accomplishments since last report: Dr. Morgan Bender of Fjord & Fish Sciences presented the final report from LTEMP sampling in 2024 to the Board in January. Planning began for LTEMP sampling in 2025. Passive sampling devices will be deployed on April 26. Passive sampling device retrieval and collection of blue mussels and sediments will take place May 27-29. The Scientific Advisory Committee supports contracting Pace Analytical Services to analyze the mussel and sediment samples and Oregon State University to analyze passive sampling devices once collected. In addition, mussels will be collected at four sites in Port Valdez and dissected for possible future transcriptomics analysis; for now, the samples will be placed in frozen storage with USGS.

In addition, an internship program for LTEMP was initiated in coordination with the Information and Education Committee. The intern, Tim, is meeting weekly with the SAC project manager to gain familiarity with LTEMP, analyzing historical hydrocarbon data collected in Port Valdez, and will participate in field work this spring. Tim will present a poster on his internship at the Prince William Sound College science symposium in May.

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: This project ended in September 2024.

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. Students are now preparing to give presentations about their internship within their communities or schools and will receive their final stipend checks this spring. The project manager will be traveling to Kodiak in April to participate in field work with the current intern, John Paul, who intends to do the internship again in 2025. Advertising for 2025 interns in Cordova and Valdez will begin soon.

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: This workshop will take place at the annual Subsistence Memorial Gathering hosted by the Chugach Regional Resources Commission (CRRC) in Anchorage on March 27, 2025, from 9am – 4pm. Board, SAC, and IEC members were invited to participate. The agenda has been finalized and distributed. SAC member Davin Holen with Alaska Sea Grant and project manager Danielle Verna will co-facilitate the workshop at the Gathering along with CRRC staff. The workshop will include two panels of speakers briefly presenting on current environmental monitoring programs in the region that could affect or involve communities. The panels will be followed by small group roundtable discussions, storytelling, and brainstorming of social science questions and needs in the region. Additional Council staff members will attend to participate in the workshop and assist with notetaking.