Prince William Sound Regional Citizens' Advisory Council

Board of Directors Meeting January 25-26, 2024

Zoom link for meeting audio and presentations https://pwsrcac.zoom.us/j/84666013879

Or participate via teleconference: 1-888-788-0099 Meeting ID: 846 660 3879

Final Agenda

Thursday, January 25, 2024

8:30	A	Call to Order, Roll Call & Introduction of Zoom • Welcome – President Robert Archibald • Introductions/Director reports on activities since the last meeting
8:45	B	1-0 Approve Agenda
8:55	C	1-1 Approve Minutes of September 21-22, 2023, Regular Board Meeting 1-2 Approve Minutes of November 21, 2023, Special Board Meeting
9:00	D	Public Comment Period, limit five minutes per person
9:10	E	Internal Opening Comments ***(Please limit to general information not contained in Agenda)*** • Technical Committee Updates (IEC, TOEM, OSPR, SAC, & POVTS) • PWSRCAC Board Sub Committee Updates (Governance, Legislative, & Finance)
9:45		BREAK
10:00	F	External Opening Comments ***(Please limit to general information not contained in Agenda)*** • PWSRCAC Ex Officio Members • Trans Alaska Pipeline System Shippers, Owner Companies, and Pilots
11:00	G	Alyeska / SERVS Activity Report
12:00		LUNCH
1:00	H	Presentation from Alaska Tanker Co. on upgrades and changes to their Alaska fleet – Chris Merten, ATC
1:35	I	4-1 Report Acceptance: 2022-2023 Long-Term Environmental Monitoring – Dr. Danielle Verna with Dr. Morgan Bender of Owl Ridge Natural Resource Consultants
2:05	J	4-2 Approval of FY2024 Budget Modifications – Ashlee Hamilton
2:15	K	Consent Agenda 3-1 Contract Approval for Air Quality Monitoring at the VMT 3-2 Approval of FY2024 Contract with Taku Engineering for Engineering Support
2:20	L	4-3 2023 VMT C-Plan Renewal & Approval of C-Plan Contract Increase – Linda Swiss
2:40		BREAK
2:55	M	Presentation on the Hope Spot Designation for Prince William Sound – Dr. Charla Hughes, PWS Stewardship Foundation
3:30	N	Executive Session to Discuss: • 4-4 Consideration of Oil Spill Region Recreational Coalition as Class I Member • 4-7 Federal Government Affairs Monitor Contract • Annual Review: Executive Director job description and performance goals
4:30		RECESS

Shaded Items Require Board Action

Friday, January 26, 2024

8:15	A	Report on Executive Session • 4-4 Consideration of Oil Spill Region Recreational Coalition as Class I Member • 4-7 Federal Government Affairs Monitor Contract Approval • Annual Review: Executive Director job description and performance goals
8:25	B	4-5 PWSRCAC Director Appointment for Oil Spill Region Recreational Coalition – Donna Schantz
8:30	C	Introduction & Discussions with ADEC Commissioner Designee, Emma Pokon
9:30	D	Native Village of Eyak Presentation on Shepard Point Marine Tribal Transportation Oil Spill & Marine Casualty Response Facility – Mead Treadwell, NVE
10:05		BREAK *Continued on next page*

10:05		BREAK *Continued from previous page*
10:20	E	4-6 Report Approval: PWSRCAC Long Range Plan for FY2025-FY2029– KJ Crawford
10:35	F	EVOS / PWSRCAC Legacy Project – Director Bob Shavelson
10:45	G	Director of Finance's Report to the Board
10:55	H	Executive Director's Report to the Board
11:05	I	President's Report to the Board
11:15	J	Consideration of Consent Agenda Items
11:25	K	Closing Comments
12:00	L	ADJOURN *lunch on your own*

Shaded Items Require Board Action

Additional items provided for information only:

- PWSRCAC Name Roster *(Board Members only)*
- PWSRCAC Expense Reimbursement Form
- 2-1 List of Commonly Used Acronyms
- 2-2 Budget Status Report
- 2-3 Director Attendance Record
- 2-4 Committee Member Attendance Record
- 2-5 List of Board Committee Members
- 2-6 PWSRCAC One-Page Strategic Plan
- 2-7 List of Board and Executive Committee Actions
- 2-8 PWSRCAC Organizational Chart
- 5-1 January 2024 Program/Project Status Report

Back to Agenda

PRINCE WILLIAM SOUND
REGIONAL CITIZENS' ADVISORY COUNCIL
MINUTES
REGULAR BOARD MEETING
September 21-22, 2023
Homer, Alaska

Members Present

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

Members Absent

Elijah Jackson	Kodiak Village Mayors Association

Committee Members Present

Tom Kuckertz	TOEM Committee
Steve Lewis *(via videoconference)*	POVTS Committee
Davin Holen	SA Committee
Wei Cheng *(via videoconference)*	SA Committee
Matt Melton *(via videoconference)*	OSPR Committee
John Kennish *(via videoconference)*	SA Committee
Sarah Allan	SA Committee
Savannah Lewis *(via videoconference)*	IE Committee
Cathy Hart	IE Committee

Staff Members Present

Donna Schantz	Executive Director
Joe Lally	Director of Programs

DRAFT

Back to Agenda

KJ Crawford	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
Alan Sorum	Project Manager
Amanda Johnson	Project Manager
Sadie Blancaflor	Project Manager
Nelli Vanderburg	Project Manager Assistant
Hans Odegard	IT Coordinator
Jaina Willahan	Office Coordinator

Ex Officio Members Present

Kara Kusche *(via videoconference)*	Alaska Dept. of Environmental Conservation
Lisa Fox *(via videoconference)*	U.S. Department of the Interior
Mary Goolie *(via videoconference)*	U.S. Environmental Protection Agency
Jonathan Kirsch *(via videoconference)*	Alaska Dept. Fish & Game
CDR Sarah Rousseau *(via videoconference)*	USCG MSU Valdez
Paul Degner *(via videoconference)*	Bureau of Land Management
Scott Pegau *(via videoconference)*	Oil Spill Recovery Institute

Others Present

Andres Morales	Alyeska Pipeline Service Company
Klinton VanWingerden	Alyeska Pipeline Service Company
Suzanne Cunningham *(via videoconference)*	Alyeska Pipeline Service Company
Mike Day *(via videoconference)*	Alyeska Pipeline Service Company / SERVS
Alyssa Sweet *(via videoconference)*	Alyeska Pipeline Service Company
Weston Branshaw *(via videoconference)*	Alyeska Pipeline Service Company
Scott Hicks *(via videoconference)*	Alyeska Pipeline Service Company
Kate Dugan *(via videoconference)*	Alyeska Pipeline Service Company
Michelle Egan *(via videoconference)*	Alyeska Pipeline Service Company
Amanda Keates *(via videoconference)*	Alyeska Pipeline Service Company
Mary Goolie *(via videoconference)*	EPA
Lanette Oliver *(via videoconference)*	Valdez Adventure Alliance
Quinten Simeon	Inletkeeper
Tiffany Larson *(via videoconference)*	Alaska Dept. of Environmental Conservation
Melissa Woodgate *(via videoconference)*	Alaska Dept. of Environmental Conservation
Anna Carey *(via videoconference)*	Alaska Dept. of Environmental Conservation
Rebecca Spiegel *(via videoconference)*	Alaska Dept. of Environmental Conservation
Andy Jones	Alaska Dept. of Environmental Conservation
Blair Patterson	Alaska Dept. of Environmental Conservation
Dianne Munson *(via videoconference)*	Alaska Dept. of Environmental Conservation
Mo Radotich *(via videoconference)*	Alaska Dept. of Environmental Conservation

DRAFT

Kathy Shea *(via videoconference)*	Alaska Dept. of Environmental Conservation
Melinda Brunner *(via videoconference)*	Alaska Dept. of Environmental Conservation
Sonja Mishmash	Alaska Dept. of Environmental Conservation
Chris Merten *(via videoconference)*	Alaska Tanker Company
Angelina Fuschetto	Crowley Alaska Tankers
Andrea West	Polar Tankers
John Novak	Polar Tankers
Chris Hiatt	Polar Tankers
Rob Kinnear *(via videoconference)*	Hilcorp
Capt. Ian Maury	Southwest Alaska Pilots Association
Eileen Oliver *(via videoconference)*	Bureau of Land Management
Rob Campbell *(via videoconference)*	Prince William Sound Science Center
Joe Levesque	Levesque Law Group
Roy Jones *(via videoconference)*	PWSRCAC legislative monitor (Federal)
LT Caroline Wilkinson *(via videoconference)*	NOAA Office of Coast Survey
Kris Holderied	NOAA
Tim Robertson	Citizen
Ken Castner	City of Homer
Ingrid Harrald	Kachemak Bay National Estuarine Research Reserve
George Matz	Kachemak Bay National Estuarine Research Reserve
Emilie Springer	Homer News
Louie Flora	Office of Alaska Senator Loki Tobin
Max Harsha *(via videoconference)*	University of New Orleans
David Podgorski *(via videoconference)*	University of New Orleans
Jamie Kiep *(via videoconference)*	KBBI
Adryan Glasgow *(via videoconference)*	Agnew::Beck
Lisa Fousek *(via videoconference)*	Agnew::Beck
Tomas Anderson *(via videoconference)*	Citizen
Rami Paulsen *(via videoconference)*	Tatitlek IRA Council

DRAFT

Thursday, September 21, 2023

CALL TO ORDER, WELCOME, AND INTRODUCTIONS

The annual meeting of the Board of Directors of the Prince William Sound Regional Citizens' Advisory Council was held September 21 and 22, 2023, at the Islands & Oceans Visitor Center in Homer, Alaska. President Robert Archibald called the meeting to order at 8:30 a.m. on September 21, 2023.

A roll call was taken. The following 17 Directors were present at the time of the roll call, representing a quorum for the conduct of business: Archibald, Bauer (via videoconference), Bender, Brittain, Crump, Cutrell, Donaldson, Haggerty, Hasenbank, Herbert, Janka, Malchoff, Moore (via videoconference), Shavelson, Vigil, Williams (via videoconference), and Zinck. Robert Beedle and Angela Totemoff joined the meeting in person shortly after the call to order at 8:38 a.m. and 8:52 a.m., respectively.

President Archibald welcomed everyone to the meeting. Yup'ik storyteller and Kachemak Bay resident, Quentin Simeon, gave a land acknowledgement. Ken Castner, Mayor, welcomed the Council to the City of Homer.

Introductions and Directors' reports followed.

1-0 AGENDA

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

Angela Totemoff **moved to approve the agenda** (green-colored sheet). Jim Herbert **seconded** and **the agenda was approved as presented**.

1-1 MINUTES

Angela Totemoff **moved to approve the minutes** of the Annual Meeting of the Board of Directors of May 4 and 5, 2023. Michael Vigil **seconded** and the **minutes were approved** as presented.

Jim Herbert noted there have been instances during past Board meetings where Board members ask questions of third parties (ex officios, Alyeska, etc.) where the representative promises follow-up information will be provided after the meeting. Herbert asked whether there is a record of the information that is ultimately provided and whether it is the responsibility of the person who asks the question to follow up or the responsibility of staff. Executive Director Donna Schantz stated that staff could do a better job of making sure that the information is received and disseminated to the Board. Herbert added he felt the person who asked the question bore some responsibility to make sure it is ultimately addressed and the information passed along.

1-2 MINUTES

Angela Totemoff **moved to approve** the minutes of the Special Meeting of the Board of Directors of April 14, 2023. Jim Herbert **seconded** and **the minutes were approved** as presented.

PUBLIC COMMENTS

Tim Robertson, a founding member of PWSRCAC and a Seldovia resident, addressed the Council about its upcoming 35th anniversary in 2024. He said he would like to see a gathering of the founders in 2024, in a roundtable format where they can reminisce about the early days of the Council, what their expectations were at the time, and their thoughts on the evolution of the Council 35 years in.

Ingrid Harrald, Education Coordinator at the Kachemak Bay National Estuarine Research Reserve (KBNERR), gave an overview of the organization, how funding from the PWSRCAC's Youth Involvement project was being used, and how the KBNERR mission overlaps in places with PWSRCAC.

DRAFT

INTERNAL OPENING COMMENTS - PWSRCAC TECHNICAL COMMITTEE UPDATES

SCIENTIFIC ADVISORY COMMITTEE (SAC)

Chair David Holen gave an update of the committee's activities and its projects since the May Board meeting:

- **Long-Term Environmental Monitoring Program (LTEMP).** The annual LTEMP sampling took place in May and June. It was an expanded sampling year, which takes place every five years. Staff gathered samples from nine out of the 12 expanded LTEMP sites throughout Prince William Sound. Unfortunately, adverse weather conditions prevented access to the three Gulf of Alaska sites. SAC members agreed to postpone sampling at the three inaccessible sites to June 2024, ensuring consistency in data collection timing. Currently, SAC is deliberating whether to integrate transcriptomics permanently into LTEMP.

- **Winter Marine Bird Survey.** 2023 marked SAC's third consecutive year of supporting winter marine bird surveys. During the May Board meeting, funding was approved in the budget for a fourth year of surveys that will take place in March 2024. Notably, the conclusion of Gulf Watch Alaska funding resulted in the omission of certain transects, some of which have been added to the pre-existing PWSRCAC transects. Survey data has been compiled and are now integrated into NOAA's Environmental Response Management Application (ERMA). A final report will be presented to the Board at this meeting and SAC recommends its acceptance.

- **Oxygenated Hydrocarbons.** The report on oxygenated hydrocarbon sampling at the Valdez Marine Terminal has revealed that the ballast water treatment facility (BWTF) effectively removes BTEX compounds, yet hydrocarbon oxidation products (HOPs) persist in the effluent discharged to Port Valdez. Optical analyses exhibited a shift towards more oxygenated and intricate compounds throughout the treatment process. These findings underscore the significance of further monitoring at the BWTF considering the presence of HOPs and heavy metals. A complete report and executive summary have been submitted to the Board for approval during this meeting and SAC recommended acceptance.

- **Marine Invasive Species.** In late June, settlement panels were deployed throughout Prince William Sound for the purpose of monitoring invasive species. This is the most expansive monitoring to take place in 20 years. A team from the Smithsonian Environmental Research Center is currently in Cordova to facilitate retrieval and analysis of these panels, which will continue through the end of the month. Results will be shared with SAC and the Board next year.

  Student intern Noah Schrof from Kodiak is engaged in a second year of monitoring for European green crab while a new student, Joshua Duong, began monitoring in Valdez this year. Encouragingly, the routine monthly monitoring conducted in Kodiak and Valdez has not detected any European green crab.

DRAFT

- **Peer Listener Training Program.** During the recent update of the Council's "Coping with Technological Disasters: A User-Friendly Guidebook," it was decided that the Peer Listener Manual (included in the Guidebook as Appendix F) needed further revisions. A project team consisting of members from SAC, IEC, and staff met several times to discuss the structure and content of the manual to ensure it was relevant to today's world and provided the selected contractor, Agnew::Beck, input into the update. The revised manual will be presented to the Board at this meeting and reflects the current understanding of mental health and the value of peer-to-peer support for community resiliency in the wake of a disaster. SAC recommends the Board accept the revised manual.

- **Review of Subpart J of the National Contingency Plan.** SAC and OSPR, in conjunction with Elise DeCola from Nuka Research and Planning Group, or Nuka, recently discussed the final updates to Subpart J of the National Contingency Plan issued by the EPA. These updates were initially proposed in January 2015, and were eventually finalized following a lawsuit against the EPA. In a memo to the Council, Nuka highlighted two significant modifications in the final rule: alterations in agent listing criteria and revised dispersant use prerequisites during emergency responses. The existing protocols will remain in effect until December 11, 2023. The revised methodology for adding new chemicals will become effective on December 12, 2025. Chemicals already listed on the Product Schedule, including the dispersant Corexit, will remain for now but will need to follow the new listing requirements once the rule takes effect.

- **Science Night.** Science Night is fast approaching, scheduled for November 30, 2023, at the Embassy Suites in Anchorage. The theme this year is *Systems and Methods: Connecting Across the Exxon Valdez Oil Spill Region*.

- **Conferences.** In early June, SAC member Roger Green attended the 45th annual Arctic Marine Oilspills (AMOP) meeting in Edmonton, Alberta. In May, staff member Danielle Verna attended the International Conference on Marine Bioinvasions in Baltimore, Maryland.

PORT OPERATIONS AND VESSEL TRAFFIC SYSTEMS COMMITTEE (POVTS)

Committee Chair Steve Lewis outlined the POVTS Committee's efforts since the May Board meeting.

- The POVTS Committee has been following the progress of the National Marine Fisheries Service (NMFS) concerning whale strike mitigation. The latest message from Kathleen Leonard states, "The NMFS Alaska Region Protected Resources Division has been gathering and evaluating the best available science on marine mammal abundance, distribution, and habitat use in Prince William Sound and the surrounding waters, as well as reviewing vessel usage and traffic patterns to assess whale-vessel interactions in the area. The Alaska Region is currently in the process of

DRAFT

drafting a response regarding the evaluation of vessel strike reduction measures in the Prince William Sound area." Lewis said that the POVTS Committee looked forward to receiving that report and would then see what it can do proactively to facilitate this issue."

- The POVTS Committee continues to stay informed about the weather-based projects led by the OSPR Committee and on matters pertaining to the Port Valdez weather buoys.

- The committee discussed the possible decommissioning of the National Data Buoy Center's Port Wells weather buoy.

- **Escort Tugboat Technology (8018)** - This project did not receive any proposals in response to its RFP. It has been deferred until the scope can be redefined to be more enticing to potential contractors.

- **Vessel Operator Tsunami Hazards Guidance Workshop (8025)** - Work on this project is underway. Sierra Fletcher of Nuka is under contract to help facilitate the workshop, which will be held in conjunction with the regional tsunami response exercise (AlasX24) in summer 2024.

- **Miscommunication in Maritime Contexts (8520)** - Contractor Dr. Nicole Zeigler has resumed her work on this project, after taking a break due to an illness in the family. The first deliverable will probably be available in time for the May 2024 Board meeting.

- **Projects to be modified or NOT continued:**

    - **Sustainable Shipping Phase 2**. Phase 1 regulatory review study was completed and distributed. Phase 2 was conceived as a review of evolving fuels and propulsion technology. Due to the pace of change and literature coverage, which the committee shares in the POVTS News, the committee is fairly well informed and feels that a project of this type would be obsolete in the year's time that PWSRCAC's project process creates. The committee is undecided if or how to pursue this matter and would appreciate the Board's input on what it needs.

- **Areas of concern being considered for future projects**:
    - Whale strike mitigation.
    - Aquatic noise.
    - Biofouling and hull coating regulation.
    - Spill prevention and response, regulatory commitment, and efficacy comparison of the five Northeast Pacific states and provinces.

DRAFT

The committee would like input from Board members, either collectively or individually, on topics and concerns and what it would like the committee to be working on.

OIL SPILL PREVENTION & RESPONSE COMMITTEE (OSPR)

Committee chair Jim Herbert outlined the OSPR Committee's activities since the May Board meeting:

- OSPR 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.

- OSPR has been updated on changes to the contingency planning regulations (18 AAC Chapter 75), including:
  - Consolidation of sections on plan contents and approval criteria.
  - Requirement of only one operations-based exercise during each five-year plan cycle, with only one additional operations-based exercise allowed each year.
  - Removal of RCACs as named reviewers.

- OSPR has been kept updated on staff participation in an Alaska Regional Response Team (ARRT)-initiated Regional Stakeholder Committee (RSC) Task Force. The group is working to construct a job aid for liaison officers to help manage the RSC process and for RSC members themselves.

- OSPR has been updated on the status of the VMT secondary containment liner. Alyeska has until October of this year to make a formal decision on the method of testing that will be used in the pilot study, which will take place in 2024 in the West Tank Farm.

- OSPR has been kept updated on the City of Valdez's case appealing the Regulatory Commission of Alaska's orders allowing Hilcorp/Harvest Alaska to keep their financial information confidential and granting the transfer of BP's assets to Hilcorp.

- OSPR reviewed and accepted various drill reports.

- OSPR has been kept updated on various weather-related projects, including repair and maintenance on the Port Valdez weather buoys and the installation of a new weather station on Kokenhenik Island. OSPR also forwarded the 2022 Port Valdez Weather Buoy Data Analysis report to the Board and is recommending Board acceptance of the report.

- Matt Melton will represent OSPR at the Pacific Marine Expo in Seattle.

- Section 5 in the meeting notebook has more detail on the committee's projects.

DRAFT

TERMINAL OPERATIONS AND ENVIRONMENTAL MONITORING COMMITTEE (TOEM)

Committee member Tom Kuckertz reported on the TOEM Committee's activities since the last Board meeting in the absence of Chair Amanda Bauer:

- TOEM received and reviewed Dr. Merv Fingas' report titled "Review of the 2019 Alaska North Slope Oil Properties." The report was sent to the Executive Committee with the TOEM Committee's recommendation that it be accepted as final and then distributed to industry and regulators.

- TOEM received and reviewed Taku Engineering's final report titled "Crude Oil Tank Vent Snow Damage." Several tank headspaces were concluded to be above the lower explosive limit during the vent damage, indicating that the presence of a spark could have caused a fire or explosion at the VMT. This report was then sent on to the Executive Committee with the TOEM Committee's recommendation that it be accepted as final and then distributed to industry and regulators.

- Reports for TOEM's tank maintenance projects for Tanks 7 and 94 are currently being drafted by Taku Engineering. The committee received the requested inspection reports through public records requests to the Alaska Department of Environmental Conservation (ADEC). Tanks 7 and 94 were inspected in 2021 and returned to service. Tank 2 was inspected in 2022 and returned to service. PWSRCAC's requests to Alyeska for Tank 2 information remain outstanding.

- TOEM received and reviewed documents obtained from an ADEC public records request regarding the tank vent snow damage incident of 2022. These documents included an ADEC "Notice of Violation" for three violations, two of which included 12 counts for each of the 12 tanks damaged, which Alyeska and ADEC had not previously disclosed to PWSRCAC.

- TOEM discussed and recommended staff send a letter to the Pipeline and Hazardous Materials Safety Administration (PHMSA) and Alyeska requesting clarification on Alyeska's response to PHMSA's Request for Information, which included correspondence related to PWSRCAC reports on Valdez Marine Terminal (VMT) crude oil storage tank maintenance and cathodic protection systems at the VMT. The letter was sent to PHMSA and Alyeska on July 27.

- TOEM discussed and recommended staff send a letter to ADEC and EPA requesting additional clarification on the timeline for the VMT Title V Air Quality permit issuance. The letter was sent to ADEC and EPA on August 22, 2023. TOEM also approved a Request for Qualifications (RFQ) for an air quality expert to provide support on the permit comment period.

- TOEM was updated on Taku Engineering's review of the 2021 APSC integrity reports.

DRAFT

Kuckertz pointed out that Alyeska's response to TOEM requests for information slowed considerably during the pandemic, and even though the business interruptions caused by the pandemic have ceased, TOEM/PWSRCAC is not getting responses any faster to its information requests.

INFORMATION AND EDUCATION COMMITTEE (IEC)

Committee member Cathy Hart reported for the IEC in the absence of Chair Trent Dodson. She reported that since the Board met in May, IEC had had several meetings, including their annual hybrid workshop.

- **Community Outreach.** Council outreach events have included:

  In May:
  - Outreach Coordinator Maia Draper-Reich provided a presentation and hosted the Council's booth at the Prince William Sound Natural History Symposium in Whittier.
  - Staff members Jeremy Robida and Nelli Vanderburg also hosted a free event for Valdez guides to learn about the Valdez Marine Terminal, oil spill prevention and response, and the Council's role.

  In June:
  - Maia Draper-Reich presented during two teachers' courses in the EVOS region co-facilitated by Alaska Geographic.
  - In mid-June, Board member Dave Janka, OSPR member Skye Steritz, and staff members Joe Lally and Danielle Verna attended Copper River Nouveau in Cordova on behalf of the Council. This event gave Council members the opportunity to speak with members of the Alaska Congressional Delegation and the new president of Alyeska to continue to foster those relationships.
  - In late June, staff members Donna Schantz and Sadie Blancaflor presented on the Exxon Valdez oil spill and the founding of the Council to a group of youth visiting Valdez from Soldotna, Anchorage, and Fairbanks for a church intensive.

  In August:
  - Maia Draper-Reich hosted the Council's booth in the nonprofit section of Salmonfest, with help from Board President Robert Archibald and POVTS member Max Mitchell, engaging with approximately 350 people.

- **Youth Involvement.** Projects have recently been completed with Prince William Sound College and Gilson Middle School, and IEC accepted both reports at their most recent meeting. Additional contracts are in motion with Copper River Watershed Project, Alaska Geographic, Prince William Sound Science Center, Center for Alaskan Coastal Studies, Alaska Marine Conservation Council, and the University of Alaska Anchorage.

DRAFT

The IEC also updated the scoring rubric for evaluating incoming Youth Involvement RFPs and are looking forward to its implementation during the next RFP cycle.

- **Web Presence BAT**. Staff member Amanda Johnson, with support from Hans Odegard, has been working with the Council's web contractor to migrate the sites to a new hosting service. This has been a large undertaking, resulting in vast improvements to how our sites function and are maintained.

(This concluded the technical committee reports.)

INTERNAL OPENING COMMENTS -- PWSRCAC BOARD SUBCOMMITTEES

BOARD GOVERNANCE COMMITTEE (BGC)

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

- The BGC has met twice since the May Board meeting.
- Since the last Board meeting, the BGC project team finalized and posted the request for qualifications to identify entities interested in potentially serving as the Recreation representative on the PWSRCAC Board of Directors.
- The BGC project team also discussed potential recreation entities for direct solicitation and considered more than 20 organizations representing recreation throughout the state of Alaska. The group agreed that recreation entities operating within the Exxon Valdez oil spill affected region shall be prioritized.
- The Request for Qualifications was open for a 90-day period, from April 15 through July 15, 2023. During that time, three statements of qualifications were submitted for consideration. Submitting organizations included: Friends of Kachemak Bay State Parks, the Prince William Sound Stewardship Foundation, and the Valdez Adventure Alliance.
- The statements of qualifications, timelines, and next steps to potentially fill the Class 1 Recreation Member Entity seat will be discussed later today in Executive Session.
- Hasenbank thanked the committee, the BGC project team, and staff for their involvement in this ongoing process.

LEGISLATIVE AFFAIRS COMMITTEE (LAC)

Committee member Robert Beedle reported on the activities of the Legislative Affairs Committee (LAC) since the May Board meeting:

DRAFT

Activities Since the Last Board Meeting:

State:

- **Alaska Department of Environmental Conservation (ADEC) Spill Prevention and Response (SPAR) budget deficit.** The Council has been concerned with the long-term sustainability of the SPAR budget, which will go into deficit in FY2029, based on the latest Prevention Account projection. Senate Bill (SB) 137, which would have increased the refined fuels surcharge to 1.5 cents per gallon, failed to advance and will carry forward into the next legislative session. PWSRCAC and the Legislative Affairs Committee will continue to strongly support this legislation.

- **PFAS Use, Regulation, and Testing (SB 67)**. This bill would have allowed the state fire marshal to determine an alternative safe and effective firefighting substance and adopt regulations requiring use of the alternative substance. This legislation passed both the Senate and House but was vetoed by the Governor.

- **Invasive Species Council**. PWSRCAC and Legislative Affairs Committee continues to advocate for the establishment of an Alaska Invasive Species Council. There appeared to be support for the establishment of the Council through an Administrative Order from the Governor's office, however, there has been no progress since April 2023 on this issue.

Federal:

- A major item of discussion has been the Billie Garde report and methods of transmittal. This report has garnered a lot of attention from industry, regulators, legislators, and the media. The Council's federal legislative monitor encouraged the Delegation to make a request to the Government Accountability Office (GAO) to initiate an audit to determine adequacy of the current regulatory oversight of operations at the Valdez Marine Terminal.

LAC Priorities Going Forward:

- LAC's top state legislative priority continues to be the sustainability of the Alaska Department of Environmental Conservation's Spill Prevention and Response Division's budget. The Council, through LAC and our state legislative monitor, will support SB 137 to increase the refined fuels surcharge that will provide a stable funding source for the SPAR Division in the future.

- LAC's top federal legislative priority continues to be following up and supporting the Alaska Congressional Delegation on their request to the Government Accountability Office to determine the adequacy of federal and state regulatory oversight of the Valdez Marine Terminal.

DRAFT

FINANCE COMMITTEE (FC)

Treasurer Wayne Donaldson reported for the Finance Committee as follows:

The Finance Committee met once since the May board meeting.

The committee reviewed the June 30, 2023, financial statements. These statements are the last of FY2023. The committee met with our auditor, BDO, to go over plans for the FY2023 audit. An audit is an independent look at our books for an opinion on accuracy and to ensure confidence that the financial statements fairly represent an organization's results and financial position. This will be the last year BDO will conduct the audit and staff are in the process of identifying a new auditor. In addition to the audit, BDO has agreed to prepare the annual IRS form 990 which is due in FY2024. BDO also highlighted cyber security issues and cyber insurance policies.

The committee reviewed the annual Required Documentation for the Board of Directors. All conflicts of interest, transactions with related parties, and statement of residency were received from all directors and staff. This is required each year as part of the annual audit.

Finally, the committee briefly discussed possible new budgeting programs, including an add-on to Sage Intacct called Sage Intacct Planning, or SIP, to highlight ongoing efforts to formulate a plan on how PWSRCAC will build the FY2025 budget.

Break: 9:51 a.m. – 10:01 a.m.

EXTERNAL OPENING COMMENTS - EX OFFICIOS

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION (ADEC)

Kara Kusche, ADEC's interim ex officio representative on the Council, replacing Allison Natcher, spoke to the Council via videoconference and introduced herself. She was joined by the Spill Prevention and Response Division (SPAR) Director Tiffany Larson who updated the Council on ADEC and SPAR Division activities of interest to PWSRCAC since the last update at the May Board meeting.

- Commissioner Brune is no longer with ADEC and former Deputy Commissioner Emma Pokon is now the Acting Commissioner.

- ADEC's new regulations under Article 4, 18 AAC 75, are now fully in effect and all c-plans and c-plan updates need to comply with the new regulations.

- Article 2, Financial Responsibility, was also updated and will become effective October 1, 2023.

- The Lieutenant Governor signed the repeal of 18 AAC 75, Sec. 835-860, which will take effect on October 18, 2023.

DRAFT

Larson introduced Melinda Bruner, the new Prevention, Preparedness & Response program manager, based in Fairbanks, and who is replacing Graham Wood. Bruner introduced herself to the Council and gave a brief summary of her background and experience via videoconference.

Following the update, Director Larson answered specific questions from the Board:

Jim Herbert asked whether the ADEC/SPAR Division and/or the Governor's Office will have a position on Senate Bill 137 (increase in refined fuels surcharge bill) going into the new session. Larson pointed out that both the Governor and previous Commissioner Brune had both supported the bill in the previous session, so she saw no indication there would be opposition.

Herbert asked about ADEC's continuing vacancy rate and what the department is doing to retain and recruit into those vacant positions. Larson acknowledged it is a challenge, and noted the department is doing as much as it can to fill the vacancies as quickly as possible and is hiring statewide where possible. The department is adhering to its "critical mass memo" which is an internal policy the department devised to ensure they have responders in each of the critical locations and a sufficient number to respond in the event of a release, and the department is doing things internally to promote retention, providing other training opportunities, and providing lateral and vertical movement etc., within the division.

Herbert went on to ask whether anything was being done about Alyeska's expired air quality permit from 2017 (reported earlier in the meeting during PWSRCAC's technical committee reports). Larson stated that ADEC's Air Quality Division is responsible for issuing their Title V permit. She referred the Board to direct those questions to Permit Manager Jim Plosay of the Air Quality Division. Herbert requested that PWSRCAC staff (Sadie Blancaflor) follow up on this issue.

Mako Haggerty reiterated a question he asked of Allison Natcher at a previous Board meeting and that was how much SPAR had recovered in fines for oil spills and the number of fines issued in the past two years, and whether it goes directly to the SPAR budget or into the general fund. Larson did not have information on the specific dollar amount at that time but will have her staff get back to the Board. She pointed out that, as a general rule, SPAR is required statutorily to recover costs from all oversight responsibilities and the monies recovered go directly into the Prevention or Response fund, depending on what the recovered costs were expended for. Fines are treated the same way. SPAR does not have to "fight" for those monies, per se, in the general budgeting process, but the Legislature has to appropriate the funds in order for them to be available to SPAR.

Bob Shavelson asked whether ADEC is cognizant of the loss of knowledge from the agency as personnel are retiring and leaving the agency, and whether it has a timeline for a replacement for Commissioner Brune. Larson stated that she does not know what the timeline is to find a replacement for Commissioner Brune as it is an exempt position appointed by the Governor. She would expect to see something before the next legislative

DRAFT

session so the replacement can be confirmed into the position. As to the retention and recruitment question, SPAR is fully aware of the turnover numbers and the challenges they face, and they have monthly check-ins by department leadership as to staffing, retention levels, and how staff are moving within the department.

Amanda Bauer pointed out that while Alyeska's air quality permit expired in 2017, ADEC has been working on it since 2012. As to the volume of vapor or hazardous pollutants that were released during the tank vent problems last year, she asked if ADEC had an estimate yet and when PWSRCAC might see those numbers. Larson stated that she did not know the reason it was taking so long to get the air quality permit renewed and she did not have information on the amount of the emissions. She referred the Council again to Permit Manager Jim Plosay in the Air Quality Division.

President Archibald asked if Larson was confident that SPAR's funding was substantial going into the new year. Larson stated that the division's appropriation going into the coming year will be up to par and sufficient. The division has been judicious with its spending and has seen savings because of lower staffing, as well as a significant return on its investment in 2022. Larson stated she has no concerns that there is enough funding through fiscal year 2024 and the Prevention & Response Fund is sustainable through 2031 at current staffing levels.

President Archibald asked what the most significant impediment to recruitment/retention is for ADEC. Larson stated that the state's beginning salary is competitive, but thereafter it is not, and that is the struggle. She also commented that there is a discrepancy between state and federal salaries (for like positions) and ADEC has been advocating for an adjustment.

Wayne Donaldson asked if staff leave because of a lack of a retirement system. Larson said she does not believe that is the case for more junior staff but that is a question that could be better answered by the state's human resources staff.

Bob Shavelson asked if the ADEC had improved its compliance and enforcement performance assessment by the EPA for the air quality and water quality permits delegated to it by the EPA from the lowest grade on the metric when last assessed in 2017. She did not have specific information but to her recollection adjustments were made and improvements were made. She also pointed out that ADEC is required to report to the Legislature annually. It is available on ADEC's website. She pointed out that it also contains information on ADEC's efforts to cost recover and what areas of the state are paying their cost recovery bills.

Kusche went to on to give other updates, as follows:

- The next Area Committee meeting will be the Arctic and Western Area Committee meeting on October 25, 2023, in Anchorage, both in person and virtually.

- Valdez Marine Terminal oversight:

DRAFT

  - The 2023 VMT Plan Renewal is anticipated to be submitted in late October and PWSRCAC will receive notifications via the listserv for public comment periods. Renewal documentation will be available on the website under the plan.
  - Central region PPR staff, with support from engineering staff, continue to make periodic visits to the VMT, check on progress of maintenance projects, and continue to review any requested API 653 inspection reports.

- Prince William Sound Shippers oversight:
  - The Shippers submitted major amendments to their c-plan to incorporate the recent amendments to Article 4, 18 AAC 75, and to replace the barge called Mineral Creek with the new Oil Spill Response Barge called OSRB5. Notifications will be on the listserv under Prince William Sound location.

- Staff continues to complete inspections of tank vessels that call at Port Valdez and continue to work with the Shippers to for exercise planning. The next exercise will be in 2024 with the Endeavour. Staff continues to monitor SERVS training and deployments.

Kusche encouraged everyone to sign up for the c-plan listserv notifications.

Kusche stated that the Billie Garde report had been circulated to ADEC staff in PPR, Air, and Water Divisions. Staff was reviewing the report to determine intersects with the department's statutes and regulations and staff was included in Joint Pipeline Office (JPO) discussions of the report. For those items that fall under ADEC oversight, the report has made staff more conscientious in reviewing documentation while conducting field work.

Kusche thanked PWSRCAC for being a regular supporter of ADEC.

Kusche continued with a report on the department's general staffing statistics. The department is currently recruiting for one position in Valdez.

She invited the Council to attend a SPAR warehouse open house on October 24, 2023, in Anchorage. Staff will be available to answer questions at that time.

In response to a question from Mako Haggerty about staff assigned to PFAS issues, Larson stated that there is not one person whose only job is dealing with PFAS, but she can provide some general points of contact who can answer questions. Haggerty requested that information be sent to PWSRCAC.

Bob Shavelson asked where PWSRCAC would find SPAR's compliance and enforcement information, noting that the last SPAR annual report on its website is for FY2022 and it does not contain that information. Larson stated that the penalties and inspections information is not currently incorporated into the annual report. In 2022-2023, they developed a work plan that incorporates compliance and enforcement that calls out those goals and what they are

DRAFT

meant to be, but they are not putting out a report. The goals are to inspect every other year (i.e., inspection of 50% of those facilities designated as high risk and every year 20% of those facilities designated as low risk). So, in any single plan term, the objective is that SPAR would inspect low-risk locations at least once, and high-risk locations two to three times, and verified compliance with their c-plan and the regulations. That information is provided to the Legislature in its performance measures report, the last report being in the fall of 2022. As to enforcement cases, PPR does not have a goal number of enforcement cases. It simply chooses cases appropriate for enforcement and penalty. The information is tracked internally and contained in the PPR work plan, but the actual deliverables are not currently published.

President Archibald thanked Director Larson and all the ADEC personnel who participated in this report to the Board.

UNITED STATES COAST GUARD (USCG)

CDR Sarah Rousseau, who took over command of MSU Valdez during the summer from CDR Patrick Drayer, introduced herself to the Council via videoconference and reported that she met with PWSRCAC personnel shortly after she assumed command and was getting to know the Council's mission. She stated that she had taken a look at the safety culture report on Alyeska (Billie Garde report) and that USCG supports the readiness and the resilience of U.S. ports and appreciates PWSRCAC's endeavors to ensure that happens.

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

Jonathan Kirsch, ADF&G's new liaison to the JPO replacing Lee McKinley, introduced himself to the Council via videoconference.

OIL SPILL RECOVERY INSTITUTE (OSRI)

(No report.)

ALASKA DEPT. OF NATURAL RESOURCES (ADNR)

(No report.)

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

Mary Goolie reported for EPA via videoconference in place of Tori Huelsketter.

She reported that the Alaska Regional Response Team (ARRT) had its meeting in Anchorage the previous week. She thanked PWSRCAC staff who were heavily involved with development of the RSC job aids at that meeting. The next meeting will be March 7, 2024, in Anchorage and available virtually.

She thanked PWSRCAC staff for making the Regional Stakeholder Committee (RSC) Task Force a success and for putting together updates to definitions and language and working on job aids for the liaison officer working with the RSC, and also for RSC members. She also thanked PWSRCAC staff for their assistance in putting together definitions and language for future Area c-plans and the Regional c-plan.

She announced that the next Arctic Area Committee meeting will be October 25, 2023. The next Prince William Sound Area Committee meeting will be October 5, 2023. The contact person within EPA who can answer questions on PFAS is Kara Lynch.

Goolie reported that two EPA on-scene coordinators (OSC) had performed facility response inspections at the VMT on June 28, 2023. The inspection checklist was still going through review with the Enforcement Compliance & Assurance Division (ECAD) and the information will be shared with PWSRCAC when that review is completed. The OSCs also did an inspection at Petro Star.

Goolie did not have an official response from the agency to the Billie Garde safety culture report but it was being reviewed and she will get back to PWSRCAC when that is available.

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

Lisa Fox, Regional Environmental Officer, reported for the Department of the Interior (DOI). She reported that the DOI chairs the Wildlife Protection Committee on the Alaska Regional Response Team (ARRT), and there have been recent updates to the Wildlife Protection Guidelines. Also presently in the works is an annex to the Arctic and Western Alaska Area C-Plan specifically geared to marine mammals.

BUREAU OF LAND MANAGEMENT (BLM)

Paul Degner reported via videoconference and updated the Board on BLM activities since the May Board meeting.

He reported Steve Weeks was heavily involved in several Alyeska projects on the southern end of the federal right-of-way this summer (e.g., integrity digs, support member replacements, and demolition activities going on at Pump Station 12). Weeks was involved in the National Environmental Policy Act (NEPA) analysis for those projects and the permitting, and since that time has made multiple trips this summer to do surveillances and grant oversight on those activities. Weeks also conducted a joint visit to the VMT with ADEC to review the work on Tank 93 ballast water treatment annular ring replacement, as well as the cleaning of Tank 8. In August, he joined members of PWSRCAC staff, ADEC, and USCG to take a tour of the new wildlife response unit at the VMT.

Degner reported that Greg Bjorgo, BLM's Environmental Protection Specialist, continues to attend oil spill exercise planning meetings for the VMT and will be attending Shoreline Cleanup and Assessment Technique (SCAT) training in October and the Incident Management Team (IMT) equipment deployment exercise, as well as attend the Prince William Sound Area Committee meeting.

Degner acknowledged BLM's receipt of the Billie Garde report and it has been circulated among his staff. Staff's comments on the report have been forwarded to their management for their consideration. His office has requested a copy of Alyeska's snow removal plan, and they will be reviewing updates to that plan for grant compliance. His office continues to

participate in JPO conversations regarding the Garde report and his office did co-author the response to Sen. Murkowski's office in reference to their inquiry about the JPO activities.

His office worked with the State Pipeline Coordinator's Office to respond to the PWSRCAC public records request and has received the subsequent requests for federal documents. He planned to respond to PWSRCAC's Linda Swiss the following week.

Eileen Oliver provided an update on the Alaska Native employment on the TAPS. As of 2nd Quarter 2023, Alyeska's overall compliance was 23.3% (Alyeska 26.1%, Contractors overall 20.5%, resulting in a combined total of 23.3% which meets their 20% goal.) Three contractors are on corrective action plans. Alyeska meets regularly with those contractors to work with them, as does Oliver. Alyeska meets quarterly with all their contractors and Native employment is discussed at those meetings.

Herbert asked Degner if his office was involved in the fire that occurred during cleaning of one of the tanks recently at the Tank Farm. Degner reported that BLM was not involved but they were notified.

U.S. FOREST SERVICE (USFS)
(No report.)

ALASKA DEPT. OF HOMELAND SECURITY AND EMERGENCY MANAGEMENT (ADHSEM)
(No report.)

NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION (NOAA)
(No report.)

Break: 11:15 a.m.– 11:25 a.m.

EXTERNAL OPENING COMMENTS: TAPS SHIPPERS & OWNER COMPANIES, & PILOTS

SOUTHWEST ALASKA PILOTS ASSOCIATION (SWAPA)
Capt. Ian Maury, President of SWAPA, reported that SWAPA had a current total of 18 pilots. They also have four trainees and are looking to bring on three more.

CROWLEY ALASKA TANKERS (CAT)
Angelina Fuschetto reported Crowley Alaska Tankers (CAT) had transported over 19.5 million barrels of oil from Valdez YTD, without incident.

CAT continues to operate the California and the Washington on the West Coast and also in Cook Inlet. The Oregon operates in the Gulf of Mexico and the East Coast trades.

Fuschetto reported it had been a busy year so far and a busy summer. Both the California and the Washington completed their out-of-service periods in Port Angeles, WA: the Washington in June and the California in August. Some of the items completed were the annual surveys and inspections and generator overhauls and other maintenance items that

are difficult to do on the run to and from Valdez. Both vessels will be headed to dry dock in mid-2024.

She announced that as of September 13, 2023, Crowley had entered into a new joint venture with SEACOR Holdings through its affiliate Seabulk Tankers. The joint venture will form a new company called Fairwater Holdings and will be based in Ft. Lauderdale, FL. She did not have information as to whether there would be an office in Valdez. CAT's contribution to Fairwater Holdings will be CAT's three Alaska tankers (the Washington, the California, and the Oregon), as well as CAT's 550 and 650 Class articulated tug barges (ATVs), and management of the CAT 750 ATVs. The partnership is subject to regulatory review and approvals and is expected to close sometime in 2024. Until that time, both partners will continue to operate separately. CAT expects its current mariners will stay on with the new partnership to ensure a seamless transition into the new joint venture.

POLAR TANKERS/CONOCOPHILLIPS

Andrea West, Marine Superintendent with Polar Tankers, reported that as of September 20, 2023, Polar Tankers had transported 71 loads with 53.1 million barrels loaded without incident.

On fleet news, West reported the Polar Resolution had completed its required regulatory shipyard in Singapore and was back in service on the West Coast, the Polar Discovery had arrived in Singapore for its required regulatory shipyard period and will be the last of the Polar Tankers fleet to have its ballast water treatment system (BWTS) installed.

Polar Tankers/Conoco Phillips just completed its fall Bridge Resources Management Course in Seward.

ALASKA TANKER COMPANY (ATC)/HILCORP

Chris Merten delivered a combined report via videoconference for Alaska Tanker Company (ATC) and Hilcorp, in the absence of Hilcorp's Rob Kinnear.

He reported that ATC continues to do well and, to date, had loaded and transported 41 tanker loads, totaling 40.8 million barrels of oil, at the VMT with no incidents, no spills, no injuries, etc.

On fleet news, Merten reported the Alaska Navigator had completed her intermediate shipyard and dry-docking in Korea and was back in service. Currently, the Alaska Legend was on her way to Korea for her intermediate drydocking and shipyard period.

Merten reported that since the May meeting, ATC/Hilcorp had completed their combined response drill. It was a successful drill and there were good lessons learned.

Hilcorp had relied solely on ATC vessels for its TAPS trade YTD 2023. It had not chartered any foreign flagged vessels, and there were none planned for the remainder of the year.

DRAFT

MARATHON (formerly Tesoro/Andeavor)
(No report.)

ALYESKA/SERVS ACTIVITY REPORT
Andres Morales, Alyeska's Emergency Preparedness and Response Director gave the Alyeska/SERVS Activity Report for the third quarter 2023.

VMT Operations:

- Operations: *(As of 8/31/2023)*

	2023
Tankers Loaded	145
Tankers Escorted	146
Barrels Loaded	111,213,724

	Since start up
Tankers Loaded	23,431
Tankers Escorted	17,751
Barrels Loaded	17,898,966,573

- Safety: *(As of 8/31/2023)*

Days away from work cases	0
TAPS Combined Recordable Rate %	0.21

- Environment (Valdez): *(As of 8/31/2023)*

Spill Volume (Gallons)	258.3
Number of Spills	10

Fishing Vessel Availability by Port (end of 2Q 2023**):**

Port	Tier 1	Tier 2
Valdez	24	15
Cordova	29 (+8 Rapid Resp.)	110
Whittier	6	20
Seward		26
Homer		44
Kodiak		35
Totals	**67**	**250**

2023 Contingency Plan Activities:

- Reviewing scope of revisions – 18 AAC 75, Article 4.
- Three Contingency Plans need to be rewritten.
  - PWS C-Plan submitted for OSRB-5 amendment in August.
  - Plan to submit VMT C-Plan renewal in September.

DRAFT

3Q 2023 – VMT/PWS Training & Exercises Completed:

- 6/30-7/1 Valdez Duck Flats Training Deployment.
- 7/2 Emergency Tow Exercise.
- 7/5-7/6 Valdez Duck Flats Training Deployment.
- 7/8 Solomon Gulch Hatchery Training Deployment
- 7/8 Remote Maintenance Tatitlek.
- 7/12 IMT Notification Test.
- 7/12 Current Buster 8/Crucial Skimmer Task Force Exercise.
- 7/13 Current Buster 8/Crucial Skimmer Task Force Exercise.
- 8/12 NM Dispersant Application – Spill Spray Deployment Exercise.
- 8/13 Valdez Rapid Response Vessel Call Out.
- 8/22-8/28 Remote Maintenance Whittier.
- 8/23 Valdez Star Open Water Deployment.
- 8/25 Wildlife Stabilization Unit Deployment.

Upcoming 2023 VMT/PWS 3Q Training & Exercises:

- 9/9-9/16 Fall Fishing Vessel Training (9/9-9/11 Classroom; 9/16 ORE).
- 9/14 Crucial Skimmer Task Force VMT Drainage 58 Exercise.
- 9/16 Nearshore Operational Readiness Exercise Cordova.
- 9/16 Current Buster 8/Crucial Skimmer Task Force Exercise.
- 9/19-9/25 GRS Deployment w/Ross Chouest.
- 9/26-9/29 Remote Maintenance Cannery Creek.
- 9/30 Remote Maintenance Lake Bay.
- TBD Unannounced Q1 Notification Exercise.

2023 Valdez Major Maintenance Projects:

- Replace sulfuric acid tank with High-Density Polyethylene (HDPE) tank.
- Tank 93 Internal API653 Inspection.
- Tank 93 – Annular Ring Replacement.
- DAF Cell 5 and 6 – Repair and Coat.
- Tank 8 – Isolate and Clean.
- Berth 4 Header and TK-93 Branch Leg Ballast System Inspection.
- VMT 48" Crude A and B Header ILI Inspection.
- OSRB 5.
- Allison Creek replacement.
- 500-2 Reconditioning.

Following the status report, Morales took questions:

Jim Herbert asked for an update on the secondary liner testing pilot program. Morales stated that it is on schedule for October as planned.

DRAFT

Shavelson asked for an update on the Process Safety Management audit that was conducted at the VMT in August as well as Alyeska's audit of deferred maintenance at the VMT. Morales deferred to Klint VanWingerden's report to follow later in the agenda.

In response to another question from Shavelson about the percentage of Alyeska's net profits it returns to the community, Morales pointed out that Alyeska is a carrier that operates the pipeline for the owner companies and is not a for-profit operation. However, the company and its employees give back to the community in other ways and currently it has a target to give $450,000 through its employees to United Way in 2023.

Robert Beedle asked if there had been any improvement in Alyeska's response times to PWSRCAC's requests for information and the items that remain outstanding. Morales stated that Alyeska had provided answers in some instances, but PWSRCAC had not accepted the feedback. He also stated there had been a miscommunication within his team, and from Morales to his team, as to some of the information requests. Morales was working to identify the requests that were still outstanding and getting the information to PWSRCAC. He expected to have a status on delivery dates on all requests in the near future.

Beedle also asked if there was an update on when Tank 8 would be put back in service. Morales stated that Alyeska was still working on the cleaning and inspection of the tank.

Robert Archibald reminded Morales that PWSRCAC has a contract with Alyeska which allows PWSRCAC to get the information it requests, in a timely manner, and it would like to get the information directly from Alyeska rather than have to go to the regulating agencies to obtain it as it had to do recently.

Alyeska's Kurt VanWingerden gave an overview and answered questions from the Board about a fire that occurred in Tank 8 on August 30, 2023, and how it was handled by Alyeska's responding personnel. VanWingerden explained that the fire was in the dryer and contained to the dryer, but the equipment was damaged to the point where it could not be repaired on-site. The investigation was ongoing and Alyeska will be working with its contractor who was hired to do the tank cleaning to make sure processes are in place so it does not happen again. VanWingerden also stated that the questions which arose at the time as to whether the fire alarm worked is part of that investigation. He was able to state that the Operations Control Center (OCC) team later validated the fire alarm and tested it that day. He was also able to state that the evacuation alarm was not activated, as evacuation was not part of that response process.

President Archibald commented that it is worrying to PWSRCAC to have something that can catch fire inside a dike cell so close to crude tanks. He asked specifically if Alyeska had thought to move the hazard out of the dike cells, possibly to the unused area of the West Tank Farm. VanWingerden said Alyeska would be working closely with its contractors and that idea is part of the investigation.

A general discussion of the fire and how it was handled followed.

DRAFT

Via videoconference, PWSRCAC's contractor, Billie Garde, who investigated and delivered the PWSRCAC commissioned report on Alyeska's employee concerns and safety culture at the VMT ("the Billie Garde report"), raised her hand for permission to engage in the discussion and ask question(s) directly of Alyeska. President Archibald acknowledged that while it was not the Board's customary practice to allow contractors to engage at the table with Alyeska, neither was there a formal policy to the contrary and he deemed her input could be advantageous to the discussion. He asked for the will of the Board on this occasion. By a unanimous consent, it was agreed that Billie Garde could participate in the discussion/ask questions of Alyeska.

Garde's question went to the management of change (MOC)/project planning for this work. It was her understanding that the alarms for this month's long project were not considered in an MOC, so the work was not planned or coordinated with out-of-service alarms, or work on the alarms was not taken into consideration for the work that being done in the dike cell. She asked Alyeska if that was being considered in the investigation Alyeska was conducting. She emphasized that her concern that Alyeska's MOC procedures were not taking into consideration all of the apparent risks with such a long project.

VanWingerden stated he had relayed Garde's concern to the investigation team and it would be part of the follow-up and captured as part of their work. He added that Alyeska handles any protection layer or alarm or automation action by ensuring they have countermeasures in place. So as gaps are identified, whether temporary or permanent, there are other mitigation measures in place to ensure they can conduct their work safely, per procedure.

Garde countered that she could understand, for example, if they had alarms out of service they might have a posted fire watch, but it was her understanding they were not considered in the work planning in this case. She emphasized she was particularly interested to make sure that processes and procedures are actually being followed for each project so they are being collectively considered in the risk analysis because in the work she did that was a consistent theme.

Garde thanked the Council for allowing her to participate in this discussion.

VanWingerden expressed appreciation to Garde for her input. He emphasized that he did relay Garde's question to the investigation team to have them specifically look into it.

Van Wingerden went on to update the Board on the work Alyeska has done since the May meeting to address the issues raised in the Garde report. He emphasized that Alyeska is always open to ways in which it can improve its safety and appreciates the input in the way it conducts its work for the safety of its people and the process, all in alignment with the mission of Alyeska and its commitment to its stakeholders and the public. As reported by Alyeska President John Kurz at the Council's May meeting, Alyeska has developed a Management Action Plan (MAP) to evaluate the issues raised in the report and to initiate improvements where needed. The MAP focuses on the following areas:

DRAFT

- Safety Management Systems (SMS).
- Process Safety Management (PSM) for Alyeska.
- Backlog and deferred maintenance.
- Alyeska's Open Work Environment Program.
- Audits.
- Training.

VanWingerden went on to summarize the progress Alyeska has made in each focus area to date:

- **Safety Management Systems (SMS)**
  - Status: Completed a review of existing SMS and assessments conducted in the past. All past action items were entered into Alyeska's Management Action and Commitments (MAC) tracking system and closed.
  - Initial results of review:
    - Identified a need to develop and use better Key Performance Indicators (KPIs).
    - These refined KPIs will better inform business decisions and identify areas that need further focus.
    - KPIs are intended to highlight what Alyeska knows to be matters of first importance. Metrics that demonstrate Alyeska is focused on the right things and/or highlight key focus areas that need to be paid closer attention to.
  - Ongoing work and improvement here include:
    - Refining key metrics for each component of Alyeska's Management System with Element Owners and Stewards identified to support this work.
    - Engaging with subject matter experts to assist with the development of new KPIs that will bring better awareness to areas Alyeska is not tracking closely today.

- **Process Safety Management (PSM)**
  - Status: Reviewed OSHA PSM requirements and related Alyeska documentation. Alyeska has reviewed its baseline Process Hazard Analyses (PHAs), its credited Independent Protection Layers (IPLs), and its Reliability Analysis Process, all for conformance with PSM.
  - Results of review:
    - The team confirmed Alyeska meets the fourteen subsection requirements of OSHA PSM regulations.
    - PHA revalidation cycle and IPLs are appropriate, which are key components of PSM regulations.
    - An area for improvement identified - although Alyeska tracks all Preventative Maintenance (PM) deferrals.

DRAFT

        - There is no way to separate out PSM-specific PMs and/or deferrals in the current Alyeska management system reports.
    - Ongoing work and improvements include:
        - Identifying equipment tags associated with PSM equipment and review for any PM procedural gaps.
        - Developing Business Object reports to capture deferred PSM-related corrective work orders so that we can better highlight and address this work.
        - Completing the scheduled triennial PSM audit with its third party contractor (ABS Consultants – Recognized Industry Leader in PSM regulation expertise). Their field work started August 7th to:
            - Audit the PSM program for regulation compliance.
            - Confirm PSM scope for the facility by validating boundaries and exceptions.
            - And to validate findings and closure methods from previous audits.
            - Update-the field work is complete. ABS is progressing their work through internal review, and Alyeska expects to receive a draft report in 4Q 2023.

- **Maintenance and Engineering backlog and deferred maintenance.**
    - Backlog is a normal part of maintaining any system. The critical aspect of managing backlog is to ensure the right work is happening at the right time so that system health and reliability is maintained.
    - Status: Alyeska has spent a lot of time working to understand what its backlog information is telling it across TAPS. To better quantify and rank the various maintenance work activities of its system, Alyeska developed a line-wide definition of "backlog" to guide consistent prioritization system-wide. Engineering and O&M 'backlog' has been reviewed, scrubbed, and prioritized. The Preventative Maintenance Change Request (PMCR) process has also been reviewed as part of this work.
    - Results of the review:
        - Alyeska has confirmed it has adequate visibility of the current backlog with existing reporting tools.
        - However, additional report granularity is desired for better visibility of Safety Critical Equipment.
        - The PMCR process was also validated as appropriate, however turnaround is too long.
    - Ongoing work and improvements:
        - Focus on completing and closing priority safety-critical work orders.
        - Establishing backlog target levels for each facility.
        - Reprioritizing work activities of the PM analyst's turnaround time.
        - Additional resources were added to deliver immediate PMCR backlog reduction.
        - A long-term PMCR backlog management strategy is being developed.

DRAFT

        - Teams have been making progress with the engineering backlog prioritization process to ensure operational impacts are being captured, understood, quantified, and appropriately prioritized.

- **Open Work Environment (OWE) program.**
    - Status: Alyeska has reviewed its company mission, vision, goals, and cultural attributes, as well as TAPS improvement plans, Harassment, Intimidation, Retaliation and Discrimination (HIRD) trainings, and the Employee Concern Program (ECP) structure.
    - Results of the review:
        - Open work environment training completion rates:
            - New hires - 99.9%
            - Annual compliance for existing employees 96-98%
        - Industry best practices for implementing an effective Employee Concerns Program are being researched and Alyeska will incorporate any learnings there.
        - Alyeska Leadership is demonstrating a commitment to fostering a strong safety culture on TAPS.
            - Ongoing encouragement for our employees to speak up when they have safety concerns.
                - This is prevalent within the company today.
    - Ongoing work and improvements:
        - Alyeska Leadership is working to supplement its foundational mission, vision, goals, and cultural attributes with action oriented 'mindsets' intended to resonate personally with the entire organization. Roll-out of these new 'mindsets' is targeted for January 2024.
        - Open work environment training enhancements are being worked to improve the impact for all employees.
            - Training content, the delivery platform, the refresher training interval, and specific supervisor and manager training improvements.
        - Alyeska determined the ECP program will continue to report through the legal team and a change will include a dotted line report to the president to enhance the independent nature of the program.

- **Audits**
    - Status: The team reviewed and confirmed the status of corrective action commitments for past maintenance, PSM, and safety audits. The audit schedule for 2023 included assessing these areas as well.
    - Results:
        - As previously mentioned, Alyeska engaged a third party PSM expert (ABS Consultants) to conduct the field work for its triennial PSM audit. The team confirmed most corrective actions were implemented and effective.

DRAFT

        - As part of the maintenance and safety audit reviews, Alyeska noted some instances where corrective actions were not completed on time or the corrective method captured was not sustained.
    - Ongoing work includes:
        - Reviewing outstanding corrective actions past due >6 months and determine steps necessary to close and implement timely corrective actions.
        - The 2023 maintenance, safety, and PSM audits are all ongoing. Once the audits are complete and findings identified, corrective action plans will be developed.

- **Training**
    - Status: The team reviewed the delivery, completion, and efficacy of the required Open Work Environment training for new hires, Alyeska, and Contractors subject to the training requirement. The Team also reviewed past Open Work Environment survey tools, and their results.
    - Results:
        - As previously reported, completion rates of Open Work Environment training for new hires and annual compliance for existing Alyeska employees is high.
        - Alyeska recognizes that participation is not the same as effective engagement and is looking closely at its training modules to assure their effectiveness.
        - Alyeska found some gaps in reporting, tracking, and communication with training awareness and requirements, particularly with contractors who are also required to complete OWE training.
    - Ongoing work includes:
        - Review and adjustment of training materials to ensure 'fit-for-purpose' as described in the OWE program topic previously summarized.
        - Creating and implementing training for managers and supervisors to reinforce effective OWE program engagement.
        - Conduct assessment of current, system-wide training and documentation capabilities to provide better, more effective, and less burdensome tracking and controls.

- **Conclusion**
  In conclusion, VanWingerden thanked the Council for the opportunity to provide a status update. He emphasized that, like the PWSRCAC, Alyeska is committed to the safe operation of TAPS, the wellbeing of its workforce, and the protection of the environment. He noted that he, along with Scott Hicks and Andres Morales, have updated Executive Director Schantz and other PWSRCAC staff several times over the past few months and they are committed to continuing this communication and partnership. He emphasized that Alaska is their home and they care greatly about its wellbeing. He also stated that he has consistently messaged and encouraged his team to raise concerns when they see them, and he asked the same of PWSRCAC -- to speak up and let Alyeska know if something does not appear to be right.

DRAFT

Lunch Break: 12:45 p.m. – 1:20 p.m.

For the Good of the Order

President Archibald remembered former Board member Al Burch, who passed away on August 8, 2023, in Kodiak. He served on the Council, representing the Kodiak Island Borough from September 2002 to May 2018, and served on the LAC for 14 of those years.

CONSENT AGENDA

3-1, 3-2, 3-3

The published consent agenda originally consisted of three items (3-1, 3-2, 3-3).

Jim Herbert **pulled Item 3-3 Contract Authorization Marine Winter Bird Survey** from the consent agenda for further discussion and it was placed on the following day's agenda under Item J - Consideration of Consent Agenda Items.

Bob Shavelson **moved to approve the consent agenda as amended**:

- **3-1 APPROVAL OF ANNUAL SAGE INTACCT LICENSING FEE**
  a. Approval of an FY2024 budget modification in the amount of $17,094 from the contingency fund into budget 1300 Information Technology for the annual Sage Intacct licensing fee; and
  b. Approval of the FY2024 licensing fee with Sage Intacct in the amount of $17,094 for continued support of the Council's accounting system.

- **3-2 APPROVE DEFERRAL OF PROJECT 5591: CRUDE OIL PIPING INSPECTION REVIEW**
  Approval of deferral of TOEM project 5591: Crude Oil Piping Inspection Review transferring $51,744 of the funds into the FY2024 contingency fund.

Angela Totemoff provided the **second** and the **motion passed** without objection.

PRESENTATION BY POLAR TANKERS ON VETTING PROCESS FOR FOREIGN FLAGGED TANKERS

Chris Hiatt, Manager Marine Assurance, and Jon Novak, Marine Assurance Advisor, for Conoco Phillips, along with Andrea West, Marine Superintendent for Polar Tankers, presented an overview of ConocoPhillips' Global Marine Risk Management Standard that the company uses to assess and manage its global vessel fleet.

Following the presentation, the presenters answered questions from the Board.

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

Break: 2:10 p.m. - 2:25 p.m.

DRAFT

4-5 REPORT ACCEPTANCE: PORT VALDEZ WEATHER BUOY DATA ANALYSIS 2019-2022

PWSRCAC Project Manager Roy Robertson introduced Dr. Rob Campbell of the Prince William Sound Science Center who presented his findings under Project 6536 on the weather data collected from the weather buoys that were installed by PWSRCAC in Port Valdez in 2019, near the Valdez Marine Terminal (VMT) and the Valdez Duck Flats. The analysis includes ocean current, wind direction and speed, wave direction and heights, and other pertinent information that can be obtained from the weather data. Dr. Campbell previously presented his report to the OSPR Committee, and the committee recommended the Board accept this report.

Angela Totemoff **moved to accept** the Port Valdez Weather Buoy Data Analysis 2019-2022 by Robert W. Campbell, Ph.D., and the Prince William Sound Science Center, as meeting the terms and conditions of the Contract 6536.23.01, and for distribution to the public. Michael Vigil and Robert Beedle **seconded** and the **motion passed** without objection.

4-2 APPROVAL OF RESOLUTION IN SUPPORT OF COAST GUARD CUTTER HOMEPORTING

PWSRCAC's Maritime Operations Project Manager, Alan Sorum, introduced Resolution 23-01, urging the USCG to homeport a Sentinel-Class Cutter (also known as the Fast Response Cutter) in Port Valdez.

As outlined in the briefing sheet for this agenda item (Item 4-2), after the terrorist attacks of September 11, 2001, the Island-Class USCG Cutter (USCGC) ANACAPA was relocated to Port Valdez from Petersburg, Alaska, to help protect the Trans Alaska Pipeline System, including the Valdez Marine Terminal (VMT) and its associated shipping infrastructure in Port Valdez and Prince William Sound. Subsequently in 2003, the USCGC LONG ISLAND was homeported permanently in Port Valdez. The Island-Class Cutters are being decommissioned to be replaced by the Sentinel-Class cutters. The current cutter stationed at Port Valdez – USCGC LIBERTY – will be the last cutter assigned to Port Valdez. The USCG currently has no plans to replace the LIBERTY at the end of its service life.

A general discussion among Board members followed.

Jim Herbert voiced a concern by a constituent that this should be a matter better left to the City of Valdez to support because it may create a conflict among some of PWSRCAC's communities who also may want to have a homeported cutter in their port.

Michael Vigil **moved to adopt Resolution 23-01**, as follows:

Resolution 23-01

Urging the United States Coast Guard to Homeport a Sentinel-Class Cutter, Also Known as the Fast Response Cutter, in Port Valdez

WHEREAS, *the Prince William Sound Regional Citizens' Advisory Council was established after the 1989 Exxon Valdez oil spill and is mandated by Congress in the Oil Pollution Act*

DRAFT

of 1990 to promote the environmentally safe transportation of crude oil from the Valdez Marine Terminal through Prince William Sound and the Gulf of Alaska; and

WHEREAS, *the Trans Alaska Pipeline System is the lifeblood of the Alaska economy, with its terminal in Port Valdez seen as critical to both national security and energy infrastructure, and understood to be a target for terrorism; and*

WHEREAS, *the volume of oil, which accounts for roughly 3-4% of the nation's supply is transported through the environmentally sensitive and pristine Prince William Sound, necessitating a high level of care to help protect Alaska, its residents, communities, economies, and environments; and*

WHEREAS, *Port Valdez is a designated United States Maritime Administration Alternative Strategies Port, as a means to ensure readiness in support of force deployment during contingencies and other national defense emergencies, and*

WHEREAS, *there were no on-water United States Coast Guard assets available in Port Valdez after the terrorist attacks of September 11, 2001, requiring the United States Coast Guard Cutter (USCGC) ANACAPA to be relocated to Port Valdez from Petersburg, Alaska, in recognition of the need for a cutter to help protect the Trans Alaska Pipeline System, including the Valdez Marine Terminal and its associated shipping infrastructure in Port Valdez; and*

WHEREAS*, starting with the USCGC LONG ISLAND, an Island-Class cutter has been homeported in Port Valdez since 2003; and*

WHEREAS*, the United States Coast Guard currently has no plans to replace the USCGC LIBERTY currently stationed in Port Valdez that is at the end of its service life; and*

WHEREAS, *threats to national security and critical energy infrastructure such as the Good Friday Earthquake of 1964 and the terrorist attacks that occurred on September 11, 2001, emphasize the need for a timely and effective response from the coast in Port Valdez; and*

WHEREAS, *after the departure of the USCGC LIBERTY, the nearest cutters will be in Cordova at more than two hours away, Seward at five hours away, and Kodiak at 12 hours away; and*

WHEREAS, *the presence of a USCGC stationed in Port Valdez is a recognized and valued asset in enhancing marine safety and the safe transportation of crude oil in Prince William Sound, both in preventing and responding to oil spills; and*

WHEREAS*, in addition to support in prevention of oil spills and directing the Federal response to a spill, a cutter can serve in multiple operational roles including law enforcement, search and rescue, and fisheries enforcement; and*

DRAFT

WHEREAS, *the recent conflicts within the Prince William Sound Traffic Lanes of the Valdez Narrows, with fishing and recreational vessels encroaching on the security zones in place to protect crude oil tankers, create a navigational safety risk and highlight the need for a continued presence by the United States Coast Guard to enforce the security zones that were permanently established after September 11, 2001, under 33 CFR 165.1710.*

NOW, THEREFORE BE IT RESOLVED*, that the Prince William Sound Regional Citizens' Advisory Council urges the United States Coast Guard to homeport a Sentinel-Class cutter, as known as the Fast Response cutter, in Port Valdez; and*

BE IT FURTHER RESOLVED*, that the Prince William Sound Regional Citizens' Advisory Council supports efforts by the City of Valdez to secure the homeporting of a Sentinel-Class cutter in Port Valdez.*

PASSED AND APPROVED *by the Prince William Sound Regional Citizens' Advisory Council on this 21st day of September, 2023.*

_____	_____
Robert Archibald	*Bob Shavelson*
President	*Secretary*

Mako Haggerty **seconded** the motion. A roll call vote was called:

Robert Archibald	Yes.
Amanda Bauer	Yes.
Robert Beedle	Abstained.
Mike Bender	Yes.
Mike Brittain	Yes.
Nick Crump	Yes.
Ben Cutrell	Abstained.
Wayne Donaldson	Yes.
Mako Haggerty	Yes.
Luke Hasenbank	Yes.
Jim Herbert	Abstained.
Dave Janka	Abstained.
Melvin Malchoff	Yes.
Dorothy Moore	Yes.
Bob Shavelson	Yes.
Angela Totemoff	Abstained.
Michael Vigil	Yes.
Aimee Williams	No response.
Kirk Zinck	Abstained.

The **motion passed and Resolution 23-01 was adopted** by a vote of 12 in favor, five abstentions, and one no-response.

DRAFT

4-3 UPDATE ON PWSRCAC EFFORTS TO ADDRESS VMT SYSTEM INTEGRITY & SAFETY CULTURE ISSUES REPORT

Joe Lally, Donna Schantz, with Billie Garde of Clifford & Garde, LLP

PWSRCAC's Director of Programs, Joe Lally, led a staff update on efforts to follow through on the recommendations contained in the Board-approved report titled "Assessment of Risks and Safety Culture at Alyeska's Valdez Marine Terminal" by contractor Billie Garde dated April 2023. This agenda item also included a staff request for approval of a budget modification and authorization to enter into a professional services agreement with Billie Garde for continued assistance following up on the report's recommendations. A briefing sheet was included in the meeting notebook at Item 4-3.

Lally reported there was a total of seven recommendations included in Billie Garde's report. Three of those recommendations were discussed as part of Alyeska's update earlier in the meeting. Those recommendations included:

- Recommend Alyeska and TAPS owners commission an independent full assessment of the Alyeska safety management systems.
- Recommend Alyeska and TAPS owners commission and conduct an immediate independent audit of all deferred maintenance at the Valdez Marine Terminal (VMT), including any deferred work on backlog lists.
- Recommend that Alyeska 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.

Lally updated the Board on the remaining four recommendations from the report, as well as other associated efforts that PWSRCAC has taken, as follows:

- **Alaska Congressional Delegation request for a GAO audit of the federal and state oversight of the VMT:**
  - **Washington, D.C., Meeting with the Alaska Congressional Delegation**.
    - PWSRCAC met with members of Alaska's Congressional Delegation and their respective staffs.
    - Senators Murkowski and Sullivan, as well as the staff for Representative Peltola's office, stated they intend to work together on a request for the GAO to conduct an audit of regulatory oversight at the VMT.
    - PWSRCAC staff also sent letters to each of the Delegation offices following up and thanking them for meeting and for their support. PWSRCAC continues to follow-up on the status of the request to the Delegation and offer assistance as may be requested.
  - **Scope of the GAO Audit**.
    - PWSRCAC was requested by the Alaska Delegation members and staff to assist with ensuring the scope of the GAO request was focused, so as to maximize the likelihood of a meaningful report.

- **Alaska Congressional Delegation Engagement with the Joint Pipeline Office**.
  - PWSRCAC's understanding, based on recent discussions with Alaska Delegation staff is that the Delegation has been in contact with the Joint Pipeline Office (JPO) to gather information regarding federal and state regulatory oversight of the VMT.
  - A letter requesting the GAO audit has been drafted and prepared for introduction through the Committee(s) of jurisdiction. To date, PWSRCAC is not aware that the request has been made. (PWSRCAC recognizes that Congress is focused on budgetary and other issues, has not resumed regular business, and is not expected to until after the budgetary issues are addressed.)

- **Occupational Safety and Health Administration (OSHA) audit of applicable VMT Process Safety Management (PSM) Systems:**
  - On April 24, 2023, PWSRCAC sent a letter transmitting PWSRCAC's report to federal OSHA with the request that OSHA conduct an audit of PSM systems at the VMT.
  - In discussions with OSHA, they clarified that because Alaska has a state program established and AKOSH has primacy, federal OSHA cannot conduct a PSM audit. That would have to come from AKOSH. We also clarified that some of the original issues they identified were not correctly characterized.
  - On May 24, 2023, PWSRCAC sent an amended letter to OSHA requesting that some of the issues raised in their response letter be recharacterized to better reflect the concerns raised. The updated letter contained specific employee concerns that had been provided to AKOSH but apparently never addressed.
  - This request is being pursued by OSHA as a Complaint About State Program Administration (CASPA) against the Alaska Labor Standards and Safety Division, Occupational Safety and Health Program (AKOSH).
  - On July 20, 2023, PWSRCAC received an amended letter from OSHA in response to our May 24, 2023 letter (requesting changes to how the issues raised by PWSRCAC were characterized by OSHA). PWSRCAC believes the amended letter adequately addresses the concerns raised and the OSHA investigation should provide valuable information.
  - On July 20, 2023, federal OSHA also sent a letter to AKOSH that updated the complaint and issues raised based on the follow-up letter PWSRCAC sent on May 24.
  - AKOSH personnel have been making some internal revisions to their field and program manual, which are available on the AKOSH website. PWSRCAC staff does not know all the actions that have been taken yet, but expects to be briefed in the future by OSHA/AKOSH.
- **State of Alaska vs. Alyeska:**
  - AKOSH subpoenaed documents from Alyeska related to concerns received in 2021.
    - In response to an Alyeska employee's safety concerns at the VMT in 2021, AKOSH conducted an investigation at the VMT. This led to the issuance of

DRAFT

two significant enforcement actions. Alyeska paid the penalty for the first enforcement action, but appealed the second, more significant enforcement action in its entirety. In preparation for the hearing, AKOSH issued a request to Alyeska for documents. Alyeska provided some documents but objected to providing most.
        - Subsequently, the state had to request court assistance in a petition to require Alyeska to provide all information requested in the subpoena (an administrative action).
    - Superior Court hearing held in late 2021:
        - The Court requested that the parties (AKOSH and Alyeska) attempt to narrow the scope of the issues and requests in the subpoena. After several unsuccessful attempts to reach resolution, the case went inactive, and on May 5, 2023, the Court filed a notice of dismissal based on lack of prosecution.
        - June 8, 2023: AKOSH asked the court to renew its consideration of the petition and require Alyeska to comply with the subpoena. In this renewal, AKOSH attached PWSRCAC's report and referenced many of the report's findings.
        - July 28, 2023: Alyeska responded to AKOSH's renewal. The court scheduled a hearing on August 25, 2023, regarding the request to renew the petition.
        - August 24, 2023: the hearing was cancelled due to a conflict of interest between the judge assigned to the hearing and one of the attorneys representing Alyeska in the case.
            - It is curious that the conflict of interest was raised one day before the hearing was scheduled to take place, and that the attorney that the judge had the conflict of interest with stopped working for Alyeska six weeks before the hearing on August 25 was scheduled to take place.
        - September 11, 2023: a status briefing with the new judge assigned to the case and the attorneys from AKOSH and Alyeska was held. PWSRCAC and Billie Garde telephonically attended the status briefing, where the judge asked questions of the attorneys and established a hearing date for oral arguments on October 3, 2023, regarding the status of discovery. The issue of dismissal of the case in its entirety had been raised by Alyeska in its briefs and attempted to be raised at the hearing, but the judge did not entertain any argument on dismissal.
- **Billie Garde's Assistance with Two Internal PWSRCAC recommendations:**
    - For several months, Billie Garde has been assisting PWSRCAC staff with the follow-up on the report recommendations. Two of the recommendations in the report are internal to PWSRCAC, including:
        - The establishment of a protocol for handling employee concerns that may be provided to PWSRCAC in the future.
        - Establishment of a PWSRCAC Human Factors Advisory Committee to advise the Council on the status of risks to operations and maintenance at the VMT.

DRAFT

- This action item includes a request for Board approval of a $15,000 FY2024 budget modification to retain Billie Garde to continue her assistance following up on the report recommendations, including the two internal PWSRCAC recommendations.

In addition to the recommendations included in Billie Garde's report, PWSRCAC staff has been working to gather information related to the tank vent damages that occurred last year through records requests, letters, and meetings with federal and state regulatory agencies related to:

- VMT East Tank Farm crude oil storage tank emissions estimates from the damaged tank vents from the time the damage was discovered until that tank vents were repaired.
- ADEC Notice of Violations issued to Alyeska on May 3, 2022, related to the Title V Air Quality Permit
- The status of Alyeska's Title V Air Quality Permit that has not been issued by ADEC since 2017 and is currently operating under an application shield.

Billie Garde commented on what she felt was missing from Alyeska/Van Wingerden's presentation earlier in the meeting.

- **Quality Control/Quality Assurance Program and Audit Program:** Detailed information was missing on whether Alyeska has increased the size and the role of its Quality Control/Quality Assurance Program and their Audit Program. She pointed out that she spent considerable time in her report talking about how that program had deteriorated over time to almost nothing, and she did not hear anything from Alyeska at this meeting about whether it had re-funded or rebuilt the program and whether it was going back to a more significant role in its operations.

- **Management of Change Process:** She also did not hear anything in Alyeska's presentation about improvements in its Management of Change process. She had pointed out in her report the lack of coordination between processes and she would like to know if anyone is evaluating that process and where the holes were that were clearly serious contributing factors to the incidents in 2021 and other incidents.

- **Fire at the East Tank Farm on August 30:**She would like to hear Alyeska's justification so she could understand its decision (other than less risk) to leave the flammable activity operation inside of the East Tank Farm and not following the Chemical Safety Board's siting recommendation and move it to the West side of the terminal (west bench area).

- **Commitment of Additional Resources:** Garde stated that she would like to see more detailed information being shared with PWSRCAC as to where the additional resources Alyeska has committed to provide and where and how they are actually being resourced.

DRAFT

- **Surveys:** She was also concerned about surveys Alyeska has done in the past and how Alyeska was comparing one survey to another, stating it wasn't comparing apples to oranges to pears, it was comparing an apple, to an orange, to a pear (i.e., surveys were not done through the same method each time and different results were focused on/released each time, so comparison was problematic).

- **Leadership at Alyeska:** She spent considerable time in her report about leadership. She had not heard from Alyeska that President John Kurz is meeting with the work force or meeting with individual members, which is important to the workforce, as well as his commitment to transparency and rebuilding trust.

- **Audit:** Garde stated the important factor related to the audit was who from Alyeska was assigned to the ABS Consulting team (the third-party contractor).

As to the regulators and oversight, Garde pointed out that she did not hear from any regulators at this meeting that they are making any changes, and the one regulator who is making changes and is critical to oversight was not at the table at this Board meeting. She expressed disappointment that the Council did not hear from AKOSH or PHMSA officially as to the points raised in her report. She hoped that PWSRCAC would extend an official invitation to them for the next Board meeting.

Garde's final comment was that one of her recommendations was for PWSRCAC to develop a standard operating procedure for staff on what to do when they are contacted in the future with concerns by an Alyeska employee. She pointed out that Alyeska employees will go to an avenue where they believe they will get timely and effective responses to concerns. If they do not get that response from Alyeska, they will approach PWSRCAC.

Robert Beedle **moved** to:

a. Authorize a FY2024 budget modification moving $15,000 from the contingency fund to Project 5053.
b. Authorize 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."

Dave Janka **seconded** and the **motion passed** without objection.

EXECUTIVE SESSION

Ben Cutrell **moved to go into executive session** for the Board to receive an update and discuss a PWSRCAC Class I Recreation Member entity. Kirk Zinck **seconded** and the **motion passed** by unanimous consent.

DRAFT

The following were asked to join the Board in executive session: Legal counsel Joe Levesque, Executive Director Donna Schantz, Director of Programs Joe Lally, Director of Administration KJ Crawford, Director of Finance Ashlee Hamilton, Executive Assistant Jennifer Fleming, and IT Coordinator Hans Odegard.

Recess:
The open session of the meeting recessed at approximately 3:45 p.m. to reconvene the following day.

Friday, September 22, 2023

CALL BACK TO ORDER
President Archibald called the meeting back to order at 9:02 a.m. on September 22, 2023. A roll call was taken. There were 16 Directors present at the time of the call back to order (Archibald, Beedle, Bender, Brittain, Crump, Cutrell, Donaldson, Haggerty, Hasenbank, Herbert, Janka, Malchoff, Shavelson, Totemoff, Vigil, and Zinck). Aimee Williams, Amanda Bauer, and Dorothy Moore each joined the meeting later via video conference at approximately 9:52 a.m., 10:10 a.m., and 10:40 a.m., respectively.

REPORT ON EXECUTIVE SESSION
President Archibald reported that the Board had received an update on the search for a Class I Recreation member entity and was ready to take action.

Bob Shavelson **moved** to support the efforts to form a coalition of recreation entities to potentially fill a Class I Recreation seat on the PWSRCAC Board of Directors **and** delegate authority to the Executive Director to engage PWSRCAC legal counsel to review the draft Memorandum of Agreement provided by the groups currently proposing the Recreation Coalition. Dave Janka **seconded.** A roll call vote was called:

Robert Archibald	Yes.
Robert Beedle	Yes.
Mike Bender	Yes.
Mike Brittain	Yes.
Nick Crump	Yes.
Ben Cutrell	Yes.
Wayne Donaldson	Yes.
Mako Haggerty	Yes.
Luke Hasenbank	Yes.
Jim Herbert	Yes.
Dave Janka	Yes.
Melvin Malchoff	Yes.
Bob Shavelson	Yes.
Angela Totemoff	Yes.
Michael Vigil	Yes.
Kirk Zinck	(Absent for vote)

DRAFT

The **motion passed** 15 in favor; one absent for vote.

4-4 REPORT ACCEPTANCE: OXYGENATED HYDROCARBONS

PWSRCAC Environmental Monitoring Project Manager, Dr. Danielle Verna, introduced Maxwell Harsha who presented a brief summary of the report titled "Examining the Effectiveness of Ballast Water Treatment Processes: Insights into Hydrocarbon Oxidation Product Formation and Environmental Implications" by Maxwell Harsha and Dr. David Podgorski from the University of New Orleans dated August 1, 2023. This project involved collecting a series of samples throughout the treatment process at the Valdez Marine Terminal Ballast Water Treatment Facility (BWTF) to identify hydrocarbon oxidation products (HOPs).

A briefing sheet, executive summary, and a copy of the report were included in the meeting notebook under Item 4-4. The Board was asked to accept the report as meeting the terms of the contract and for distribution.

Following the presentation, Harsha and Dr. Podgorski answered questions from the Board.

Jim Herbert pointed out that most ballast is segregated now and segregated ballast would not go through this process at the VMT. Alyeska's Andres Morales confirmed that most of what goes through the facility now is rainwater and snowmelt.

Verna pointed out that PWSRCAC tracks all the unsegregated ballast water that comes in on the tankers and keeps a spreadsheet. They do see a spike in the winter months when ships need more ballast water because of the rougher weather they encounter during those months and this extra ballast water is held in oiled cargo tanks.

Harsha and Podgorski answered technical questions from the Board on the analysis and the findings.

At the request of Wayne Donaldson, Harsha agreed to include the raw data and sampling dates as an addition/appendix to the report.

Jim Herbert **moved to accept** the report titled "Examining the Effectiveness of Ballast Water Treatment Processes: Insights into Hydrocarbon Oxidation Product Formation and Environmental Implications" by Maxwell Harsha and Dr. David Podgorski from the University of New Orleans dated August 1, 2023, as meeting the terms and conditions of Contract 9512.22.01, and ready for distribution to the public. Robert Beedle **seconded** and the **motion passed** without objection.

4-1 REPORT ACCEPTANCE: PRINCE WILLIAM SOUND MARINE BIRD WINTER SURVEYS

In March 2023, staff from the Prince William Sound Science Center conducted surveys of marine birds and mammals in Prince William Sound, including Valdez Arm, Valdez Narrows, and two new transects in the vicinity of Zaikof Bay and northwest Hinchinbrook Island. This

DRAFT

survey was the third consecutive year of Council-sponsored surveys. The Board was asked to accept the final report on the project titled "Marine Bird Winter Surveys in Prince William Sound" dated June 26, 2023, by Anne Schaefer and Dr. Mary Anne Bishop of the Prince William Sound Science Center.

The report describes the methods and findings of the survey and recommendations for continued monitoring. A briefing sheet and the report were included in the meeting notebook as Item 4-1.

PWSRCAC Environmental Monitoring Project Manager, Dr. Danielle Verna, introduced Dr. Mary Anne Bishop who presented the survey report and findings and answered questions from the Board.

Jim Herbert asked that future surveys better identify the specific species in the reports. He pointed out that it was for this reason he had pulled next year's project from the consent agenda for discussion later at this meeting.

Michael Vigil **moved to accept** the report titled "Marine Bird Winter Surveys in Prince William Sound" by the Prince William Sound Science Center dated June 26, 2023, as meeting the terms and conditions of Contract 9110.23.01, and for distribution to the public. Mike Bender **seconded** and the **motion passed** without objection.

Break: 10:20 a.m. - 10:35 a.m.

4-6 REPORT ACCEPTANCE: PEER LISTENER TRAINING MANUAL

PWSRCAC's Dr. Danielle Verna gave a brief introduction of an action item to accept the updated PWSRCAC Peer Listener Training Manual. The manual is an appendix to the Council's "Coping with Technical Disasters: A User-Friendly Guidebook." The purpose of the manual is to outline the tools and techniques for active listening that individuals can employ to support fellow community members in the wake of a technological disaster, such as an oil spill. The updated manual is the second in a series of phases to modernize the Council's Peer Listener program. Subsequent phases, if approved, will address delivery of the manual throughout the region.

Contractors Lisa Fousek and Dr. Adryan Glasgow of Agnew::Beck Consulting explained the manual and how it would be used.

In addition to the manual, Agnew::Beck Consulting discussed some ideas and recommendations for how to best distribute the manual to the wider public.

[Kirk Zinck returned to the meeting at 11:00 a.m.]

Verna pointed out that the draft version is already on PWSRCAC's website and staff will post the final version and will be working on a broader dissemination plan for next year.

DRAFT

Angela Totemoff asked about PWSRCAC's internal plans to implement the manual in the event of another disaster event. Executive Director Schantz stated that the training manual is not currently in PWSRCAC's internal emergency response plan, but SAC would be looking at that in the next phase and PWSRCAC should have a section for it in its internal response plan.

Alyeska's Morales commended PWSRCAC for producing the manual. He added that Alyeska does have an official plan on how to help individuals and teams and the triage of societal and community impacts, but it is still a "soft area" of understanding for Alyeska. It does not have a firm plan, but it does have resources to reach out to individuals and the public and it is an ongoing subject of conversation within Alyeska.

Totemoff added that the Council should recognize the role that PWSRCAC plays, and it should have a plan to distribute this manual in the future.

President Archibald pointed out that people and communities react differently to a technological disaster than they do a natural disaster. This manual deals with that and it should be read before anything happens.

Mako Haggerty **moved to accept** 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. Angela Totemoff **seconded** and the **motion passed without objection.**

Verna added that she has recommendations for distribution on SAC's LRP list but also welcomed ideas from individual Board members on how to distribute to their communities.

4-7 PWSRCAC LONG RANGE PLANNING (LRP)

Cathy Hart gave a review of the Strategic Planning meeting that was held on September 20, 2023.

Director of Administration KJ Crawford introduced a list of proposed protected projects for the upcoming LRP cycle for Board review and approval.

The proposed protected project list for FY2025 was included in the meeting notebook as Attachment A to the briefing sheet at Item 4-7, as well as the definition of a protected project.

Through this agenda item, all Board members were also asked to participate in the current LRP effort. To help foster Board enthusiasm and participation, the LRP Guidance Memo and associated documents were included as Attachment B. Also included was the Project Briefing Sheet as Attachment C.

Questions were raised about whether the transcriptomics portion of the LTEMP program was included in the LTEMP FY2024 protected budget of $204,000, as the transcriptomics

portion did not meet the definition of a permanent protected project. As explained by Verna, the samples were taken, but SAC has yet to decide whether to analyze those samples as part of its LRP for projects in 2024.

Ben Cutrell **moved to approve** the protected project list for the upcoming Long Range Planning process as presented in Attachment A Item 4-7 to this briefing sheet. Dave Janka **seconded** and the **motion passed** without objection. [Each Director was also asked to take individual action over the next several months by participating in the LRP planning process.]

PRESIDENT'S REPORT TO THE BOARD

President Archibald spoke of his personal experience of the Exxon Valdez spill in 1989, the realization of the enormity of the situation after the news broke of a grounded tanker and the spill, and the realization of the lack of preparedness for such a catastrophic event. He stated it was a complete and utter failure on many counts. Anger and mistrust grew as time went on and it affected everybody deeply.

Using the analogy of a bicycle wheel, he spoke of the interrelationship and responsibility of all the parts of the wheel for an effective, smooth, and functioning operation. The public is the hub and has the power. Industry, RCACs, government and regulators, oil companies (i.e., everybody who has oversight of the system) are the spokes. If the spokes are strong, the wheel will be strong and there is trust, transparency, and the willingness to communicate with one another. Without the strong spokes, the rim wobbles and fails. He said his goal for PWSRCAC is to keep those spokes strong, striving to maintain a round rim to keep the wheel rolling smoothly and keep Prince William Sound in a safe condition. He said he felt that PWSRCAC was doing a good job in furthering that goal.

EXECUTIVE DIRECTOR'S REPORT TO THE BOARD

Executive Director Schantz provided a written report before the meeting via email and asked the Board to refer to that for a more comprehensive overview of activities since the May meeting.

She reminded everyone it is crucial that PWSRCAC remains mindful of its founding documents, mandate, and mission to promote the highest level of oil spill prevention, safety, and response as possible. She emphasized the importance of the organization to not lose focus of its ultimate and original goal and to continue its original mission because there is too much at stake that PWSRCAC has been entrusted to fulfill under OPA 90 and its contract with Alyeska. It is also PWSRCAC's duty to make sure the public, industry, and the regulators – all the "spokes of the wheel" - do not forget the trauma and devastation the spill caused and the lessons learned from it. She said it is important for PWSRCAC to look to the past as it does strategic planning, so it never forgets why and how the Council got where it is today -- and realize the system is working. Even though there are concerns with how the system is structured today, it is working.

She expressed appreciation for the Board's support to continue to pursue the concept of a coalition for the Recreation seat, which is to satisfy the USCG's concerns. She recognized Jim

Herbert for taking the lead on the effort and also Robert Archibald for his involvement on the coalition concept. She pointed out that while PWSRCAC's position is that it does not agree a Recreation seat is required for PWSRCAC as the alternate voluntary group under OPA 90, the Council strives to adhere to OPA 90 as closely as possible, and it is not worth the risk to the Council's existence and recertification not to address what the USCG is asking for. She emphasized the importance of PWSRCAC doing what it can to satisfy those USCG concerns because the stakes are too high.

Schantz reported a Request for Qualifications (RFQ) was issued for an air quality expert to review the Title V Air Quality permit for the VMT that was reported earlier. PWSRCAC's concerns are growing, so it is likely staff will be asking for additional funding for this review once the responses are received to the RFQ. She pointed out it is a complicated process that has been going on since 2004 and the federal rulemaking (EPA) changes that have been made under the NESHAP-OLD regulations are a big part of why the Title V permit, which is under the State of Alaska permitting primacy, has been delayed. Staff is hoping to have an air quality expert on board by the time the Title V permit goes out for public comment. There will only be a 30-day window for comment, so staff needed to be ready. She noted there should be funds in the contingency fund to apply to this project once the books are closed out for 2023.

She thanked everyone for following up on the recommendations in the Billie Garde report, noting that there is much in that report, and PWSRCAC may be dealing with this for years. She would like the TOEM Committee to be PWSRCAC's lead technical committee to follow up on the recommendations Garde made for PWSRCAC internally and for TOEM to send its recommendations back to the Board.

She reminded the Board that staff recaps the actions taken at Board meetings and those meeting recaps may be shared with a Board member's member entity.

She thanked the Board, committee volunteers, and staff for all their support and reiterated the importance of the Council's work.

FINANCIAL MANAGER'S REPORT TO THE BOARD

Director of Finance Ashlee Hamilton reported that since the May Board meeting her main focus had been closing out the 2023 books and entering the 2024 budget into Sage Intacct. While changing the accounting software was completely different from what she was used to, it had already benefited PWSRCAC greatly and she sees many more efficiencies to come from the switch.

Another transition was outsourcing the payroll to Paychex. It was a challenge from the beginning and continues to be. So, the decision was made to remove the direct import into Sage Intacct. Hamilton will manually enter all payroll going forward for the time being. On the positive side, employees can now track their own leave, submit electronic leave requests, fill out electronic timecards online, download their paystubs and, when the time comes, access their W-2 information through the system.

DRAFT

Hamilton reported another process she was working on is the transition to electronic contract files, eliminating the need for paper files.

Hamilton reported her focus going forward will be on the upcoming audit which is projected to be completed by October 12. This will be the last year BDO will be PWSRCAC's auditors/accountants. Staff is currently looking for a new auditor. There are three prospects in consideration, and the Finance Committee will review and come to a consensus. BDO has agreed to file the organization's upcoming Form 990 in the meantime.

She is also looking at new budgeting software and hopes to have something in place by the end of the year.

Volunteer travel claims are now digital and can be accessed through QR code. Hamilton recognized Executive Assistant Jennifer Fleming's assistance in creating this new method of claiming travel expenses. Hamilton said she is still working on the implementation of Automated Clearing House (ACH) payments to pay vendors, etc., and had just signed an agreement with an electronic payment company, CSI, which is an add-on to the Sage Intacct accounting software.

Lunch Break: 12:30 p.m. – 1:30 p.m.

CONSIDERATION OF CONSENT AGENDA ITEMS

3-3 CONTRACT AUTHORIZATION: MARINE BIRD WINTER SURVEYS

Jim Herbert spoke to agenda Item 3-3 which he pulled from consent agenda. He suggested three enhancements to improve the project:

- Use a camera to identify distant birds to identify down to a species level and breaking out those "unidentified birds" which make up 4-5% of the total bird count.
- More information on what hotspot analysis would entail and catch populations off the transects.
- Herbert noted this project had increased approximately 10% with no explanation of why. He wants to see good value, quality work, and things that will be useful in the long run.

A brief discussion followed about hotspots and catching those bird populations outside of the transects of the study. Herbert said he would like to see this tweaked a little more to better represent what is there with nearshore task forces if there should ever be another spill.

Dr. Verna said she had talked to the contractor, and they will be using Gulf Watch surveys and the surveys PWSRCAC has sponsored so it will have more information than only the surveys PWSRCAC has supported. It is going to look at hotspots that fell along transects during those surveys. There is value in the repeatability in having those transects year to

DRAFT

year and having a long-term data set. The contractor has acknowledged that there are gaps in marine bird surveys but they are providing a repeatable data set so they can see trends over time, and the hotspot analysis will show some of those areas of most concern. They will use a camera and try to get closer to shore to get better identification of the species level. The increase in the budget was for the hotspot analysis. Verna said she appreciated the feedback and will pass it on to SAC.

Herbert **moved** to authorize the Executive Director to enter into a sole source contract with the Prince William Sound Science Center to conduct project 9110 Marine Bird Winter Surveys in 2024 in an amount not to exceed $65,138. Robert Beedle **seconded** and the **motion passed** without objection.

CLOSING COMMENTS

Directors were given the opportunity to make closing comments.

Wayne Donaldson said he had reflected on the information given by Alyeska on the fire at the Tank Farm on August 30 and, in his opinion, the risk analysis Alyeska did on that fire was not robust enough. He added he was very concerned about the risk of any fire there because of the amount of oil stored in the tanks and there is simply too much at stake for the entire area.

Bob Shavelson pointed out that March 24, 2024, would be the 35th anniversary of the EVOS and, by extension, the creation of the Council. To commemorate the anniversary, he proposed a gathering in Anchorage of some of the principal founders of the organization to share their stories of the early days on stage in a roundtable format. He offered to work with staff to get something on the next meeting's agenda.

ADJOURNMENT

There being no further business to come before the Board, **the meeting was adjourned** at 1:35 p.m. on a **motion made** by Michael Vigil, **seconded** by Ben Cutrell, and **passed by unanimous consent.**

_____

Secretary

DRAFT

Prince William Sound Regional Citizens' Advisory Council
Special Board of Directors Meeting Minutes
November 21, 2023

Members Present: Robert Archibald, Amanda Bauer, Robert Beedle, Wayne Donaldson, Mako Haggerty, Jim Herbert, Elijah Jackson, Dave Janka, Bob Shavelson, Angela Totemoff (10:07 a.m.), Michael Vigil, Aimee Williams (10:04 a.m.), and Kirk Zinck

Members Absent: Mike Bender, Mike Brittain, Nick Crump, Ben Cutrell, Luke Hasenbank, Melvin Malchoff, and Dorothy Moore

Staff Present: KJ Crawford, Jennifer Fleming, Ashlee Hamilton, Joe Lally, Amanda Johnson, Donna Schantz, Alan Sorum, and Danielle Verna

Others Present: Joy Merriner (BDO, LLC)

Call to Order and Roll Call

President Robert Archibald called the meeting to order at 10:00 a.m. A roll call was taken, and the following 11 Directors were present representing a quorum for the conduct of business: Archibald, Bauer, Beedle, Donaldson, Haggerty, Herbert, Jackson, Janka, Shavelson, Vigil, and Zinck.

Approve Agenda

Vigil asked for clarification on item A under the consent agenda. Staff noted the budget modifications should be for FY2024, not FY2023. This change was made. Vigil moved to approve the agenda as amended. Bauer seconded. Archibald asked for objection; hearing none, the agenda was approved.

Aimee Williams joined the meeting at 10:04 a.m.

Public & Opening Comments

Archibald asked for any public or opening comments. There were none.

Approval of FY2023 Audit

Hamilton introduced Joy Merriner of BDO who summarized the June 30, 2023 audited financial statements and audit report to the Board. Merriner explained that the draft audited financial statements were presented in depth to the Finance Committee at its November 2 meeting and that this year's audit was a very smooth process overall. Merriner noted the transition from Gregory Dixon to Hamilton and applauded the Council for the successful transfer of Director of Finance duties. Merriner stated that FY2023 was considered a typical audit review that was very strong from a financial perspective with no audit findings.

Angela Totemoff joined the meeting at 10:07 a.m.

Merriner presented a couple of highlights from the audited financial statements and audit wrap up report, including:

- It is BDO's opinion that the financial statements present clearly and that all materials presented reflect the Council's financial position.
- BDO followed the generally accepted accounting standards, with Council staff responsible for preparing financial statements with BDO assisting with the footnote disclosures.
- Council staff is responsible for implementing and maintaining internal control features and BDO did not identify any internal control deficiencies.

Merriner reviewed the liabilities, assets, and statement of functional expenses with the Board.

Haggerty asked for an explanation on the repurchasing agreement the Council has with First National Bank Alaska (FNBA). Merriner explained that this agreement is very unique as FNBA no longer offers it to its customers. It is technically considered investment income, that is recorded as interest for the organization. FNBA sweeps the account at the end of the business day and invest it in an overnight security (owned by the Council) that is sold in the morning and returned or repurchased with the dividend earned paid daily. Merriner stated this is a very advantageous arrangement.

Directors thanked Merriner for her work over the years and wished her well.

Janka moved to approve the FY2023 audit by BDO. Zinck seconded. Archibald asked for objection; hearing none, the audit was approved.

Schantz and the Board applauded Hamilton for her hard work and accuracy on this year's audit and the finances of the organization overall, noting that the FY2023 audit was quite difficult as it was the first on her own and with a new accounting system.

Consent Agenda to Approve:

A. FY2024 Budget Modifications
B. Appointment of Tim Robertson to OSPR Committee
C. Approval of Travel for K. Morse and C. Hart to NTEN Conference

Zink moved to approve the consent agenda. Totemoff seconded.

Robert Archibald pulled item A: FY2024 Budget Modifications from the consent agenda for discussion.

Mako Haggerty pulled item C: Approval of Travel for K. Morse and C. Hart to NTEN Conference from the consent agenda for discussion.

DRAFT

The consent agenda was approved, as amended, as follows.

- Appointment of Tim Robertson to the OSPR Committee with a term set to expire at the May 2024 annual Board meeting.

Executive Session to conclude Executive Director 2023 evaluation process and kick off the 2025 evaluation.

Vigil moved to go into executive session to discuss the Executive Directors evaluation. Haggerty seconded. The motion passed without objection.

The Board moved into executive session at 10:25 a.m. Ashlee Hamilton was asked to join the Board in executive session.

The open session of the meeting resumed at approximately 11:45 a.m.

Report on Executive Session
Archibald reported that while in executive session, the Board discussed the Executive Director's compensation as the conclusion to her 2023 evaluation. He reported that the Board reached a consensus on the following action. He noted that the Board expressed interest in conducting a compensation study to have an updated representation on current pay scales.

Totemoff moved to award Schantz an 8.1% increase to her pay, retroactive to the first pay period of FY2024. Haggerty seconded. Archibald asked for objection; hearing none, the action was approved.

Schantz expressed her appreciation to the Board. She added that the management team has recently discussed updating the compensation study with the hopes of conducting it on a regular cycle. Gallagher, the contractor who conducted these studies in the past, will no longer do these studies. Going forward, the study may cost more than it did in years past.

Regarding the action approved, Totemoff noted that a lot of discussion and consideration went into this decision, and she recognized Schantz for all of her hard work and dedication to the organization. She referenced the Council's small, hardworking team adding that the work Schantz has been able to accomplish sets a high standard for the nonprofit industry.

Consideration of Consent Agenda
Items A and C were previously pulled from the consent agenda by Archibald and Haggerty, respectively.

A: Approval of FY2024 Budget Modifications
Hamilton addressed a necessary amendment to the proposed modifications that differed from what was delivered to the Finance Committee. The change was under Project 5000

DRAFT

Terminal Operations Program, whereas the project manager's travel was $1,000 more than originally anticipated.

Totemoff moved to approve the FY2024 budget modifications as listed on the provided sheet, with a total revised contingency in the amount of $181,607. Vigil seconded. Archibald asked for objection; hearing none, the budget modification was approved.

C: Approval of Travel for K. Morse and C. Hart to NTEN Conference

Haggerty asked for clarification on who would be in attendance at this conference. Schantz explained that if this travel is approved, Kate Morse, Cathy Hart, and Amanda Johnson would be attending in person, and Savannah Lewis would attend virtually. She noted that the Executive Director has authority to approve staff travel, therefore Johnson's travel is not included in this request.

Haggerty noted that the airfare seemed excessive in the requested, and suggested staff shop around for the best possible price.

Haggerty moved to approve travel for IEC members Kate Morse and Cathy Hart to attend the NTEN Conference, March 13-15, 2024, in Portland, Oregon, with travel costs in an approximate amount of $3,272 and $2,963 respectively. Janka seconded. Archibald asked for objection; hearing none the travel was approved.

Closing Comments

Archibald opened the floor for closing comments. Members wished a Happy Thanksgiving to each other.

Shavelson suggested that staff look into TREC – Training Resources for the Environmental Community as an option for future salary surveys.

Fleming announced that the regular January venue is not available in 2025 due to renovations at the Embassy Suites. She is researching a new venue and encouraged volunteers to share any suggestions in Anchorage they may have.

Adjourn

The meeting adjourned at 12:05 p.m.

DRAFT

Back to Agenda

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

Back to Agenda

Prince William Sound Regional Citizens' Advisory Council
Budget Status Report
as of December 19, 2023

	Original Budget	Budget Modifications	Summary	Actual	Commitments	Total	Remaining Amount	Percentage Remaining
All Tasks								
1000 - General & Administrative	518,310.00	-	518,310.00	200,041.99	(587.12)	199,454.87	318,855.13	61.52 %
1050 - General & Administrative - Anchorage	169,356.00	65,000.00	234,356.00	68,419.04	-	68,419.04	165,936.96	70.81 %
1100 - General & Administrative - Valdez	177,236.00	-	177,236.00	70,150.23	-	70,150.23	107,085.77	60.42 %
1300 - Information Technology	109,588.00	22,094.00	131,682.00	44,279.32	-	44,279.32	87,402.68	66.37 %
2100 - Board Administration	141,038.00	-	141,038.00	56,834.23	-	56,834.23	84,203.77	59.70 %
2150 - Board of Director Meetings	201,500.00	-	201,500.00	72,627.98	5,000.00	77,627.98	123,872.02	61.47 %
2200 - Executive Committee	3,000.00	-	3,000.00	-	-	-	3,000.00	100.00 %
2222 - Finance Committee	3,000.00	-	3,000.00	-	-	-	3,000.00	100.00 %
2250 - Committee Support	211,067.00	-	211,067.00	103,018.41	-	103,018.41	108,048.59	51.19 %
2300 - Oil Spill Prevention & Response (OSPR)	11,000.00	-	11,000.00	6,776.31	-	6,776.31	4,223.69	38.40 %
2400 - Port Ops & Vessel Traffic System (POVTS)	4,000.00	-	4,000.00	1,851.72	-	1,851.72	2,148.28	53.71 %
2500 - Scientific Advisory Committee (SAC)	12,000.00	-	12,000.00	2,114.75	-	2,114.75	9,885.25	82.38 %
2600 - Terminal Ops & Envrn Monitoring (TOEM)	4,000.00	-	4,000.00	81.08	-	81.08	3,918.92	97.97 %
2700 - Legislative Affairs Committee (LAC)	18,675.00	-	18,675.00	-	-	-	18,675.00	100.00 %
2800 - Information & Education Committee (IEC)	10,000.00	-	10,000.00	4,369.00	-	4,369.00	5,631.00	56.31 %
3100 - Public Information Program	7,390.00	-	7,390.00	-	-	-	7,390.00	100.00 %
3110 - Oral History	-	10,000.00	10,000.00	-	-	-	10,000.00	100.00 %
3200 - Observer Newsletter	7,500.00	-	7,500.00	4,321.36	-	4,321.36	3,178.64	42.38 %
3300 - Annual Report	8,000.00	-	8,000.00	4,312.40	1,250.00	5,562.40	2,437.60	30.47 %
3410 - Fishing Vessel Program Comm Outreach	19,000.00	-	19,000.00	-	-	-	19,000.00	100.00 %
3500 - Community Outreach	65,635.00	-	65,635.00	21,807.46	-	21,807.46	43,827.54	66.77 %
3530 - Youth Involvement	61,164.00	-	61,164.00	10,052.00	19,955.00	30,007.00	31,157.00	50.94 %
3562 - Then and Now	-	6,200.00	6,200.00	3,825.00	-	3,825.00	2,375.00	38.31 %
3600 - Public Communications Program	4,149.00	-	4,149.00	2,582.50	-	2,582.50	1,566.50	37.76 %
3610 - Web Presence Best Available Technology	5,440.00	-	5,440.00	1,828.75	3,611.25	5,440.00	-	0.00 %
3810 - Illustrated Prevention & Response System	20,000.00	2,000.00	22,000.00	40.00	-	40.00	21,960.00	99.82 %
4000 - Program & Project Support	1,800,070.00	-	1,800,070.00	823,974.00	-	823,974.00	976,096.00	54.23 %
4010 - Digital Collections Program	5,000.00	-	5,000.00	75.00	-	75.00	4,925.00	98.50 %
4400 - Federal Government Affairs	64,100.00	-	64,100.00	-	-	-	64,100.00	100.00 %
4410 - State Government Affairs	35,800.00	6,000.00	41,800.00	11,700.00	20,000.00	31,700.00	10,100.00	24.16 %
5000 - Terminal Operations Program	13,640.00	14,000.00	27,640.00	9,210.45	2,520.00	11,730.45	15,909.55	57.56 %
5051 - Water Quality Permit Review	-	30,000.00	30,000.00	-	-	-	30,000.00	100.00 %
5053 - VMT System Integrity and Safety Culture	-	15,000.00	15,000.00	15,087.50	-	15,087.50	(87.50)	(0.58) %
5081 - Storage Tank Maintenance Review	52,268.00	-	52,268.00	15,976.00	36,292.00	52,268.00	-	0.00 %
5591 - Crude Oil Piping Maintenance Review	51,744.00	(51,744.00)	-	-	-	-	-	0.00 %
6000 - Spill Response Program	4,000.00	-	4,000.00	-	-	-	4,000.00	100.00 %
6510 - State Contingency Plan Reviews	80,000.00	-	80,000.00	14,545.75	57,659.25	72,205.00	7,795.00	9.74 %
6512 - Adjudicatory Hearing	16,312.00	-	16,312.00	-	13,312.00	13,312.00	3,000.00	18.39 %
6530 - Weather/Sea Currents	16,400.00	-	16,400.00	7,804.00	5,255.97	13,059.97	3,340.03	20.37 %
6531 - Port Valdez Weather Buoys	51,200.00	-	51,200.00	26,314.26	18,372.00	44,686.26	6,513.74	12.72 %
6536 - Analysis of Port Valdez Weather	21,292.00	-	21,292.00	2,931.00	-	2,931.00	18,361.00	86.23 %

Back to Agenda

Prince William Sound Regional Citizens' Advisory Council
Budget Status Report
as of December 19, 2023

	Original Budget	Budget Modifications	Summary	Actual	Commitments	Total	Remaining Amount	Percentage Remaining
Buoys								
6537 - Copper River Delta Weather Station	-	-	-	1,391.15	-	1,391.15	(1,391.15)	0.00 %
6560 - Peer Listener Training	7,440.00	-	7,440.00	7,440.00	-	7,440.00	-	0.00 %
7000 - Spill Response Operations Program	4,250.00	-	4,250.00	-	-	-	4,250.00	100.00 %
7035 - Virtual Meeting w/ Response Vessel Reps	1,000.00	-	1,000.00	-	-	-	1,000.00	100.00 %
7520 - Preparedness Monitoring	28,500.00	-	28,500.00	4,262.67	-	4,262.67	24,237.33	85.04 %
8000 - Maritime Operations Program	11,160.00	-	11,160.00	4,646.65	-	4,646.65	6,513.35	58.36 %
8018 - State of Industry: Advances in Escort	45,000.00	(45,000.00)	-	-	-	-	-	0.00 %
8025 - Vessel Operator Tsunami Hazards Workshop	30,000.00	-	30,000.00	2,000.00	8,000.00	10,000.00	20,000.00	66.67 %
8520 - Miscommunication in Maritime Contexts	55,000.00	-	55,000.00	-	50,000.00	50,000.00	5,000.00	9.09 %
9000 - Environmental Monitoring Program	17,000.00	-	17,000.00	14,215.17	-	14,215.17	2,784.83	16.38 %
9110 - PWS Marine Bird Winter Survey	71,738.00	-	71,738.00	6,600.00	-	6,600.00	65,138.00	90.80 %
9510 - Long-Term Environmental Monitoring	173,636.79	(16,264.00)	157,372.79	110,638.18	22,416.72	133,054.90	24,317.89	15.45 %
9512 - Composition of Oxygentated Hydrocarbons	17,000.00	-	17,000.00	17,000.00	-	17,000.00	-	0.00 %
9520 - Marine Invasive Species	186,629.00	-	186,629.00	30,000.00	-	30,000.00	156,629.00	83.93 %
9521 - Marine Invasive Species Internship	6,500.00	(1,000.00)	5,500.00	2,564.90	800.00	3,364.90	2,135.10	38.82 %
Total All Tasks	4,658,727.79	56,286.00	4,715,013.79	1,807,710.21	263,857.07	2,071,567.28	2,643,446.51	56.06 %

Contingency fund as of December 19, 2023 is $233,450.

PWSRCAC Director Attendance Record

January 2024

(Attendance recorded through November 21, 2023 Special Board Meeting)

Board Member *(date appointed)*	***Overall Attendance*** *# attended / # missed*	***Last 3 Mtgs.**** *# attended / # missed*	***Term Expires***
Archibald, Robert *(May 2015)*	48/1	3/0	5/25
Bauer, Amanda *(May 2012)*	63/1	3/0	5/25
Beedle, Robert *(May 2013)*	56/4	3/0	5/24
Bender, Mike *(Sept. 2015)*	39/9	2/1	5/24
Brittain, Mike *(May. 2023)*	2/1	2/1	5/25
Crump, Nick *(May. 2021)*	11/6	2/1	5/25
Cutrell, Ben *(Jan. 2020)*	23/1	2/1	5/24
Donaldson, Wayne *(Jan. 2015)*	48/2	3/0	5/25
Haggarty, Mako *(May 2015)*	38/9	3/0	5/25
Hasenbank, Luke *(May 2016)*	34/11	2/1	5/24
Herbert, Jim *(January 2023)*	6/0	3/0	1/24
Jackson, Elijah *(May 2021)*	8/8	1/2	5/25
Janka, David *(January 2023)*	6/0	3/0	5/24
Malchoff, Melvin *(Sept. 2016)*	28/13	2/1	5/24
Moore, Dorothy *(Jan. 2007)*	88/2	2/1	5/24
Shavelson, Bob *(Sept. 2014)*	53/9	2/1	5/24
Totemoff, Angela *(May 2021)*	13/4	3/0	5/25
Vigil, Michael *(Sept. 2015)*	39/9	3/0	5/24
Williams, Aimie *(May 2022)*	10/3	3/0	5/24
Kirk Zinck *(May 2019)*	26/3	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)	24/0	3/0	5/24
Amanda Bauer (Director) (Vice Chair)	36/6	3/0	5/24
Steve Lewis (Chair)	20/0	3/0	5/24
Max Mitchell	4/0	3/0	5/24
Gordon Terpening	14/1	3/0	5/24

Oil Spill Prevention and Response (OSPR)			
Committee Member	**Overall**	**Last 3 mtgs**	**Term Expires**
Robert Beedle (Director)	39/16	2/1	5/25
Mike Bender (Director)	29/15	2/1	5/24
Dave Goldstein	79/21	3/0	5/24
Jim Herbert (Chair) (Director)	57/0	3/0	5/25
Matt Melton	3/1	2/1	5/25
Tim Robertson	1/0	1/0	5/24
Gordon Scott	70/78	0/3	5/25

Terminal Operations & Environmental Monitoring (TOEM)			
Committee Member	**Overall**	**Last 3 mtgs**	**Term Expires**
Amanda Bauer (Director) (Chair)	58/10	2/1	5/24
Harold Blehm	54/11	1/2	5/25
Matt Cullin	21/10	2/1	5/24
Mikkel Foltmar	36/14	3/0	5/25
Steve Goudreau	33/16	1/2	5/25
Tom Kuckertz	40/10	2/1	5/25
George Skladal (Vice Chair)	138/11	3/0	5/24

Ratios are # meetings present/ # of absences

Attendance Record is from 2003 to present.

Scientific Advisory Committee (SAC)			
Committee Member	**Overall**	**Last 3 mtgs**	**Term Expires**
Sarah Allan	89/10	3/0	5/24
Wei Cheng	60/6	3/0	5/25
Wayne Donaldson (Director)	75/9	1/2	5/25
Roger Green	154/23	3/0	5/25
Davin Holen (Chair)	69/6	3/0	5/24
John Kennish	148/14	3/0	5/25
Dorothy Moore (Director)	132/14	3/0	5/25
Debasmita Misra	59/61	0/3	5/24
Ana Aguilar-Islas	9/8	2/1	5/24

Information & Education Committee (IEC)			
Committee Member	**Overall**	**Last 3 mtgs**	**Term Expires**
Trent Dodson (Chair)	35/27	1/2	5/25
Jane Eisemann	83/13	2/1	5/25
Cathy Hart (Vice Chair)	77/22	3/0	5/25
Andrea Korbe	33/27	2/1	5/25
Ruth E. Knight	80/10	2/1	5/24
Savannah Lewis *since recommittal date	49/0*	3/0	5/25
Kate Morse	59/30	2/1	5/24
Aimee Williams	9/4	2/1	5/24

Ratios are # meetings present/ # of absences

Current List of Board Committee Members

As of May 2023

Executive Committee

- Robert Archibald, President
- Amanda Bauer, Vice President
- Wayne Donaldson, Treasurer
- Bob Shavelson, Secretary
- Robert Beedle, Member-at-Large
- Ben Cutrell, Member-at-Large
- Angela Totemoff, Member-at-Large

Board Governance Committee

- Luke Hasenbank (Chair)
- Dorothy Moore
- Robert Beedle
- Mike Bender

Finance Committee

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

Long Range Planning Committee

- Robert Archibald
- Jim Herbert
- Angela Totemoff
- Davin Holen (SAC Chair)
- Amanda Bauer (TOEM Chair)
- Jim Herbert (OSPR Chair)
- Steve Lewis (POVTS Chair)
- Trent Dodson(IEC Chair)
- Cathy Hart

Legislative Affairs Committee

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

Prince William Sound Regional Citizens' Advisory Council
One-Page Strategic Plan

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

Link to full FY2023-FY2027 Long Range Plan

Core Purpose: Citizen oversight to prevent oil spills, minimize environmental impacts, and promote response readiness

Core Values

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

Overarching Goals and Objectives

- Compliance with OPA90 and Alyeska contractual requirements.
  ☐ (1) Annual re-certification and funding
  ☐ (2) Maintain regional balance
  ☐ (3) Link projects and programs to OPA90 and Alyeska contract

- Continue to improve environmental safety of oil transportation in our region.
  ☐ (4) Monitor and review development of, and compliance with, laws and regulations
  ☐ (5) Pursue risk-reduction measures and promote best available technologies and best practices
  ☐ (6) Monitor operations and promote a safe and clean marine terminal
  ☐ (7) Monitor and review the condition of the tanker fleet/maritime operations
  ☐ (8) Monitor and promote the safe operation of all Alyeska/SERVS-related on-water assets
  ☐ (9) Monitor and review environmental indicators
  ☐ (10) Promote and facilitate effective research for scientific, operational and technical excellence

- Develop and maintain excellent external and internal communication.
  ☐ (11) Advocate for government and industry measures to improve the environmental safety of oil transportation
  ☐ (12) Maintain and improve relationships with government, industry and communities
  ☐ (13) Be the model for citizen oversight and provide support for other citizens' advisory groups
  ☐ (14) Ensure availability of PWSRCAC information
  ☐ (15) Work to improve availability of information to PWSRCAC from industry sources

- Achieve organizational excellence.
  ☐ (16) Effective short and long term planning, with clear and measurable goals for projects
  ☐ (17) Fiscally responsible, efficient, and easily understood financial procedures and reporting
  ☐ (18) Committed to continuous improvement
  ☐ (19) Recognize people as the most important asset of the organization
  ☐ (20) Recruit and develop knowledgeable and committed Board members, volunteers, and staff
  ☐ (21) Strong volunteer structure and support for volunteers

Back to Agenda

PWSRCAC Board and Executive Committee Actions

PRINCE WILLIAM SOUND REGIONAL CITIZENS' ADVISORY COUNCIL

Meeting	Date	Action Item	File Code (if any)	Responsible	Disposition
Board	11/21/2023	**Approval of FY2023 Audit:** The Board approved the FY2023 audit by BDO. Is this audit in place?		Hamilton	Done
Board	11/21/2023	**Appointment of Tim Robertson to OSPR Committee:** The Board approved Tim Robertson to the OSPR Committee with a term set to expire at the May 2024 annual Board meeting. Is this appoitnment in place?		Vanderburg	Done
Board	11/21/2023	**Executive Director 2023 Evaluation:** The Board awarded and 8.1% increase to Schantz' pay, retroactive to the first pay period of FY2024. Is this increase in place?		Hamilton	Pending
Board	11/21/2023	**Approval of FY2024 Budget Modifications:** The Board approved the FY2024 budget modificationsas listed on the provided sheet, with a total revised contingency in the amount of $181.607. Are these modifications in place?		Hamilton	Done
Board	11/21/2023	**Approval of Travel for K. Morse and C. Hart to NTEN:** The Board approved travel for IEC members Kate Morse and Cathy Hart to attend the NTEN Conference, March 13-15, 2024 in Portland, Oregon, with travel costs in an approximate amount of $3,272 and $2,963, respectively. Has the travel taken place?		Willahan	Pending; travel
Board	9/21/2023	**APPROVAL OF ANNUAL SAGE INTACCT LICENSING FEE:** The Board approved a FY2024 budget modification in the amount of $17,094 from the contingency fund into budget 1300 Information Technology for the annual Sage Intacct licensing fee; and the FY2024 licensing fee with Sage Intacct in the amount of $17,094 for continued support of the Council's accounting system. Are these steps in place?		Hamilton	Done
Board	9/21/2023	**APPROVE DEFERRAL OF PROJECT 5591: CRUDE OIL PIPING INSPECTION REVIEW:** The Board approved the deferral of TOEM project 5591: Crude Oil Piping Inspection Review transferring $51,744 of the funds into the FY2024 contingency fund. Is this deferral in place?		Blancaflor	Done

Back to Agenda

PWSRCAC Board and Executive Committee Actions

PRINCE WILLIAM SOUND REGIONAL CITIZENS' ADVISORY COUNCIL

Meeting	Date	Action Item	File Code (if any)	Responsible	Disposition
Board	9/21/2023	**REPORT ACCEPTANCE: PORT VALDEZ WEATHER BUOY DATA ANALYSIS 2019-2022:** The Board accepted the Port Valdez Weather Buoy Data Analysis 2019-2022 by Robert W. Campbell, Ph.D., and the Prince William Sound Science Center, as meeting the terms and conditions of the Contract 6536.23.01, and for distribution to the public. Is this report in place?	653.431.230901.PtVdzWxBuoyData	Robertson	Done
Board	9/21/2023	**APPROVAL OF RESOLUTION IN SUPPORT OF COAST GUARD CUTTER HOMEPORTING:** The Board adopted Resolution 23-01 "Urging the United States Coast Guard to Homeport a Sentinel-Class Cutter, Also Known as the Fast Response Cutter, in Port Valdez." Is this resolution in place?	210.106.230921.USCCutter	Sorum	Done
Board	9/21/2023	**PWSRCAC EFFORTS TO ADDRESS VMT SYSTEM INTEGRITY & SAFETY CULTURE ISSUES:** The Board 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." Are these steps in place?		Blancaflor	Done
Board	9/21/2023	**Class I Recreation Seat:** The Board voted in favor of supporting the efforts to form a coalition of recreation entities to potentially fill a Class I Recreation seat on the PWSRCAC Board of Directors, and delegation of authority to the Executive Director to engage PWSRCAC legal counsel to review the draft Memorandum of Agreement provided by the groups currently proposing the Recreation Coalition. Are these steps in place?		Crawford	Done
Board	9/21/2023	**REPORT ACCEPTANCE: OXYGENATED HYDROCARBONS:** The Board accepted the report titled "Examining the Effectiveness of Ballast Water Treatment Processes: Insights into Hydrocarbon Oxidation Product Formation and Environmental Implications" by Maxwell Harsha and Dr. David Podgorski from the University of New Orleans dated August 1, 2023, as meeting the terms and conditions of Contract 9512.22.01, and ready for distribution to the public. Is this report in place?	951.431.230921.NOLAOxyHydro	Verna	Done
Board	9/21/2023	**REPORT ACCEPTANCE: PRINCE WILLIAM SOUND MARINE BIRD WINTER SURVEYS:** The Board accepted the report titled "Marine Bird Winter Surveys in Prince William Sound" by the Prince William Sound Science Center dated June 26, 2023, as meeting the terms and conditions of Contract 9110.23.01, and for distribution to the public. Is this report in place?	900.431.230626.WinterBrdSvy	Verna	Done
Board	9/21/2023	**REPORT ACCEPTANCE: PEER LISTENER TRAINING MANUAL:** 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. Is the report in place?	656.431.230921.CopeTechDstrs	Verna	Done

PWSRCAC Board and Executive Committee Actions

PRINCE WILLIAM SOUND REGIONAL CITIZENS' ADVISORY COUNCIL

Meeting	Date	Action Item	File Code (if any)	Responsible	Disposition
Board	9/21/2023	**PWSRCAC LONG RANGE PLANNING:** The Board approved the protected project list for the upcoming Long Range Planning process as presented in Attachment A to the briefing sheet under Item 4-7 in the meeting notebook. Is the project list in place?		Crawford	Done
Board	9/21/2023	**CONTRACT AUTHORIZATION: MARINE BIRD WINTER SURVEYS:** The Board authorized the Executive Director to enter into a sole source contract with the Prince William Sound Science Center to conduct project 9110 Marine Bird Winter Surveys in 2024 in an amount not to exceed $65,138. Is this contract in place?		Verna	Done
XCOM	9/14/2023	**Deferral of Project 8018 - State of the Industry: Advances in Escort Tugboat Technology and Regulatory Frameworks:** The Executive Committee approved the transfer of $45,000 from project 8018 – State of the Industry: Advances in Escort Tugboat and Regulatory Frameworks to the FY2024 contingency. Is this transfer in place?		Sorum	Done
XCOM	9/14/2023	**Acceptance of Report Titled "Crude Oil Storage Tank Vent Snow Damage," by Taku Engineering, LLC.:** The Execuitve Committee accepted the technical memorandum titled, "Crude Oil Storage Tank Vent Snow Damage," by Taku Engineering, dated July 2023, with direction for staff to forward the memo to Alyeska and state and federal regulators accompanied by a cover letter summarizing findings and recommendations with requests for appropriate action and a complete response. Has the report been transmitted?	500.431.230601.TankVentSnowDmg	Blancaflor	Done
XCOM	9/14/2023	**FY2024 budget modification to update "Then & Now," not to exceed $6,000:** The Executive Committee approved an FY2024 budget modification in the amount of $6,200 from the contingency fund into budget 3562 Then & Now for the update and reprinting of this document ahead of the 35th anniversary of EVOS. Is this budget modification in place?		Taylor	Done
XCOM	9/14/2023	**PWSRCAC's State Legislative Monitor Contract Increase:** The Executive Committee approved Gene Therriault's requested contract increase from $25,700 to $31,700 to continue as a legislative monitor for FY24. Approve a budget modification from the contingency fund to Project 4410 State Government Affairs in the amount of $6,000 to increase PWSRCAC's Legislative Monitor contract amount to $31,700. Is the revised contract in place?		Lally	Done
XCOM	9/14/2023	**Out-of-State Travel to Pacific Marine Expo:** The Executive Committee approved out-of-state travel for Max Mitchell and Matt Melton to attend the Pacific Marine Expo, November 8-10, 2023 in Seattle, Washington with total travel costs in an approximate amount of $2,116 for Mitchell (based in Homer) and $1,456 for Melton (based in Anchorage). Has the travel taken place?		Draper-Reich	

PWSRCAC Board and Executive Committee Actions

PRINCE WILLIAM SOUND REGIONAL CITIZENS' ADVISORY COUNCIL

Meeting	Date	Action Item	File Code (if any)	Responsible	Disposition
XCOM	9/14/2023	**Agenda for Upcoming PWSRCAC Board Meeting:** The Executive Committee approved the agenda for the PWSRCAC Board meeting, September 21-22, 2023 in Homer as presented with the changes. Is the agenda in place?	210.001.230921.SeptAgenda	Fleming	Done
XCOM	7/13/2023	**Acceptance of Sustainable Shipping: Regulatory Mandate Review Report:** The Executive Committee accepted the Nuka Research and Planning Group report titled "Sustainable Shipping: Regulatory Mandate Review", dated June 2023, as meeting the terms and conditions of contract number 8300.23.01 and allow for its distribution to the public.	800.431.060123.NukaSustainShip	Sorum	Done
XCOM	7/13/2023	**Acceptance of POVTS Tanker Speed Reduction Operational Review Internal Memo:** The Executive Committee accepted the POVTS Committee memo titled "TAPS Tanker Speed Reduction Operational Review", dated April 5, 2023 and allow for its distribution to the public. Is this report in place?	240.109.230405.TAPSSpeedReduce	Sorum	Done
XCOM	7/13/2023	**OSPR Committee Member Appointment:** The Executive Committee appointed Nick Crump to the OSPR Committee with a term set to expire at the May 2024 annual Board meeting. Is this appointment in place?		Vanderburg	Done
XCOM	7/13/2023	**Approval of In-State Travel:** The Executive Committee approved in-state travel for Robert Archibald to attend the USCG Sector Anchorage Change of Command ceremony in Anchorage, Alaska on July 14, 2023 in an approximate amount of $500. Has the travel taken place?		Fleming	Done
Board	5/4/2023	**4-1 DIRECTOR APPOINTMENTS**: The Board approved the two-year terms of the selected representatives for the following: R. Archibald (Homer); W. Donaldson (City of Kodiak); K. Zinck (City of Seldovia); M. Brittain (City of Seward); A. Bauer (City of Valdez); M. Haggerty (Kenai Peninsula Borough); E. Jackson (Kodiak Village Mayors' Association); N. Crump (PWSAC); and A. Totemoff (Tatitlek Corp. & Tatitlek IRA Council). Are these appointments in place?		Fleming	Done
Board	5/4/2023	**FY2024 BUDGET APPROVAL:** The Board approved the adoption of the 2024 budget as presented during the budget workshop on April 29, 2023, and as described in the Draft Budget 2024 dated April 25, 2023. Total income is assumed to be $4,264,106, total expenses are $4,745,278, contingency of $75,000, capital budget of $15,000 for a total of $571,172 net assets used. Is the budget in place?		Hamilson	Done

PWSRCAC Board and Executive Committee Actions

PRINCE WILLIAM SOUND REGIONAL CITIZENS' ADVISORY COUNCIL

Meeting	Date	Action Item	File Code (if any)	Responsible	Disposition
Board	5/4/2023	**3-1 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?		Hamilton	Done
Board	5/4/2023	**3-2 APPROVAL OF FY2024 LTEMP CONTRACT AUTHORIZATION:** The Board approved the following: a) Authorization of individual contracts with Alpha Analytical and Owl Ridge Natural Resource Consultants, Inc. with the aggregate total not to exceed the amount approved in the final FY2024 LTEMP budget (Project #9510) for contract expenses, and b) Authorization of contract work to commence prior to the start of the 2024 fiscal year to accommodate timing considerations and purchasing needs. It is estimated that up to $15,000 of the above contract work may be performed before June 30, 2023. Are these steps in place?		Verna/Love	Done
Board	5/4/2023	**3-3 FY2024 MARINE INVASIVE SPECIES SURVEY ANALYSIS CONTRACT INCREASE:** Authorization of a contract increase of $156,629 to contract #9520.23.01 - Marine Invasive Species Broadscale Survey in Prince William Sound - with the Smithsonian Environmental Research Center for a new cumulative contract total of $216,883. (Note: $60,254 of the proposed contract was approved in FY2023. This action is contingent upon approval of the FY2024 budget adding new funding of $156,629 for a cumulative contract total of $216,883.) Is this contract in place?		Verna	Done
Board	5/4/2023	**3-4 ANNUAL TECHNICAL COMMITTEE MEMBER APPOINTMENTS:** The Board made the following two-year technical committee appointments: Cheng, Kennish, moore, Green and Donaldson to SAC; Blehm, Foltmar, Coudreau, and Kuckertz to TOEM; Scott, Steritz, and Melton to OSPR; Terpening, Mitchell, and Lewis to POVTS, and Dodson, Eisemann, Hart, Korbe and Sav. Lewis to IEC. Are these appointments in place?		Vanderburg/O	Done
Board	5/4/2023	**3-5 APPROVAL OF FY2023 CONTINGENCY PLAN CONTRACTOR POOL:** The Board Authorized 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. Are these contracts in place?		Swiss	Done
Board	5/4/2023	**APPROVAL OF PWSRCAC/ALYESKA CONTRACT COMPLIANCE VERIFICATION REPORT:** The Board accepted the PWSRCAC/Alyeska Annual Contract Compliance Verification Report. Is the report in place?	100.109.230331.ContrComplRpt	Schantz/Hamil	Done

PWSRCAC Board and Executive Committee Actions

PRINCE WILLIAM SOUND REGIONAL CITIZENS' ADVISORY COUNCIL

Meeting	Date	Action Item	File Code (if any)	Responsible	Disposition
Board	5/4/2023	**4-3 REPORT ACCEPTANCE: LTEMP TRANSCRIPTOMICS:** The Board accepted the reports titled "Executive Summary: Transcriptomic responses to an Alaskan oil spill over time reveal a dynamic multisystem involvement in exposed mussels" and "Transcriptomic responses to an Alaskan oil spill over time reveal a dynamic multisystem involvement in exposed mussels (Mytilus trossulus)" by Lizabeth Bowen, William B. Driskell, Brenda Ballachey, James R. Payne, Shannon Waters, Eric Litman, and Austin Love as meeting the terms and conditions of research contribution number 951.22.07, and for distribution to the public. Are these reports in place?	951.431.230301.TrnScriptomcFull	Love	Done
Board	5/4/2023	**4-4 REPORT ACCEPTANCE: 2019 ALASKA NORTH SLOPE CRUDE OIL PROPERTIES:** The Board accepted the report titled "Review of the 2019 Alaska North Slope Oil Properties Relevant to Environmental Assessment and Prediction" by Dr. Merv Fingas as meeting the terms and conditions of contract #5640.23.01, and for distribution to the public. Is this report in place?	500.431.230301.MFrvwANSprops	Love	Done
Board	5/4/2023	**4-7 REPORT ACCEPTANCE: 2022 DRILL MONITORING ANNUAL REPORT:** The Board accepted the 2022 Annual Drill Monitoring Report for distribution. Is this report in place?	752.431.230101.DrillMon2022	Robertson	Done
Board	5/4/2023	**4-9 ANNUAL BOARD COMMITTEE APPOINTMENTS**: The Board made the following committee appointments: FINANCE - Treasurer Wayne Donaldson (chair), Robert Archibald, Mako Haggerty Angela Totemoff, Jim Herbert; LONG RANGE PLANNING COMMITTEE - The chairs of all the technical committees, Robert Archibald, Jim Herbert, Angela Totemoff, and Cathy Hart from the IE Committee; BOARD GOVERNANCE COMMITTEE -Luke Hasenbank, Dorothy Moore, Robert Beedle, Mike Bender; LEGISLATIVE AFFAIRS COMMITTEE - Robert Beedle, Robert Archibald, Mako Haggerty, Kirk Zinck, Dorothy Moore, Elijah Jackson. Are these appointments in place?		Fleming	Done
XCOM	4/28/2023	**Dispersant Literature Report Acceptance:** The Executive Committee approved the report titled "Review of Literature on Oil Spill Dispersants: 2021-2023", dated January 2023, by Dr. Merv Fingas of Spill Science, LLC, as meeting the terms and conditions of contract number 9550.22.02, and for distribution to the public.	955.431.230101.FingasLitRvw	Verna	Done
XCOM	4/28/2023	**Board Strategic Planning Contract Approval:** The Executive Committee authorized the Executive Director to enter into contract with Agnew::Beck Consulting for an amount necessary from FY2023 funds that will extend to June 30, 2023 for the purpose of Board strategic planning and facilitated workshop to be held September 20, 2023, in Homer, Alaska. The remainder of the funds would be subsequently passed in the FY2024 budget. Is the contract in place?		Crawford	Done

PWSRCAC Board and Executive Committee Actions

PRINCE WILLIAM SOUND REGIONAL CITIZENS' ADVISORY COUNCIL

Meeting	Date	Action Item	File Code (if any)	Responsible	Disposition
XCOM	4/28/2023	**Approval of International Travel to the 45th Annual AMOP Technical Seminar:** The Executive Committee approved international travel for Dr. Roger Green to attend the 45th Annual AMOP Technical Seminar, June 6-8, 2023, in Edmonton, Canada in an approximate amount of $2,541. Has the travel taken place?		Odegard	Done
XCOM	4/28/2023	**OSPR Committee Appointment:** The Executive Committee appointed Matt Melton to the OSPR Committee with a term set to expire at the May 2023 annual Board meeting. Is this appointment in place?		Vanderburg	Done
Board	4/14/2023	**Acceptance of the report titled "Assessment of Employee Concerns Regarding the Valdez Marine Terminal":** Once out of executive session, the Board 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. Is this report in place?	500.431.230401.GardeVMTriskassmt	Schantz	Done
Board	4/14/2023	**Transmittal of the report titled "Assessment of Employee Concerns Regarding the Valdez Marine Terminal":** The Board approved the letter transmitting the report to the Alaska Delegation, to be signed by all PWSRCAC Board members, with the release of the report to other government regulators, elected officials, formal transmittal to Alyeska, and availability to the public to occur 7-10 days after transmittal of the report to congress. Has the letter been sent?	440.105.230415.AKDelTAPS	Schantz	Done
Board	3/14/2023	**Participation in May 2 Youth Involvement Bligh Reef Expedition:** The Board authorized the additional expenditure of an estimated $215 per person for Council volunteers to attend the May 2, 2023 youth Involvement Bligh Reef Expedition in Valdez.		Draper-Reich	Done
Board	3/14/2023	**Approval of Resolution Increasing MasterCard Account at FNBA:** The Board adopted the attached corporate resolution provided by First National Bank Alaska authorizing an increase in the total credit limit for the Council's Mastercard account to $80,000.		Hamilton	DOne
Board	3/14/2023	**Approval of Travel for President Archibald to Anchorage:** The Board approved costs for President Robert Archibald to travel to Anchorage on March 16 to meet with Alyeska interim president Betsy Haines in an approximate amount of $500.		Fleming	Done

PWSRCAC Board and Executive Committee Actions

PRINCE WILLIAM SOUND REGIONAL CITIZENS' ADVISORY COUNCIL

Meeting	Date	Action Item	File Code (if any)	Responsible	Disposition
Board	3/14/2023	**Approval of IRS Form 990:** The Board authorize the Executive Director to sign the Form 990 on behalf of PWSRCAC and submit it to the IRS on or before May 15, 2023.		Hamilton	Done
Board	3/14/2023	**Annual Evaluation of the Executive Director:** The Board approved extending the Executive Director's contract for one year		Crawford	Done
XCOM	2/21/2023	**Dispersant Literature Report Acceptance:** The Executive Committee the report titled "Review of Literature on Oil Spill Dispersants: 2021-2023", dated January 2023, by Dr. Merv Fingas of Spill Science, LLC, as meeting the terms and conditions of contract number 9550.22.02, and for distribution to the public." Has the report been distributed?	955.431.230101.FingasLitRvw	Verna	Done
XCOM	2/21/2023	**Board Strategic Planning Contract Approval:** The Executive Committee authorized the Executive Director to enter into contract with Agnew::Beck in an amount necessary from FY2023 funds that will extend into June 30, 2023 for the purpose of Board strategic planning and facilitated workshop to be held September 20, 2023 in Homer, Alaska The remainder of the funds would be subsequently passed in the FY2024 budget. Is this contract in place?		Crawford	Done
XCOM	2/21/2023	**Approval of International Travel to the 45th Annual AMOP Technical Seminar:** The Executive Committee approved approve International travel for Roger Green to attend the 45th Annual AMOP Technical Seminar, June 6-8, 2023 in Edmonton, Canada in an approximate amount of $2,541. Has the travel taken place?		Odegard	Done
XCOM	2/21/2023	**OSPR Committee Appointment:** The Executive Committee appointed Matt Melton to the OSPR Committee with a term set to expire at the May 2023 annual Board meeting. Is this appointment in place?		Vanderburg	Done
Board	1/26/2023	**DIRECTOR APPOINTMENT FOR CDFU AND CITY OF CORDOVA:** The Board accepted the confirmations of the appointments of Robert Beedle representing Cordova District Fishermen United, and David Janka representing the City of Cordova, each with a term set to expire in May 2024. Are these appointments in place?		Fleming	Done

PWSRCAC Board and Executive Committee Actions

PRINCE WILLIAM SOUND REGIONAL CITIZENS' ADVISORY COUNCIL

Meeting	Date	Action Item	File Code (if any)	Responsible	Disposition
Board	1/26/2023	**APPROVAL OF LTEMP BUDGET MODIFICATION AND CONTRACT CHANGE ORDER:** The Board authorized an FY2023 budget modification from the contingency fund to project #9510 – Long Term Environmental Monitoring Program adding $836 for contract expenses and approval of negotiation of a contract change order, for contract #951.22.06, with Owl Ridge Natural Resource Consultants, adding $5,058 for compensation to archive the 1993-2021 Long-Term Environmental Monitoring Program data in the Alaska Ocean Observing System and extending the term of the contract to March 31, 2023. [Note: This change order would increase the total contract amount to $68,007.]Are these steps in place?		Love	Done
Board	1/26/2023	**APPROVAL OF FY2023 BUDGET MODIFICATIONS:** The Board approved the proposed FY2023 budget modifications as listed on the provided sheet, with a total revised contingency in the amount of $128,778. Are these modifications in place?		Hamilton	Done
Board	1/26/2023	**REPORT ACCEPTANCE: SECONDARY CONTAINMENT SYSTEM EVALUATION METHODS:** The Board 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. Are these steps in place?	500.431.221129.BensonCBAMethods	Love	Done
Board	1/26/2023	**CREATION AND APPOINTMENT OF TEMPORARY RECREATION SEAT:** The Board approved: a waiver of Administrative Procedure 16-01 "Consideration of an Entity for the PWSRCAC Board of Directors" for the Temporary Recreation Seat; the proposed amendment to section 2.2.1 of the PWSRCAC Bylaws to add Temporary Recreation Seat to the list of Class I Membership; the proposed amendment to section 3.2 of the PWSRCAC Bylaws to add the following language: The Board of Directors may appoint an entity or individual to serve as a Class I or Class II member on a temporary basis, on terms and conditions as may be determined by the Board, by action of the Board as provided in this section; and, the appointment of Jim Herbert to fill the Temporary Recreation Seat as a Class I member with a term set to expire at the January 2024 Board meeting or at the completion of the Request for Qualifications process, whichever comes first. Are these steps in place?		Taylor/Crawfo	Done
Board	1/26/2023	**REPORT ACCEPTANCE: 2022 FORAGE FISH SURVEY:** The Board accepted the report titled "2022 Prince William Sound Forage Fish Observations" by Dr. Scott Pegau of the Prince William Sound Science Center dated November 28, 2022, as meeting the terms and conditions of Contract 9511.22.01, and for distribution to the public. Is the report in place?	900.431.221128.PegauForageRpt	Verna	Done

PWSRCAC Board and Executive Committee Actions

PRINCE WILLIAM SOUND REGIONAL CITIZENS' ADVISORY COUNCIL

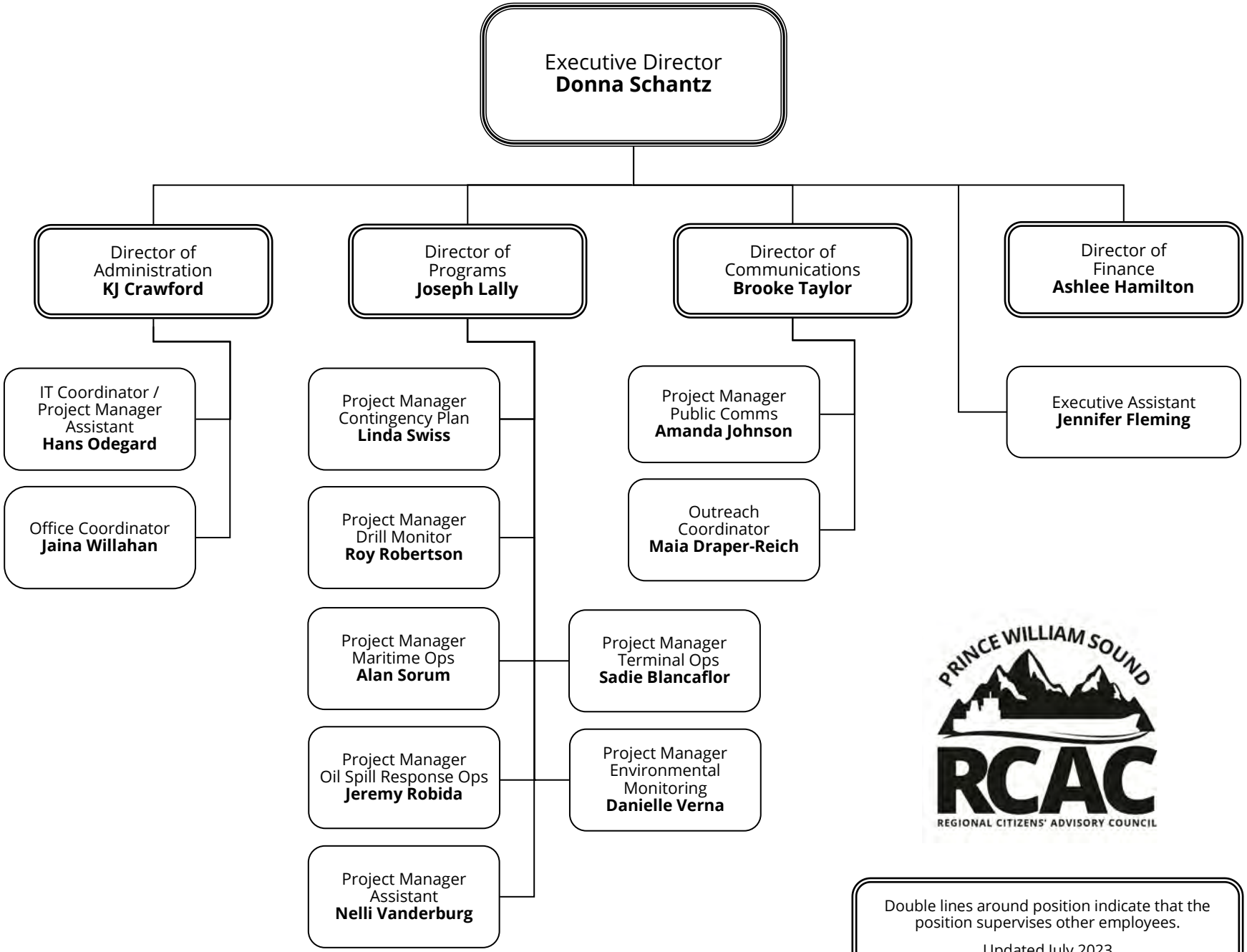
Meeting	Date	Action Item	File Code (if any)	Responsible	Disposition
Board	1/26/2023	**REPORT APPROVAL - PWSRCAC ANNUAL LONG RANGE PLAN:** The Board approved the Five-Year Long Range Plan for Fiscal Years 2024–2028, as developed and finalized for consideration by the Board at the January 25, 2023 Long Range Plan work session. Is this report in place?	210.101.230129.FiveYearLRP	Crawford/Van	Done
Board	1/26/2023	**APPROVAL OF DISPERSANTS USE POSITION SUPPORTING MATERIALS:** The Board accepted the document titled "PWSRCAC Dispersant Use Position Supporting Materials" by Elise DeCola of Nuka Research and Planning Group, LLC, dated December 2022, as meeting the terms and conditions of Contract 9550.22.01, and for distribution to the public. Are the materials available to the public?	955.431.230127.PositionStatement	Verna	Done
Board	1/26/2023	**REPORT ACCEPTANCE - PORT VALDEZ WEATHER BUOY DATA ANALYSIS 2019 - 2021:** The Board accepted the report titled "Port Valdez Weather Buoy Data Analysis 2019-2021" by Robert W. Campbell, Ph.D., of the Prince William Sound Science Center dated December 7, 2022, as meeting the terms and conditions of the Contract 6536.22.01, and for distribution to the public. Is the report in place?	653.431.221207.PtVdzWxBuoyData	Robertson	Done
Board	1/26/2023	**APPROVAL OF MARINE INVASIVE SPECIES SOLE SOURCE CONTRACT:** The Board authorized a budget modification from the contingency fund to project 9520 Marine Invasive Species in the amount of $8,645 for FY2023 contract expenses; and authorized the Executive Director to enter into a sole source contract with the Smithsonian Environmental Research Center for the project Marine Invasive Species Broadscale Survey in Prince William Sound in an amount not to exceed $60,254. Are these steps in place?		Verna	Done
XCOM	1/19/2023	**Agenda for Upcoming PWSRCAC Board Meeting:** The Executive Committee approved the agenda for the PWSRCAC Board meeting, January 26-27, 2021 with changes as presented and discussed. Has the agenda been distributed?	210.001.230126.JanAgenda	Fleming	Done
Board	12/20/2022	**Update on Assessment of Employee Concerns Regarding the VMT:** The Board 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. Are these steps in place?		Schantz	Done
Board	12/20/2022	**PWSRCAC Member Entity and Board Seats:** The Board directed staff to contact individuals from the EVOS region to temporarily fill the recreation seat, with the intent to temporarily waive Administrative Procedure 16 -01 and temporarily seat the representative selected at the January 2023 Board meeting, after which a full RFP process will be conducted. Are these steps in place?		Taylor/Crawfo	Done

PWSRCAC Board and Executive Committee Actions

PRINCE WILLIAM SOUND REGIONAL CITIZENS' ADVISORY COUNCIL

Meeting	Date	Action Item	File Code (if any)	Responsible	Disposition
Board	12/20/2022	**Facilitated Strategic Planning Session and Related Events:** The Board directed staff to plan on holding a Strategic Planning workshop in FY2024, by adding the full day facilitated workshop to the September Board meeting in Homer. Has the workshop taken place?		Crawford	Done
Board	12/20/2022	**Rescind COVID 19 Restrictions for In-Person Meeting:** The Board rescinded specific COVID-19 safety mitigation's and restrictions that were previously approved by the Board in March 2022. Rescinded restrictions to include: required mask usage, social distancing of a minimum of three feet, and requirement for food items to be served via individually packaged meals. Has this action taken place?		Fleming	Done
XCOM	12/15/2022	**Acceptance of Memo by Taku Engineering Regarding the Maintenance of ballast Water Storage Tank 93:** The Executive Committee accepted the technical memorandum titled "Valdez Marine Terminal Tank 93 Preliminary Recommendations" by William Mott of Taku Engineering dated October 28, 2022, as meeting the terms and conditions of Contract 5081.22.01, with direction to staff to forward the memo to Alyeska and state and federal regulators. Has the report been distributed?	500.431.221028.VMTtk93Memo.pdf	Love	Done
XCOM	12/15/2022	**Approval of Travel to the 2023 Nonprofit Technology Conference:** The Executive Commitee approved travel for IEC member Cathy Hart to attend the NTEN Conference, April 12-14, 2023, in Denver, Colorado, with travel costs in an approximate amount of $2,572. Has the travel taken place?		Willahan	Done
XCOM	12/15/2022	**Planning and Process for Executive Director FY2024 Evaluation:** The Executive Committee approved forwarding the Executive Director performance goals to the Board for approval at the January 2023 Board meeting. Has this taken place?		Schantz	Done

Back to Agenda



PRINCE WILLIAM SOUND RCAC REGIONAL CITIZENS' ADVISORY COUNCIL

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

Updated July 2023

Consent Agenda Briefing for PWSRCAC Board of Directors – January 2024

ACTION ITEM

Sponsor: Sadie Blancaflor and the TOEM Committee

Project number and name or topic: 5570 – Valdez Air Quality

1. **Description of agenda item:** The Board is being asked to approve a contract with Ron Sahu to conduct work related to the Valdez Marine Terminal (VMT) Title V Air Quality Permit Review and associated work with tank venting estimates in an amount not to exceed $50,000.

2. **Why is this item important to PWSRCAC:** Since its inception, PWSRCAC has had a continuing interest in the environmentally responsible operation of the VMT. Concerns related to the emission of air pollutants from operations at the VMT are consistent with PWSRCAC's mission, as well as our mandates under OPA 90 and the contract with Alyeska. This project is necessary to ensure that PWSRCAC can provide technical advice and recommendations related to the VMT Title V air quality permit, as well as provide advice related to the operation and maintenance of facilities to help mitigate and eliminate sources of air pollution at the VMT which may pose adverse environmental and health impacts.

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

4. **Summary of policy, issues, support, or opposition:**

Tank Vent Damage Monitoring: PWSRCAC submitted two Public Records Requests on July 27, 2023, and August 31, 2023, requesting information related to the tank vent damage emissions. Included among the documents received was a letter detailing that the Alaska Department of Environmental Conservation issued a Notice of Violation to Alyeska on May 3, 2022, for three separate incidents, with two incidents carrying twelve counts of violation.

Air Quality: The VMT Title V Air Quality Permit was originally slated to be released for public comment on June 16, 2023, but as communicated to Council staff by ADEC Air Quality, that date has been delayed and no release date has been made available at this time. The Council transmitted a letter to ADEC and EPA in August 2023, requesting an updated timeline on when the Title V Air Quality Permit would be released for public comment, an update on the status of ADEC's Notice of Violation Investigation regarding the tank vent damage upset, and any information on emissions estimates from the upset, if those estimates exist. On October 6, 2023, ADEC Air Quality responded to the Council's letter, noting that no timeline was available for the release of the permit for public comment, and its release was contingent on Alyeska's current appeal of EPA NESHAP-OLD provisions. ADEC confirmed the investigation into the tank vent damage incident was ongoing and no emission estimates are available at this time.

Preparations to on board an air quality contractor for tank vent damage emission estimates, Title V Air Quality permit preparation, and NESHAP-OLD provisions are ongoing, and Ron Sahu, PhD, was selected as the recommended contractor.

5. **Committee Recommendation:** At their January 5, 2024 meeting, the Terminal Operations and Environmental Monitoring Committee recommended that the Board approve funding in an amount not to exceed $50,000 for selected contractor, Ron Sahu, PhD, to conduct work related to the VMT Title V Air Quality Permit Review and associated air quality issues.

6. **Relationship to LRP and Budget:** Project 5570 – Valdez Air Quality would be added to the FY2024 budget in the amount of $50,000, assuming that item 4-2 Approval of FY2025 Budget Modifications is approved by the Board on the January 25, 2024 agenda.

7. **Action Requested of the Board of Directors:** Authorize a contract with Ron Sahu, PhD, in an amount not to exceed $50,000 to conduct work related to VMT Title V air quality permit review and associated air quality issues under project 5570 - Valdez Air Quality.

Note: This action is contingent upon Board approval of the budget modification for project 5570 - Air Quality, as included under item 4-2, for this work.

8. **Alternatives:** None.

9. **Attachments:** None.

Back to Agenda

Approval of FY24 Contract with Taku Engineering for Engineering Support 3-2

Consent Agenda Briefing for PWSRCAC Board of Directors – January 2024

ACTION ITEM

Sponsor: Sadie Blancaflor and the TOEM Committee

Project number and name or topic: 5000 - Terminal Operations and Environmental Monitoring Program

1. **Description of agenda item:** The Board is being asked to approve a contract increase with Taku Engineering in the amount of $21,720 for a not to exceed total contract amount of $46,720. Work under this program includes tank maintenance review, as well as follow-up work related to the tank vent damage upset from February and March 2022. This contract increase is for Taku to (1) provide engineering support for an assessment of the oxygen content of the head spaces of the Valdez Marine Terminal (VMT) crude oil storage tanks during the tank vent damage incident that occurred in 2022, (2) review and prepare their oxygen concentration calculations such that they can be shared with Alyeska in response to Alyeska's request, and (3) meet with Alyeska to review system operating parameters and assumptions made for the calculations. The additional funds being requested for this work are solely to respond to Alyeska's request for additional information.

2. **Why is this item important to PWSRCAC:** This scope of work will enable a response to Alyeska's October 25, 2023 letter requesting additional information related to Taku Engineering's July 2023 report, "Crude Oil Storage Tank Vent Snow Damage" (Alyeska letter as Attachment A). PWSRCAC transmitted a response letter to Alyeska on November 3, 2023 (Attachment B), offering a meeting with Taku Engineering to discuss their calculations within the report. This funding would support that meeting, including the preparatory work to be conducted before it occurs.

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

Meeting	Date	Action
XCOM	9/14/23	Accepted the technical memorandum titled, "Crude Oil Storage Tank Vent Snow Damage," by Taku Engineering, dated July 2023, with direction for staff to forward the memo to Alyeska and state and federal regulators accompanied by a cover letter summarizing findings and recommendations with requests for appropriate action and a complete response.
Board	11/21/2023	Authorized a $14,000 budget modification for travel and engineering support.

4. **Summary of policy, issues, support, or opposition:** On September 20, 2022, PWSRCAC staff and contractor Bill Mott of Taku met with Alyeska representatives to discuss the tank vent damage oxygen excursion and Taku's associated analysis. Data and information was requested from Alyeska related to the oxygen excursion that was intended to better understand how the system had been operating during the incident, and to determine if refinements in the assumptions used in Taku's model were warranted. This information was not provided by Alyeska, but some of the information was received through a public records request to the Alaska Occupational Safety and Health (AKOSH) who received the documents from Alyeska. On October 12, 2023, PWSRCAC transmitted Taku Engineering's "Crude Oil Storage Tank Vent Snow Damage" report (dated July 2023) to Alyeska, which outlined several concerns regarding the lower explosive limit of tank headspaces when several vents were

sheared off last winter. Prior to being accepted as final at the September 14, 2023 Executive Committee meeting, the report was shared with Alyeska for their review with the opportunity to provide feedback. No feedback was provided at that time.

The Council received a response from Alyeska on October 25, 2023, requesting additional information on Taku Engineering's mass balance calculations and reasoning behind the lack of gaseous mixing in the headspace.

The Council prepared and transmitted a letter in response on November 3, 2023, offering a meeting with Taku Engineering to present their calculations, and reiterating the Council's ongoing requests for additional information to both compare Taku's results with those of Alyeska's engineers' and further refine the model. In the letter, PWSRCAC explained that providing the model, calculations, and references used by Taku to support their findings and discussions in the report was not part of the original scope of work, and that PWSRCAC is not in possession of the information being requested. The requested action to increase the contract with Taku is necessary in order for Taku to review and prepare the oxygen concentration calculations such that they can be shared with Alyeska.

5. **Committee Recommendation:** The Terminal Operations and Environmental Monitoring Committee reviewed this work, and recommends the Board approve the contract increase to allow Taku Engineering to (1) provide engineering support for an assessment of the oxygen content of the head spaces of the VMT crude tanks during the tank vent damage incident that occurred in February and March of 2022, (2) review and prepare their oxygen concentration calculations such that they can be provided to Alyeska, and (3) meet with Alyeska to review system operating parameters and assumptions made for the calculations, in an amount not to exceed $21,720.

6. **Relationship to LRP and Budget:** Program 5000 – Terminal Operations is in the approved FY2024 budget and annual plan.

5000 – Terminal Operations Program

As of December 19, 2023

Original Budget	$13,640
Revised Budget	$27,640
Actual & Commitments	$11,730
Amount Remaining	$15,909

7. **Action Requested of the Board of Directors:** Authorize a contract increase with Taku Engineering in the amount of $21,720, for a new not to exceed total of $46,720, to provide engineering support related to Alyeska’s request for information on the oxygen content of the head spaces of the VMT crude oil storage tanks.

Note: This action is contingent upon Board approval of the budget modification for 5000 - Terminal Operations Program, as included under item 4-2, for this work.

Approval of FY24 Contract with Taku Engineering for Engineering Support 3-2

8. **Alternatives:** Alternatively, the Board can choose to not fund this contract increase and associated scope of work.

9. **Attachments:**

A) October 25, 2023 letter from Alyeska to PWSRCAC requesting additional information regarding the PWSRCAC Transmittal of "Crude Oil Storage Tank Vent Snow Damage" Report.

B) November 3, 2023 letter from PWSRCAC to Alyeska responding to their request for information regarding the "Crude Oil Storage Tank Vent Snow Damage Report".

Back to Age

Alyeska pipeline SERVICE COMPANY

P.O Box 196660 ANCHORAGE, ALASKA 99519-6660 TELEPHONE (907) 787-8700

October 25, 2023

Letter No. 53119
File 7.14.02

Donna Schantz
Executive Director
Prince William Sound Regional Citizens' Advisory Council
130 S. Meals, Ste. 202
Valdez, AK 99686

Subject: **Request for additional information regarding the PWSRCAC Transmittal of Crude Oil Storage Tank Vent Snow Damage Report**

Dear Ms. Schantz,

We have received the Prince William Sound Regional Citizens' Advisory Council report titled "Crude Oil Storage Tank Vent Snow Damage." We appreciate the opportunity to review the report and related recommendations. In order to review the findings, we request the following information:

1) For the mass balance performed for O2 in the vapor system:
   - Basis of calculations
   - Data input utilized
   - Calculation details
   - Any other assumptions utilized
   - LOC (lower oxygen concentration) for combustion utilized or assumed

2) Basis of assumption of the general stratification or lack of general mixing in the gaseous headspace

Thank you, in advance, for providing the information requested and for sharing our commitment to the safe and environmentally responsible operation of the Valdez Marine Terminal.

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,

Andres Morales
Emergency Preparedness and Response Director
Alyeska Pipeline Service Company

Protected Document. Refer to Alyeska Data Access and Classification Policy, LEGAL-DPOL-001.

Back to Age

cc:
M. Day
A. Morales
M. Parsons
K. VanWingerden
T. Marchesani
L. Vorachek
A. Sweet

Protected Document. Refer to Alyeska Data Access and Classification Policy, LEGAL-DPOL-001.

PRINCE WILLIAM SOUND RCAC REGIONAL CITIZENS' ADVISORY COUNCIL

www.pwsrcac.org

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

Members:

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
Community of Chenega
Community of Tatitlek
Cordova District Fishermen United
Kenai Peninsula Borough
Kodiak Island Borough
Kodiak Village Mayors Association
Oil Spill Region Environmental Coalition
Port Graham Corporation
Prince William Sound Aquaculture Corporation

Anchorage
3709 Spenard Rd, Ste 100
Anchorage, AK 99503
O: (907) 277-7222
(800) 478-7221

Valdez
P.O. Box 3089
130 S. Meals, Ste 202
Valdez, AK 99686
O: (907) 834-5000
(877) 478-7221

November 3, 2023

Mr. Andres Morales
Alyeska Pipeline Service Company
PO BOX 300
Valdez, Alaska 99686

SUBJECT: Alyeska Pipeline Service Company's Request for Additional Information Regarding the PWSRCAC Transmittal of Crude Oil Storage Tank Vent Snow Damage Report

Dear Mr. Morales,

This letter is in response to Alyeska Pipeline Service Company's (Alyeska) request dated October 25, 2023, for additional information related to Taku Engineering's (Taku) June 2023 report titled "Crude Oil Storage Tank Vent Snow Damage Report." The additional information requested relates to the mass balance performed for oxygen in the vapor system, and the basis of the report's assumption of the general stratification, or lack of general mixing, in the gaseous headspace.

As you may recall, staff from the Prince William Sound Regional Citizens' Advisory Council (PWSRCAC or Council) and contractor Bill Mott of Taku met with Alyeska representatives on September 20, 2022, to discuss the tank vent damage oxygen excursion and Taku's associated analysis. Alyeska attendees included yourself, Weston Branshaw, Joe Howell, Lindsey Vorachek, Jessica Hannan, Klint VanWingerden, and Mike Drew. At that meeting, PWSRCAC and Taku explained the rationale behind better understanding and defining the oxygen content in the tanks related to the March 2022 snow damage incident.

This meeting followed an initial information request to Alyeska dated April 19, 2022. In that communication, PWSRCAC requested data and information related to the oxygen excursion. The requested information was intended to better understand how the system had been operated during the incident, and to determine if refinements in the assumptions used in Taku's model are warranted. On August 22, 2022, PWSRCAC also requested information related to the Tank Vent Damage repair plan, procedures, and schedule. Additionally, on October 7, 2022, PWSRCAC requested information related to the tank vent damage timeline, management action plan, and investigation report.

Some of this information was received in a June 2022 public records request from Alaska Occupational Safety and Health (AKOSH), who received some of the associated documents from Alyeska. Subsequently, AKOSH shared these documents with PWSRCAC in July 2022. This transmitted information included the management action plan, the VMT East Tank Farm Work Orders, and the VMT Power Vapor Control Room Logs from February/March 2022. With these exceptions, all requests made to Alyeska for additional information on the tank vent damage incident remain outstanding.

PWSRCAC understands, based on previous discussions during our monthly communications meetings, that Alyeska is restricted from providing the bulk of the requested information based on internal Alyeska legal directive and requirements from regulatory agencies related to ongoing investigations they are conducting into the Valdez Marine Terminal East Tank Farm vent damage incident. However, the information requested to refine Taku's model and analysis is directly related to the questions and information requests included in your letter dated October 25, 2023. Due to the lack of information from Alyeska, Taku indicates in the report that the conclusions are drawn using the "limited data available to complete a mass balance" (page 6).

Providing the model, calculations, and references used by Taku to support their findings and discussions in the report was not part of the original scope of work for this effort, and therefore PWSRCAC is not currently in possession of the information being requested. PWSRCAC is in the process of expanding the original contract with Taku in order to accommodate Alyeska's information request. Taku has requested a meeting with Alyeska's technical team to explain the calculations before sharing this information. Due to scheduling conflicts, the earliest availability Taku has to meet with Alyeska to review this information is mid-December 2023.

PWSRCAC also notes that if the initial information requested had been provided, Taku would have been able to further refine the model initially discussed in September of 2022, and subsequently used to draw the conclusions in the report. PWSRCAC also requested Alyeska's investigation report on October 7, 2022, based on information received that this report has been completed. This report has not yet been shared with the Council to date. We would expect that an investigation would include an assessment to determine the actual tank headspace conditions during the upset. As such, PWSRCAC again requests access to Alyeska's investigation report to allow Taku to compare results and better refine their model.

Given that Alyeska has access to the full scope of information needed for a refined model of the oxygen content in the crude oil storage tank headspaces, PWSRCAC requests both access to all outstanding information requested related to the tank vent damage incident and Alyeska's report before providing Taku's model and calculations. Adjustments to the model, and the report recommendations and findings, would be made accordingly, if this information is provided and the data supports changes.

PWSRCAC thanks Alyeska for reviewing the report and associated recommendations and looks forward to continued dialogue regarding the information requests and calculations contained within the Crude Oil Storage Tank Vent Snow Damage Report. Please let us know how you would like to proceed, either scheduling a meeting mid-December, or providing the information needed so that the model and report can be refined appropriately.

Sincerely,

Donna Schantz

Donna Schantz
Executive Director

Cc: Arlene Lamont, OSHA
Cathy Munoz, ADOL
William "Dale" Williamson, ADOL
Krista Childers, ADOL
Krishna Viswanathan, EPA

Geoffrey Glass, EPA
Jason Olds, ADEC
Dylan Morrison, ADEC
Jim Plosay, ADEC
Mike Day, Alyeska
Martin Parsons, Alyeska
Klint VanWingerden, Alyeska
Thomas Marchesani, Alyeska
Lindsey Vorachek, Alyeska
Alyssa Sweet, Alyeska

Briefing for PWSRCAC Board of Directors – January 2024

ACTION ITEM

Sponsor: Danielle Verna and the Scientific Advisory Committee

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

1. **Description of agenda item:** The Board is being asked to accept the report titled "Long-Term Environmental Monitoring Program 2022–2023 Summary Report" and the accompanying 2022–2023 Technical Supplement by Dr. Morgan Bender of Owl Ridge Natural Resource Consultants, Inc., both dated December 2023. The report and technical supplement provide data and results from the 2022 and 2023 sampling excursions in Port Valdez and Prince William Sound for the Council's Long-Term Environmental Monitoring Program (LTEMP), now in its 30th year.

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

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

Meeting	Date	Action
Board	5/2/2019	The Board authorized contract negotiations with Payne Environmental Consultants for sampling and analytical report work on mussels and sediments to be performed under LTEMP for FY20, at an amount not to exceed $65,866; and authorized contract negotiations with Newfields Environmental Forensics Practice for analytical laboratory work and sample storage to be performed under LTEMP for FY20 at an amount not to exceed $28,506. Authorized contract negotiations with Oregon State University for passive sample device purchase and analytical laboratory work on passive sampling devices to be performed under LTEMP for FY20, at an amount not to exceed $20,590; and authorized contract work to commence prior to the start of FY20, as approximately $20,000 of these funds will need to be expended in May and June 2019 because of the supply prerequisites and sampling timing.
Board	9/19/2019	The Board accepted the report titled "Long Term Environmental Monitoring Program: 2018 Sampling Results and Interpretations" by Dr. James R. Payne and William B. Driskell, dated July 2019 as meeting the terms of the contract and for distribution to the public.

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

purchasing needs. It is estimated that up to $15,000 of the above contract work may be performed before June 30, 2023.

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

5. **Committee Recommendation:** The Scientific Advisory Committee has reviewed the report and technical supplement, and recommended the Board accept the material as final, at its meeting on December 5, 2023.

6. **Relationship to LRP and Budget:** Project 951 / Long Term Environmental Monitoring Program is in the approved FY2024 budget and annual work plan.

9510 – Long Term Environmental Monitoring

As of December 19, 2023

Original Budget	$173,636.79
Revised Budget	$157,372.79
Actual & Commitments	$133,054.90
Amount Remaining	$24,318.89

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

8. **Alternatives:** None.

9. **Attachments:**
A) “Long-Term Environmental Monitoring Program 2022–2023 Summary Report”
B) “Long-Term Environmental Monitoring Program 2022–2023 Technical Supplement”

Back to Agenda

Final

Long-Term Environmental

Monitoring Program

2022–2023 Summary Report

December 2023

Prepared for:
Prince William Sound Regional Citizens' Advisory Council
3709 Spenard Road, Suite 100
Anchorage, Alaska 99503

Prepared by:
Morgan L. Bender, Ph.D.
Owl Ridge Natural Resource Consultants, Inc.
4060 B Street, Suite 200
Anchorage, Alaska 99503
T: 907.344.3448
www.owlridgenrc.com

"The opinions expressed in this PWSRCAC commissioned report are not necessarily those of PWSRCAC. PWSRCAC Contract #951.24.04."

Document Number: PWS002-23-001F0

TABLE OF CONTENTS

Table of Contents i

Acronyms and Abbreviations i

Abstract i

1. Introduction 1

2. Results and Discussion 3

2.1. Sediments 4

2.1.1. Ecotoxicological Interpretation 7

2.1.2. Site-Specific Source Identification 8

2.1.3. Historical Perspective 8

2.2. Pacific Blue Mussels 9

2.2.1. Ecotoxicological Interpretations 13

2.2.2. Site-Specific Source Identification 13

2.2.3. Historical Perspective 14

2.3. Water sampled via Passive Sampling Devices 15

2.3.1. Ecotoxicological Interpretations 16

2.3.2. Site-Specific Source Identification 17

2.3.3. Historical Perspective 17

2.4. Holistic Interpretation 18

3. Future Perspective 20

4. Conclusion 22

5. References 23

ACRONYMS AND ABBREVIATIONS

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

ABSTRACT

To understand the environmental impact, fate, and source of hydrocarbons related to the operations of Alyeska Pipeline Service Company's Valdez Marine Terminal, hydrocarbon concentrations were monitored in sediments, in intertidal Pacific blue mussels, and in the water via passive sampling devices. In the 2022 and 2023 results, we see low levels of petroleum (petrogenic) hydrocarbons in sediments at the terminal that can be attributed to terminal operations. Passive water sampling devices and Pacific blue mussels from all sampled locations had low levels of toxic hydrocarbons. Sediment and mussels sampled from sites away from the terminal in Port Valdez contained more combustion (pyrogenic) related compounds than detected at the terminal. In 2022, mussels from the Valdez Small Boat Harbor had the highest levels of hydrocarbons, likely due to frequent small spills and heavy human activity not forensically attributed to terminal operations. In 2023, higher polycyclic aromatic hydrocarbons (PAH) levels were found in some mussel samples at Knowles Head in northeastern Prince William Sound than those in the harbor. Other mussel sites sampled in 2023 as part of the expanded sampling regime included Disk Island, Zaikof Bay, a new site in outer Zaikof Bay, Sleepy Bay, and Sheep Bay. Generally, the expanded sampling sites had comparable PAH levels to annual sampling sites (e.g., Gold Creek and sites near the terminal) with low potential hydrocarbon ecotoxicity for organisms.

In 2022 and 2023, the hydrocarbons detected by the Long-Term Environmental Monitoring Program sampling, and determined to be from the terminal and tankers, posed low potential ecotoxicological risk. Since 1993, hydrocarbon concentrations are generally low with localized spikes corresponding with spill events like the April 2020 oil spill at the terminal. Following an all-time low in the mid-2010s, hydrocarbon concentrations detected in sediments and mussels have slowly increased across all sites but are still below any threshold for adverse effects on aquatic life. Prince William Sound-wide trends in these hydrocarbon concentrations may be influenced by environmental factors such as increased freshwater input, glacial melt, and warming ocean temperatures. We recommend that future monitoring efforts maintain the current three-matrix design and attempt to preserve, economize, and modernize aspects of Prince William Sound Regional Citizens' Advisory Council's Long-Term Environmental Monitoring Program.

1. INTRODUCTION

The Long-Term Environmental Monitoring Program (LTEMP), managed by the Prince William Sound Regional Citizens' Advisory Council (PWSRCAC), is in its 30th year of monitoring hydrocarbons in the wake of the Exxon Valdez oil spill. Through LTEMP, we are able to determine the source of hydrocarbons and the potential adverse effects on the ecosystem from Alyeska Pipeline Service Company's Valdez Marine Terminal (terminal) and tanker activity. These data have been insightful in understanding the influence of terminal and non-terminal sources of hydrocarbons and environmental factors on hydrocarbon dynamics across Prince William Sound and the Gulf of Alaska.

Hydrocarbons are an extremely diverse group of compounds that make up the bulk of petroleum products like crude oil, fuel, and various maritime products like hydraulic and motor oil. However, hydrocarbons are also readily created by marine and terrestrial plants, locked up in organic sediments and rocks, and produced by combustion. Hydrocarbons in the environment undergo processes called weathering, which includes dissolution, evaporation, ultraviolet (UV) degradation, and microbial degradation. These change the physical and chemical properties of the released oil. Polycyclic aromatic hydrocarbons (PAHs) are a group of hydrocarbons in oil with varying numbers of benzene rings that are relatively resistant to degradation and toxic to living organisms. This group of chemicals tends to adsorb rapidly on suspended materials and sediments, and accumulate in biological tissues once released into the marine environment.

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

While many aquatic organisms like fish can metabolize PAHs, marine invertebrates, such as Pacific blue mussels, are less able to efficiently metabolize these compounds, remain sedentary in a fixed location, filter particles from their immediate surroundings, and therefore serve as efficient natural samplers and indicators of overall environmental PAH exposure (Neff and Burns 1996). Toxic responses to PAHs in aquatic organisms include inhibiting reproduction, developmental effects, tissue damage, cellular stress, oxidative stress, damage to genetic material, and mortality. While the body of knowledge on the adverse effects of petroleum exposure is immense, specifics regarding PAH mixtures, exposure routes, duration and magnitude, species and life stages exposed, and other

environmental factors that may act synergistically on organisms, challenge the predictive ability of any hydrocarbon study and necessitate the continued monitoring efforts of LTEMP.

The ubiquity of hydrocarbons in the environment complicates tracing sources, understanding ecotoxic thresholds, and following dynamics over time and space. Environmental samples, like sediments, can accumulate multiple hydrocarbon sources over time, resulting in a mixed or unresolved profile. Organisms such as blue mussels can accumulate, eliminate, or alter hydrocarbon compounds, which complicates the task of identifying the sources. Passive sampling devices are specifically designed to complement the biological and toxicological interpretations by measuring just the dissolved compounds available to aquatic organisms (the bioavailable fraction) but are not well suited for hydrocarbon forensics. Sources investigated for the present study are those associated with terminal operations, including Alaska North Slope (ANS) crude oil (which is pumped through the trans-Alaska pipeline and is loaded into tankers at the terminal), effluent from the Ballast Water Treatment Facility (BWTF) at the terminal, and samples from recent spills at the terminal.

The following study presents the 2022 and 2023 results from the LTEMP and aims to determine:

- The extent, if any, that the terminal and associated tankers' hydrocarbon fingerprint is present in 2022 and 2023 samples with varying ranges from the terminal.
- The potential ecotoxicological risk posed by the measured hydrocarbon contribution from the terminal and tankers.
- The historical trends, ecotoxicological risk, and hydrocarbon fingerprint from mussels collected from extended sampling sites across greater Prince William Sound in 2023.
- Other factors (e.g., environmental or anthropogenic) that may be influencing hydrocarbon presence and composition in 2022 and 2023 samples, and the ecotoxicological relevance of these results.
- Recommendations for future monitoring of petroleum hydrocarbons at the terminal and in Prince William Sound.

2. RESULTS AND DISCUSSION

Sediment, passive sampling device, and Pacific blue mussel tissue samples were collected in June of 2022 and 2023 from annual and quinquennial expanded sampling at LTEMP monitoring stations in Port Valdez and greater Prince William Sound. The sampling program investigated three matrices: sediment, Pacific blue mussels, and water quality. For 2022 and 2023 sediments were sampled at two sites –Alyeska's Valdez Marine Terminal and Gold Creek (Figure 1). In 2022, Pacific blue mussel samples were taken from four sites around the Port of Valdez with a focus on the terminal – Saw Island, Jackson Point, Gold Creek, and Valdez Small Boat Harbor entrance (RED - a site that is chemically different from the ANS terminal source signature and currently acts as a high human use, non-ANS reference site). In 2023, mussels were collected from the four standard sites in Port Valdez in addition to the quinquennial expanded sampling sites of Knowles Head, Disk Island, Zaikof Bay, a new station in outer Zaikof Bay, Sleepy Bay, and Sheep Bay. Three Gulf of Alaska stations (i.e., Aialik Bay, Windy Bay, and Shuyak Harbor) planned to be included in the five-year survey will instead be sampled in 2024 due to weather preventing sampling in 2023. Water was sampled with passive sampling devices at three sites in 2022 — Gold Creek, Jackson Point, and Saw Island. In 2023 passive sampling devices were again deployed at Gold Creek, Jackson Point, and Saw Island, and additional devices were deployed at Knowles Head and Disk Island; the Knowles Head devices could not be relocated due to a severed line and were not retrieved.

Samples were analyzed for PAHs, saturated hydrocarbons, and geochemical petroleum biomarkers using advanced analytical techniques at the NewFields (2022) and Alpha Analytical Laboratory (2023) in Mansfield, Massachusetts (sediments and tissues), and the Oregon State University Food Safety and Environmental Stewardship lab in Corvallis, Oregon (passive sampler, PAHs only). These are the same laboratories that have participated in the LTEMP effort for the last eight years. Briefly, the results continue to be of acceptable precision and accuracy and can be compared to previous years' data. Physical characteristics of sediments were also reported in laboratory results though not presented herein.

Many compounds, especially in the mussel tissues, were below or near the analytical methods detection limit or were not detected in the sample. Sediment and mussel tissue concentrations are plotted and discussed as a sum of multiple PAHs (sum PAH) either by dry weight or wet weight where appropriate. Passive sampling device concentrations have been converted by the analytical lab into the dissolved-phase water concentration, C-free concentration. By converting the concentration units, comparisons can be made across other studies, areas, and ecotoxicological effect thresholds. Concentrations below the method level of detection threshold were provided by the lab as an estimate. These estimated concentrations were plotted on PAH profile figures and included in sum calculations; compounds that were not detected in a sample or were biased by laboratory issues were not included in the sum calculations. Forensic interpretation was done using analyte profile pattern comparisons for likely petroleum sources (i.e., ANS crude, a sample of the April 2020 oil spill at the terminal, and a spring 2017 effluent sample from the BWTF) for PAH, geochemical petroleum biomarkers, and saturated hydrocarbons in sediment sample. Blue mussels

and passive sampling devices tentative forensic assertions were made by qualitative ratios of parent to alkylated compounds and low and high molecular weight PAH compounds. Analytical results and calculations for all samples and all analytes, pattern profiles, forensic ratios, and laboratory blanks are presented in the Technical Summary (Owl Ridge 2023) to support the assertions made in this summary report.

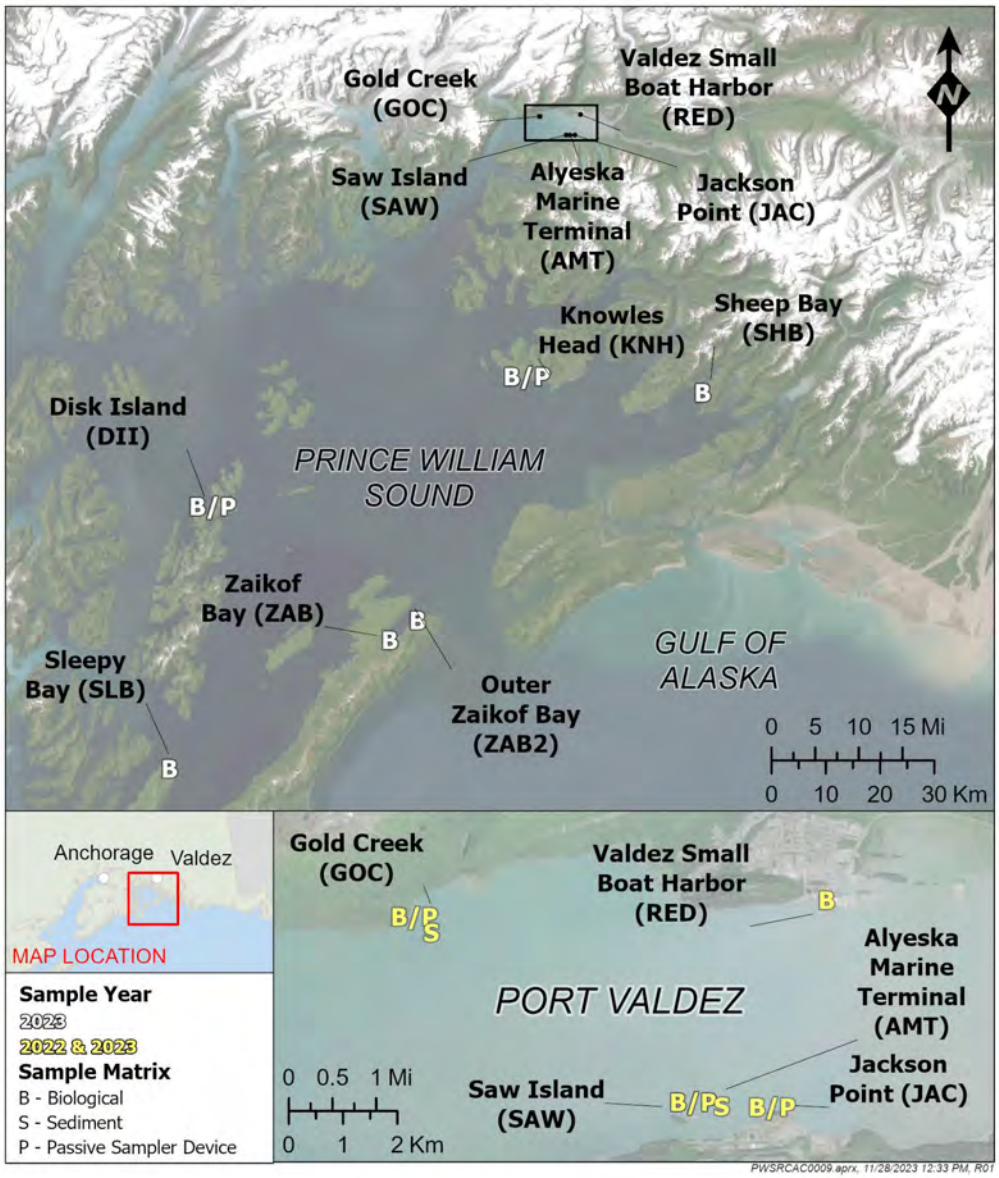


Figure 1. Map of 2022 and 2023 LTEMP sites for sediment (S), Pacific blue mussels (B), and passive sampling devices (P).

2.1. Sediments

Hydrocarbons were detected in all sediments sampled at the terminal and Gold Creek sites in the low parts per billion range (ppb or ng/g). One (1) ng/g or 1 ppb can be visualized as the concentration of 50 drops in an Olympic-sized swimming pool. In 2022, the highest sum (∑) PAH

concentrations were found in the Gold Creek sediment (17.6±22.0 ng/g dry weight), while in 2023 the highest concentrations were found in the terminal sediments (41.1±5.7 ng/g dry weight) (Figure 2 and Figure 3). Naphthalenes and alkylated fluorenes, phenanthrenes, fluoranthenes/pyrenes, and chrysenes made up the bulk of PAHs at Gold Creek in 2022 and 2023 (see Figure 4 for 2023 results). At the terminal, similar compounds made up the bulk of detectable PAHs for both years but with great contribution from naphthobenzothiophenes. For comparison, PAH concentrations across both Port Valdez sites are lower than those reported in Norwegian fjords, Novia Scotia small boat harbors, and the Baltic Sea (Oen et al. 2006; Davis et al. 2018; Pikkarainen 2010). Present Port Valdez concentrations were more similar to those reported from sediments of Cook Inlet and St. Paul Island, Alaska (Nesvacil et al. 2016).

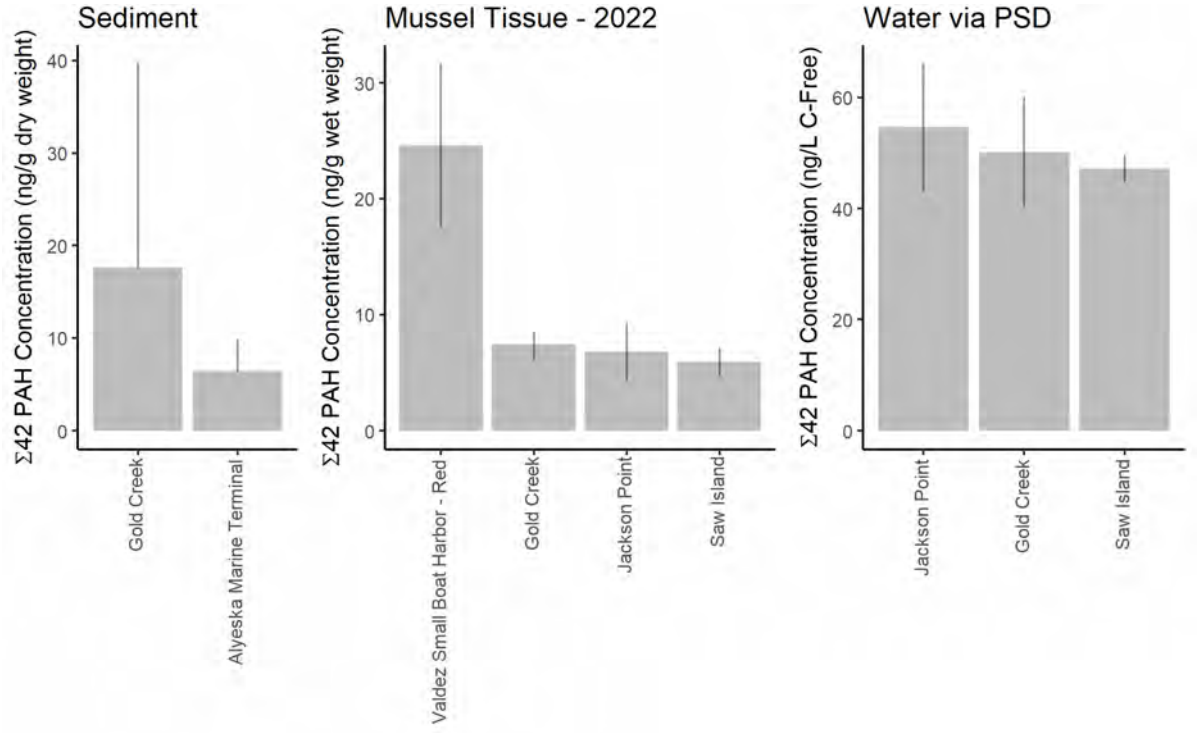


Figure 2. ∑ PAH concentrations for 2022 sediments, Pacific blue mussel tissues, and water sampled via passive sampling devices by site plotted at the mean ± 1 standard deviation. Due to large deviation between replicate samples, standard deviation was plotted only in the positive direction for sediment samples. Note difference in units between matrices (i.e., parts per billion for sediments and mussel tissues and parts per trillion for passive sampling devices).

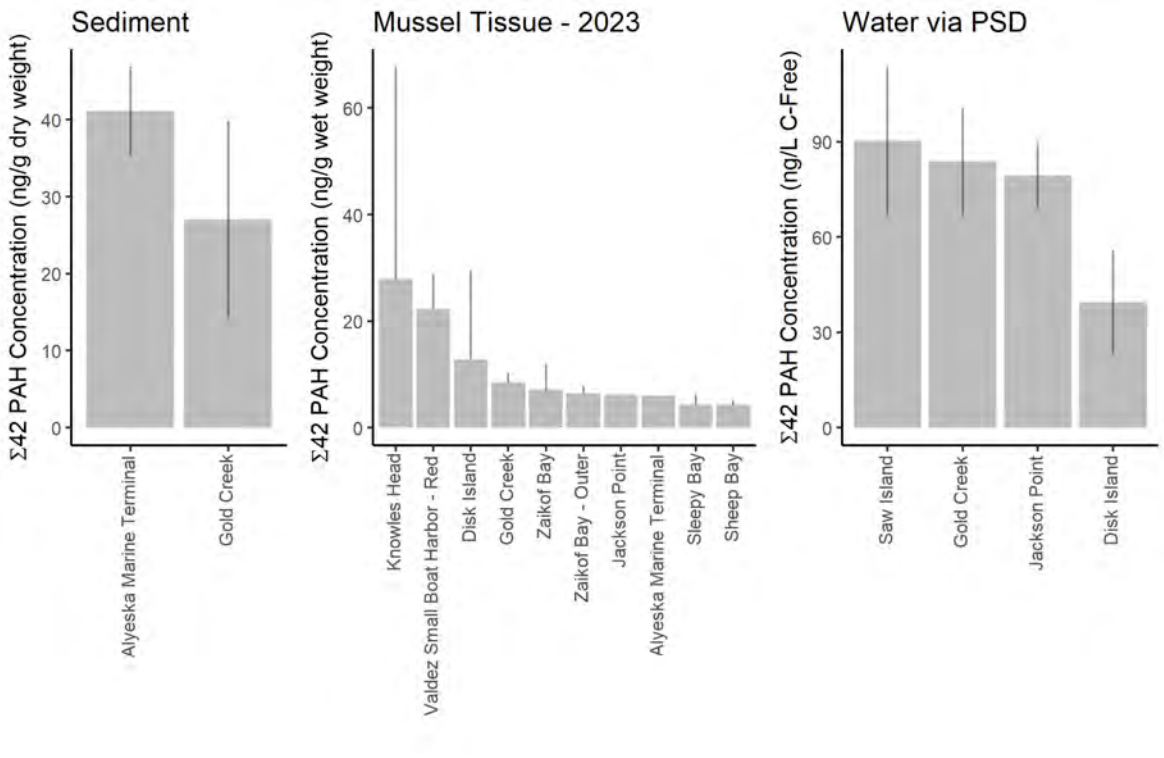


Figure 3. ∑ PAH concentrations for 2023 sediments, Pacific blue mussel tissues, and water sampled via passive sampling devices by site plotted at the mean ± 1 standard deviation. Due to a large deviation between replicate samples, standard deviation was plotted only in the positive direction for mussel samples. Note difference in units between matrices (i.e., parts per billion for sediments and mussel tissues and parts per trillion for passive sampling devices).

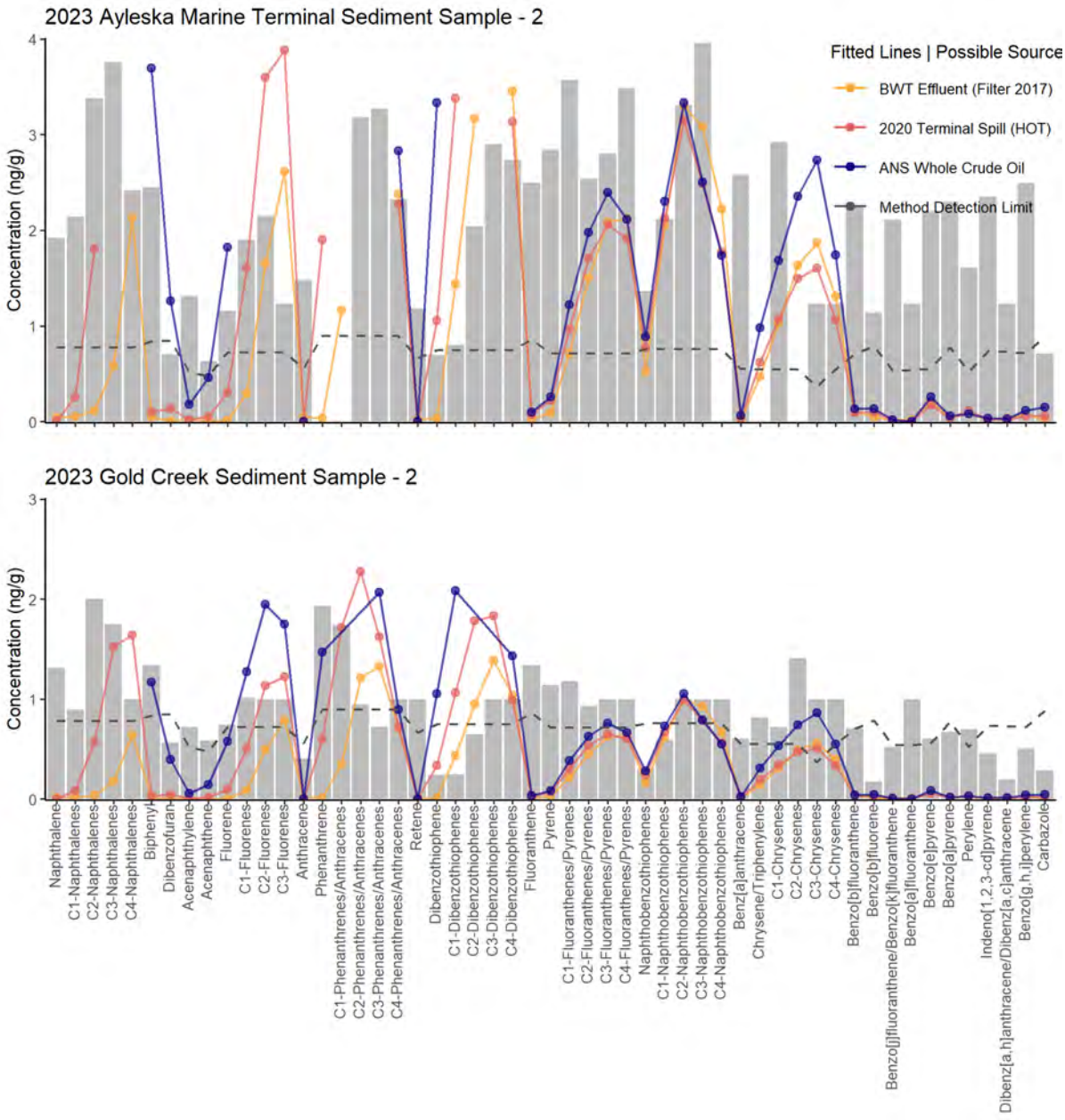


Figure 4. 2023 PAH profiles from sediments sampled at the terminal and Gold Creek site. Each plot displays a representative sample from the three replicates analyzed (note difference in y-axis scale). Possible Alaska North Slope Crude related source profiles are super imposed as different colored lines. A dashed, dark line indicated the analyte specific method detection limit.

2.1.1. Ecotoxicological Interpretation

In 2022 and 2023, individual and ∑ PAH concentrations in sediment at the terminal and Gold Creek sites pose little to no acute or chronic risk for marine organisms with concentrations of individual compounds and sums 1% or less than the U.S. Environmental Protection Agency (EPA) sediment quality PAH benchmarks for aquatic life (EPA 2016). While benthic communities adapted to the cold and sediment-rich waters of Port Valdez may not be adequately represented in these EPA

benchmarks, past monitoring efforts around the terminal have indicated little to no change in the benthic community with varying PAH concentrations (Shaw and Blanchard 2021). The total organic carbon concentration in the sediment is low (0.4–0.6%), which indicates higher bioavailability of PAHs to marine organisms. High molecular weight PAHs are detected in sediments but concentrations of this group do not exceed any protective benchmarks nor are these compounds generally present in oil. Known carcinogenic PAHs are present in low concentrations at both sites.

2.1.2. Site-Specific Source Identification

Using PAH and biomarker profiles, the source of the hydrocarbons in the 2022 and 2023 terminal sediments is determined to be mostly petrogenic and derived from ANS crude oil. Biomarker patterns closely match those of previous oil spills at the terminal in 2017 and April 2020 (Payne and Driskell 2021) and particulate-phase oil in the effluent from the BWTF (Payne and Driskell 2018). The diagnostic biomarkers confirm ANS crude oil as the source. Two other patterns are also seen including a water-washing weathering of fluorenes and pyrogenic indicative phenanthrene/anthracene ratios. Accumulation of higher molecular weight alkylated PAHs, likely from local combustion sources, indicates residuals of prior PAH inputs inefficiently degraded over time, especially in 2023 samples. Saturated hydrocarbons in the terminal sediment reveal strong microbial degradation and weathering of the hydrocarbons leaving the higher molecular weight compounds (and in some cases, terrestrial plant wax compounds).

At Gold Creek, chemical biomarkers were sparse compared to those at the terminal, still petrogenic biomarker traces confirm the oil signal as a distant source. However, the PAH patterns are mixed petrogenic and pyrogenic. Gold Creek sediments are moderately weathered with a near complete loss of saturated hydrocarbons, except those contributed by terrestrial plants. In summary, relatively low hydrocarbon concentrations in the terminal sediments are linked to the terminal activities and incidents (BWTF effluent, spills, and combustion) with residues that have undergone environmental degradation and accumulated over time. Gold Creek sediments show mixed pyrogenic and lower petrogenic sources with a greater degree of weathering.

2.1.3. Historical Perspective

Hydrocarbon concentrations have varied widely throughout the LTEMP monitoring period from 1993 to the present (Figure 5). The highest sediment PAH concentrations were measured in the early 2000s at nearly 36 times the present concentrations. Since 2005, hydrocarbon concentrations have remained low with an all-time low seen in the mid-2010s. Since the low, a gradual increase in PAHs has been measured in sediments at the terminal and Gold Creek (Figure 5B). Terminal sediments have generally contained higher, more variable PAH loads than Gold Creek although considerable overlap in PAH concentration ranges between the two stations has persisted since 2008.

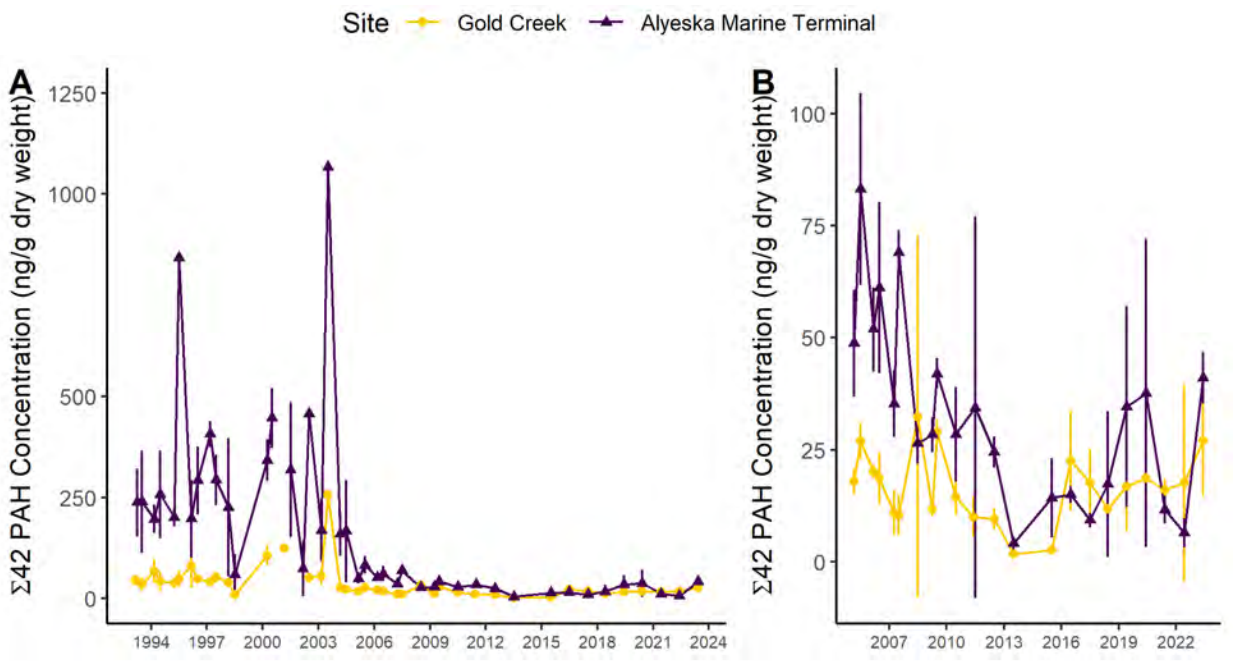


Figure 5. Sum 42 PAH concentrations in sediments (A) over the entire duration of the LTEMP and (B) since 2005 when concentrations have remained relatively low. Note the difference in scale. Colors and shapes indicate sampling site; mean values ± 1 standard deviation are plotted for each sampling event.

2.2. Pacific Blue Mussels

PAHs were detected in Pacific blue mussels (*Mytilus trossulus*) at low to moderate concentrations at all sites (Figure 2 and Figure 3). In 2022, the highest PAH concentrations were found at the Valdez Small Boat Harbor entrance, a non-ANS positive control site at the red harbor navigation light (range 18.4–32.2 ng/g wet weight; Figure 6). PAH concentrations in 2022 were similar at Gold Creek, Saw Island, and Jackson Point (range 4.7–9.5 ng/g wet weight). In 2023, mussels were collected from ten sites around the terminal, Port Valdez, and greater Prince William Sound (Figure 7). Samples were intended from the North Gulf coast of Alaska but these were not collected in 2023 due to inclement weather. The highest (and lowest) PAH levels were seen in mussels from Knowles Head in northeastern Prince William Sound (range 2.8–73.8 ng/g wet weight) although variability between replicates was high. Other relatively high PAH levels were found in mussels from the Valdez Small Boat Harbor and Disk Island.

Phenanthrene was the most abundant PAH at sites in 2022 except for the harbor where larger PAHs were more prevalent (Figure 6). In 2023, higher molecular weight PAHs were found in some replicates from Disk Island, Knowles Head, and the Valdez Small Boat Harbor, while Naphthalene and Phenanthrene were most prevalent at other Port Valdez sites, Sleepy Bay, and other Zaikof Bay sites.

The 2022 and 2023 mussel tissue PAH concentrations in Port Valdez are comparable to those found in relatively pristine locations in national parks and forests around southcentral and southeast Alaska and well below the high concentrations (>1000 ng/g dry weight (138 ng/g wet weight when using mean conversion factor from LTEMP mussel data)) found in the harbor at Skagway, Alaska

(Rider 2020). Only mussels from the Valdez Small Boat Harbor exceeded National Oceanic and Atmospheric Administration's (NOAA) national long-term monitoring status "Low Concentration" range (0–173 ng/g dry weight (0–24 ng/g wet weight)). Like the Valdez Small Boat Harbor location, fluoranthene was also the most abundant PAH in mussels in a Norwegian fjord with moderate human activity where sum PAH concentrations were otherwise comparable to this study (Schøyen et al. 2017). Mussel tissue PAH concentrations were comparable to those measured in pelagic zooplankton in Valdez Arm (Carls et al. 2006) and to mussels caged two kilometers or greater from an oil rig in the North Sea (Sundt et al. 2011).

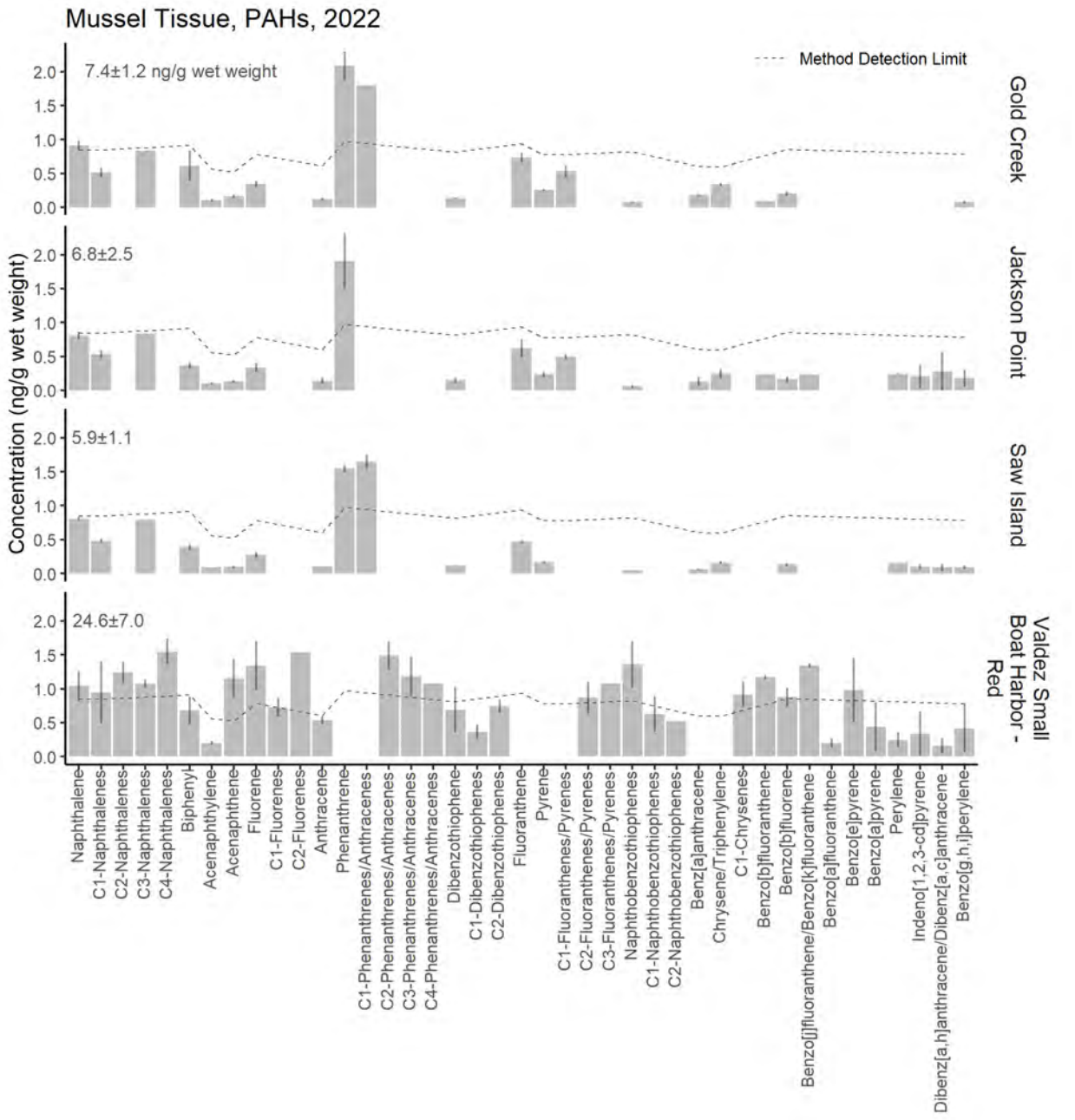


Figure 6. PAH profiles from Pacific blue mussels sampled at four sites in Port Valdez in 2022. Values represent mean ± 1 standard deviation and sum 42 PAH values are displayed in the upper left of each profile. The dashed line represents the PAH specific method detection limit.

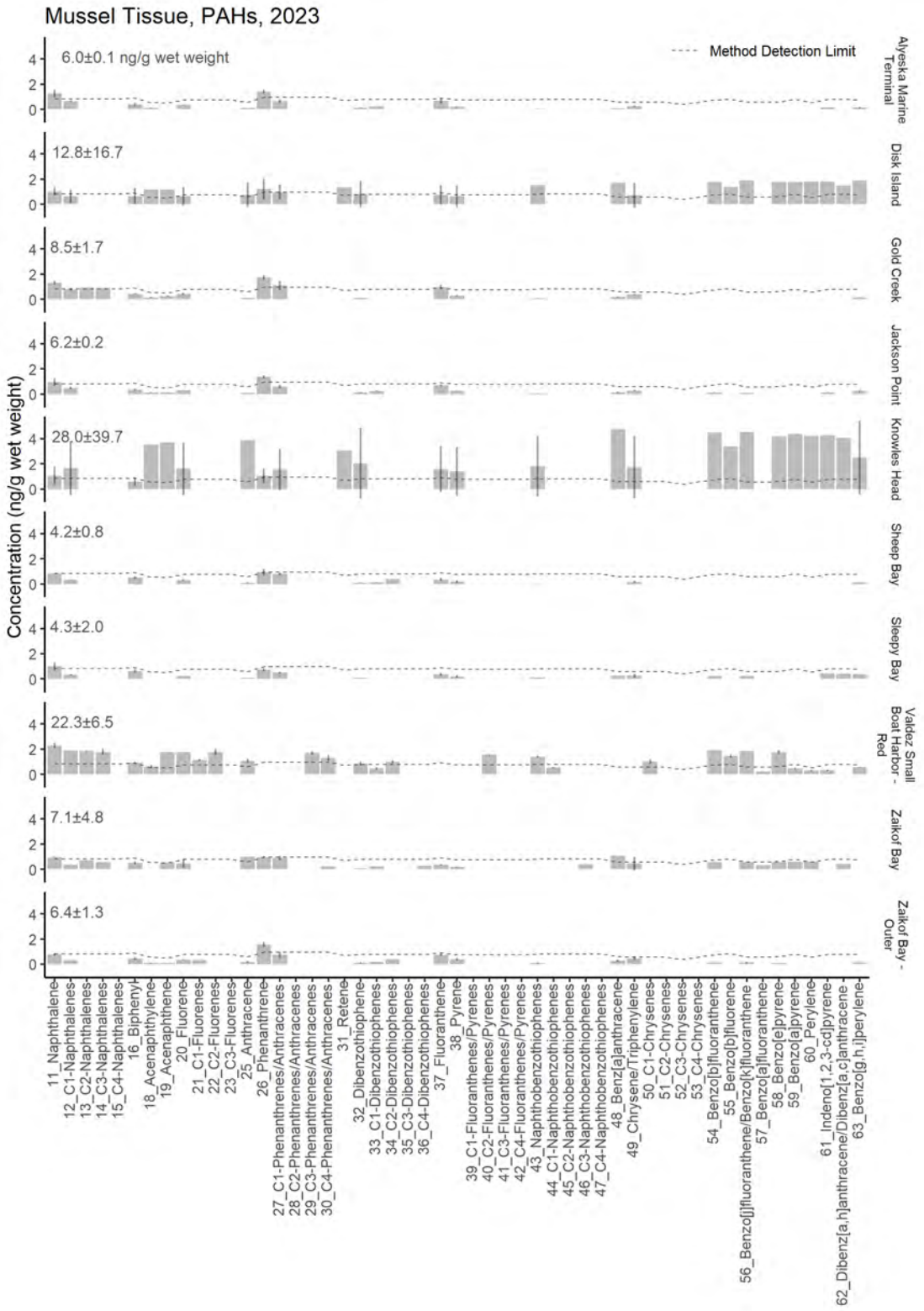


Figure 7. 2023 PAH profiles from Pacific blue mussels sampled at ten sites in Port Valdez and Prince William Sound. Values represent mean ± 1 standard deviation and sum 42 PAH values are displayed in the upper left of each profile. The dashed line represents the PAH specific method detection limit.

2.2.1. Ecotoxicological Interpretations

At the 2022 and 2023 tissue concentrations, no adverse biological effects are predicted. Considering the behavior of larger PAHs to adhere to lipids, mussel tissue concentrations are likely higher in the winter and early spring, before Pacific blue mussel spawning events (i.e., lipid-rich eggs will carry away significant amounts of PAHs). In this case, the post-spawning June sampling may represent a PAH accumulation low over the annual cycle.

Similar mussel tissue concentrations did not elicit early warning signs for genotoxicity or cellular toxicity in laboratory and field studies (Hylland et al. 2008; Sundt et al. 2011). At tissue PAH concentrations two orders of magnitude greater, laboratory studies observed reduced body size and greater cellular stress but no significant differences in gamete development in fuel-oil-exposed mussels (Ruiz et al. 2014).

Mussels accumulate more than just hydrocarbons. Across Prince William Sound and the North Gulf Coast, elevated concentrations of many metals and legacy pollutants are found locally in Pacific blue mussels (Rider 2020). While some of these concentrations are directly related to local past and present anthropogenic sources (e.g., mining, chemical storage, shipping, accidents and spills, and human activities), long-range transport of chemicals is likely a contributing factor. The potential for adverse effects on aquatic organisms from the combined stressors either through contaminant mixtures and/or environmental stressors should be highlighted but any further assertion as to the degree of injury would be speculative.

2.2.2. Site-Specific Source Identification

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

In 2022, Gold Creek, Jackson Point, and Saw Island mussels exhibited similar PAH profiles with very few petroleum biomarkers detected. Saturated hydrocarbon in these samples reveal a higher relative presence of lighter saturated hydrocarbons compared to 2021 and 2023 which indicate a larger contribution of marine biogenic origin hydrocarbons (e.g., n-C15, n-C17, and pristane). The PAH profile at the harbor shows a greater contribution of pyrogenic sources with a lesser pyrogenic signature at sites around the terminal (i.e., Saw Island and Jackson Point). Gold Creek had so few PAHs detected but can tentatively be assessed as more petrogenic in origin whereas the other sites are more mixed source in origin. The ratio of n-C17/Pristane was greater than one at the Valdez Small Boat Harbor indicating a less biodegraded hydrocarbon source. At the other Port Valdez sites this ratio was less than one and thus reveals greater biodegradation.

In 2023, many sites exhibited detectable presence of higher molecular weight PAHs, indicative of bioavailable pyrogenic PAH and/or selective accumulation and retention of these compounds. Very few petroleum biomarkers were seen in the Knowles Head, Sheep Bay, and Sleepy Bay samples, thus exposure of these mussels to petroleum compounds is likely very low. At Disk Island and Knowles Head, high molecular weight PAHs were observed at relatively high concentrations in a single replicate. In both instances these high levels were not supported by the presence of

petroleum biomarkers indicating a specific source. Similar patterns and sources attributed were seen in Port Valdez sites in 2023 as in 2022.

2.2.3. Historical Perspective

Historical trends in Pacific blue mussel tissue PAH concentrations are variable, reflecting known oil spill incidents in 2004 at Gold Creek, and 2017 and April 2020 spills at the terminal, and mirroring high concentrations found in sediments pre-2005 (Figure 8). Within the larger trend, PAH variability and mean tissue concentrations have stabilized since ~2010 in the absence of known spills (Figure 8B). In non-spill conditions, mussel tissue concentrations have remained below < 1,000 ng/g wet weight, indicating the mussels are likely not under PAH exposure-induced stress. However, high values have been recorded following spill incidents (e.g., 244,000 ng/g wet weight after the April 2020 terminal spill, not shown), a value likely to induce adverse effects at the molecular to the individual level for organisms (Figure 8A). Expanded sampling stations (e.g., Disk Island, Knowles Head, Sheep Bay, Sleepy Bay, and Zaikof Bay) show less variability in recent years, likely due to them being less exposed to recent spill events and the bias of less frequent sampling. Overall, 2022 and 2023 represent years with one of the lowest PAH concentrations found in mussels in LTEMP's 30-year history. However, this should be interpreted with caution as analytical methods are at the lower limits of detection and as such many compounds are considered an estimation in sum calculations.

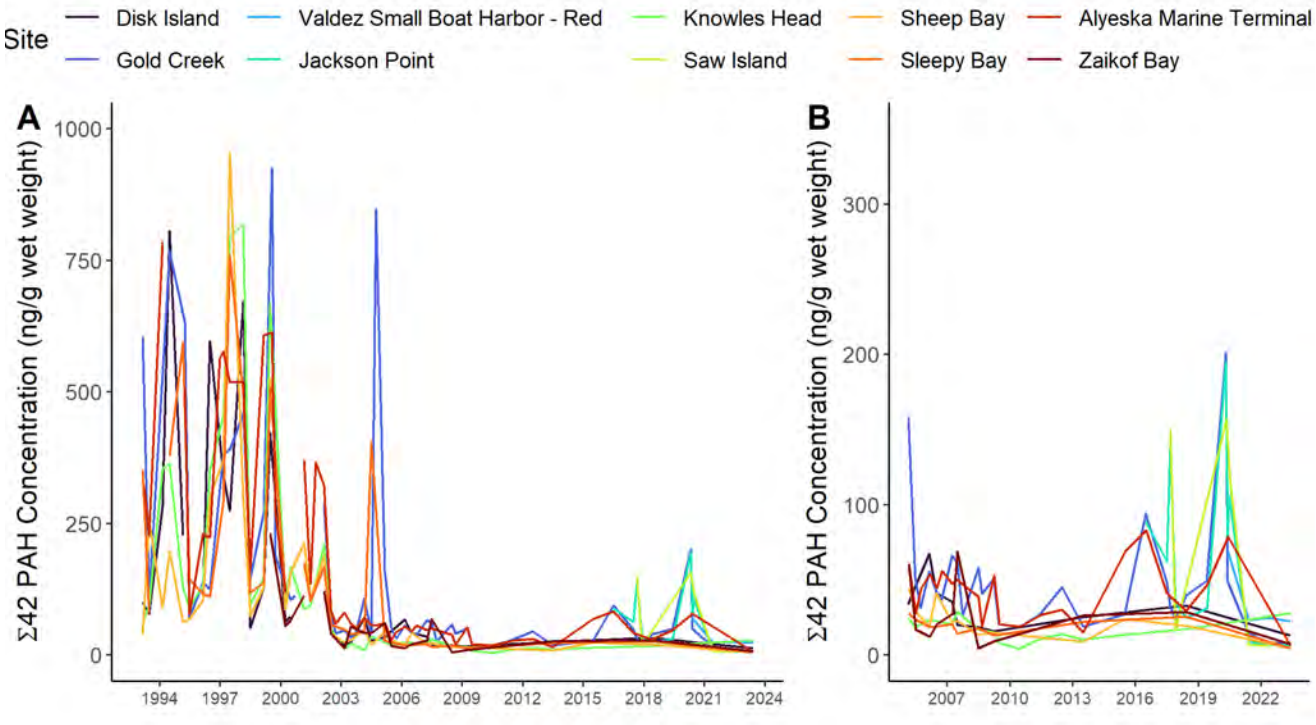


Figure 8. Total PAH concentrations in Pacific blue mussel tissue (A) over the entire duration of the LTEMP; note concentrations > 1000 ng/g wet weight (i.e., known spill events) were removed for clarity even though max post spill concentration >200 000 ng/g wet weight, and (B) over the last 18 years and excluding concentrations >350 ng/g wet weight for clarity. Colors indicate sampling site and mean values are plotted for each sampling event.

The range of the 2022 and 2023 PAH concentrations in Port Valdez mussel tissues is within the historical range of locations with limited human use and not oiled during the Exxon Valdez oil spill (Boehm et al. 2004).

2.3. Water sampled via Passive Sampling Devices

Hydrocarbons were found at low concentrations in water sampled via passive sampling devices in 2022, at sites in Port Valdez (47–54 ng/L sum 42 PAHs) (Figure 2) and in Port Valdez and greater Prince William Sound in 2023 (38–83 ng/L sum 42 PAHs) (Figure 3). These concentrations represent the dissolved constituents (C-free) and are not traditional total water concentrations, but in this report the passive sampling device C-free concentrations are used as a proxy for water concentrations of PAHs. In 2022, the highest relative passive sampling device-derived water concentrations were measured at Jackson Point (54±11 ng/L) closely followed by Gold Creek (49±9 ng/L) and Saw Island (47±2 ng/L). In 2023, Port Valdez trends were reversed with Saw Island reporting the highest relative PAH concentration (84±19 ng/L) followed by Gold Creek (81±17 ng/L), Jackson Point (78±10 ng/L) and the extended sampling site in central western Prince William Sound, Disk Island, (38±16 ng/L). A passive sampling device was deployed at Knowles Head in 2023, but could not be located for retrieval.

In both years, dissolved and heavily water-washed naphthalenes made up the majority of the PAH bulk across all samples and sites (see Figure 9 for 2023 PAH profile). Smaller, 2–3 ring PAHs made up 99% of the sum concentrations, indicative of the more readily water-soluble fraction. Other PAHs that were detected at lower concentrations at all sites were fluorenes, fluoranthenes, dibenzothiophenes, phenanthrenes, and anthracenes. Concentrations of alkylated compounds were greater than those of parent compounds at Disk Island indicating a water-washed oil source, evaporative transfer of dissolved compounds into the atmosphere, or weathering of a surface oil film before it was entrained into near-surface water and dissolved to an appreciable extent. At Port Valdez sites a petrogenic pattern was seen in parent and alkylated fluorenes. While direct comparison of the passive sampling data to other environmental hydrocarbon studies is challenging due to methodological differences, present dissolved PAH concentrations from the passive sampling devices are comparable to water concentrations at unoiled sites and sites with medium human activity around Prince William Sound (Short et al. 2008; Lindeberg et al. 2017). The present passive sampling device-derived water concentrations in Port Valdez and at Disk Island were all at least two to three orders of magnitude below published water quality standards and below those of polluted areas across the United States (EPA 2002).

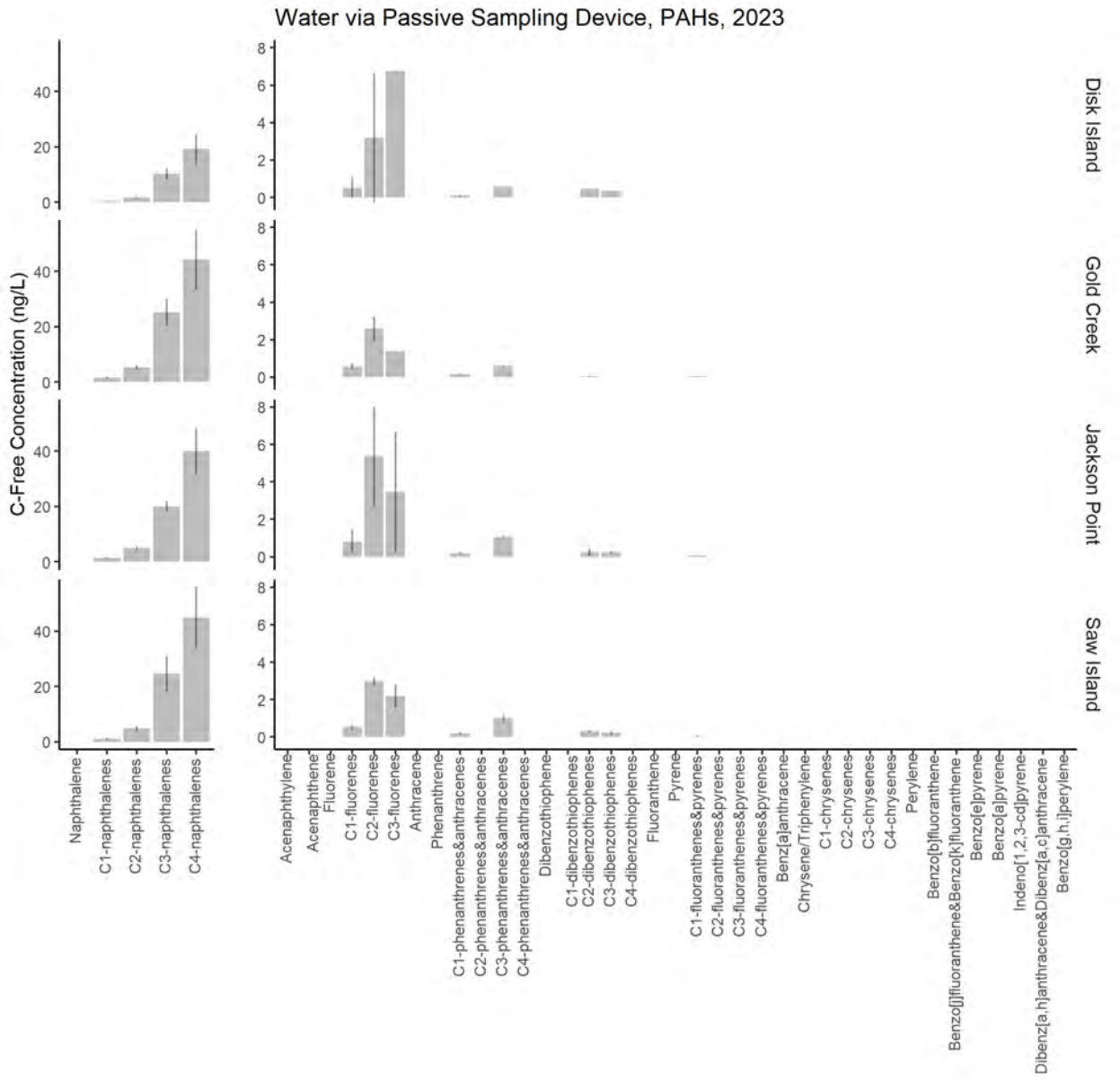


Figure 9. PAH Profiles in 2023 water sampled via passive sampling devices placed at Gold Creek, Jackson Point, and Saw Island. Values represent mean ± standard deviation for the three replicates.

2.3.1. Ecotoxicological Interpretations

Concentrations reported in the Port Valdez passive sampling device-derived water concentrations are below those reported to cause adverse effects even in the most sensitive of life stages for marine organisms. The 2022 and 2023 PAH concentrations in the parts per trillion range (i.e., one drop in 20 Olympic-sized swimming pools) are an order of magnitude lower than those reported to cause developmental and delayed effects in herring and salmon early life stages (Incardona et al. 2015), although no analytical lower limit measured from water or tissues has been identified for developmental cardiac effects in herring (Incardona et al. 2023). Studies on Arctic cod embryos, a Bering Sea species not present in Prince William Sound, report malformations and reduced survival

at concentrations similar to those measured by the passive samplers; however, the analytic methods and exposure PAH composition differs with the Arctic cod study using whole crude oil (Bender et al. 2021). Naphthalene, while present at greater concentrations than other PAHs, is of low toxicological concern at present concentrations and is not a carcinogen.

2.3.2. Site-Specific Source Identification

Though not the focus of the passive sampling device, which measures the dissolved and bioavailable fraction (C-free concentrations) in the water, PAH profiles can be used conservatively for source identification and forensic analysis. One striking observation is the large naphthalene peak with ascending alkylation, indicative of a water-washed and weathered petrogenic source present in all samples. Similar patterns are seen in the fluorenes in all 2022 samples; however, the pattern is more petrogenic in 2023 at Gold Creek and Saw Island.

2.3.3. Historical Perspective

PAH concentrations in passive samplers have remained low since the 2016 inclusion of passive sampling device-derived water concentrations into LTEMP (Figure 10). A peak in PAH levels is seen at the terminal adjacent site, Jackson Point, following the 2020 terminal spill. Passive sampler PAH profiles over time have also remained consistent with high naphthalene spikes dominating PAH profiles as noted in previous LTEMP reports (Payne and Driskell 2021).

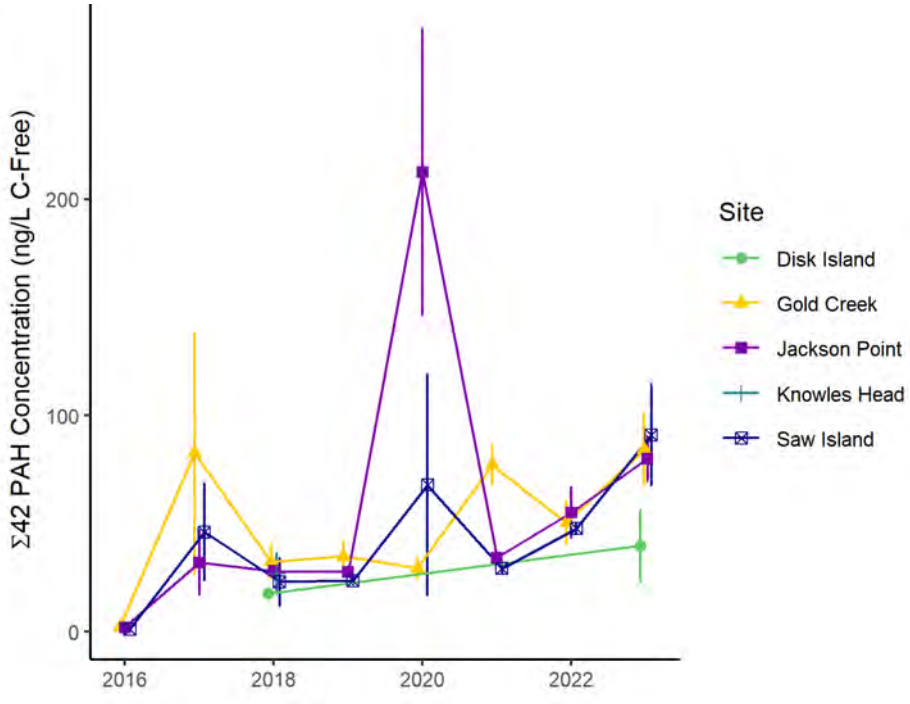


Figure 10. Sum 42 PAH concentrations in passive sampling device-derived water concentrations at five sites for 2016–2023. Sites are distinguished by color and shape and plotted by mean ± 1 standard deviation. Note that 2016 values only include parent PAHs, no alkylated PAHs were quantified in 2016.

2.4. Holistic Interpretation

In 2022, we saw agreement on low-level PAHs at similar concentrations across the three standard LTEMP stations in Port Valdez (i.e., Gold Creek, Saw Island, and Jackson Point). Mussel PAH levels found at the Valdez Small Boat Harbor were higher than other stations but could not be confirmed by sediment or passive sampler results as these samples were not taken. In 2023, the standard LTEMP stations in Port Valdez reported similar PAH concentrations and similarities to one another as in 2022. Surprisingly, the expanded LTEMP stations of Knowles Head and Disk Island had average PAH concentrations more similar to the Valdez Small Boat Harbor. Other expanded LTEMP mussel sites of the Zaikof Bay (both inner and outer), Sleepy Bay, and Sheep Bay had low PAH concentrations similar to those around the terminal. The passive sampling device deployed and retrieved at Disk Island did not corroborate the relative increased abundance of PAHs found in mussels at Disk Island but rather reported a concentration of water-soluble PAHs below that of the Port Valdez sites. Both mussels and passive sampling devices from Disk Island had considerable variability between replicates compared to other sites so the ranking of hydrocarbon contaminant between sites should be done with caution. Even greater variability between replicates was seen in the Knowles Head mussel samples which may indicate a difference in the sampling for these expanded efforts may have impacted sample agreement (e.g., holding time, sample quality, cross contamination procedures). However, both locations from the remote site of Zaikof Bay had relatively good agreement so other factors may contribute to the variability (e.g., site specific heterogeneity in mussel community or habitat).

Looking across time both sediments and mussel PAH concentrations have varied over time (Figure 11) with both matrices experiencing peaks and troughs in PAH concentrations. Relatively low R-squared values, which reflect the amount of variation in the data explained by the 3rd order polynomial log transformed model, are expected for this type of environmental chemistry data, however these values indicate that other factors besides time likely influence PAH concentrations (e.g., environmental changes in Port Valdez such as increased glacial melt/freshwater runoff (Campbell 2018), recent spills). Although sampling locations for sediments and mussels are not identical in all years, more recent PAH peaks are seen in mussels compared to sediments. This is likely due to the shorter response time mussels have to spill events, something highlighted in LTEMP adjacent studies (e.g., Bowen et al. 2021) which investigated the transcriptomic response of mussels exposed to the April 2020 spill at the terminal.

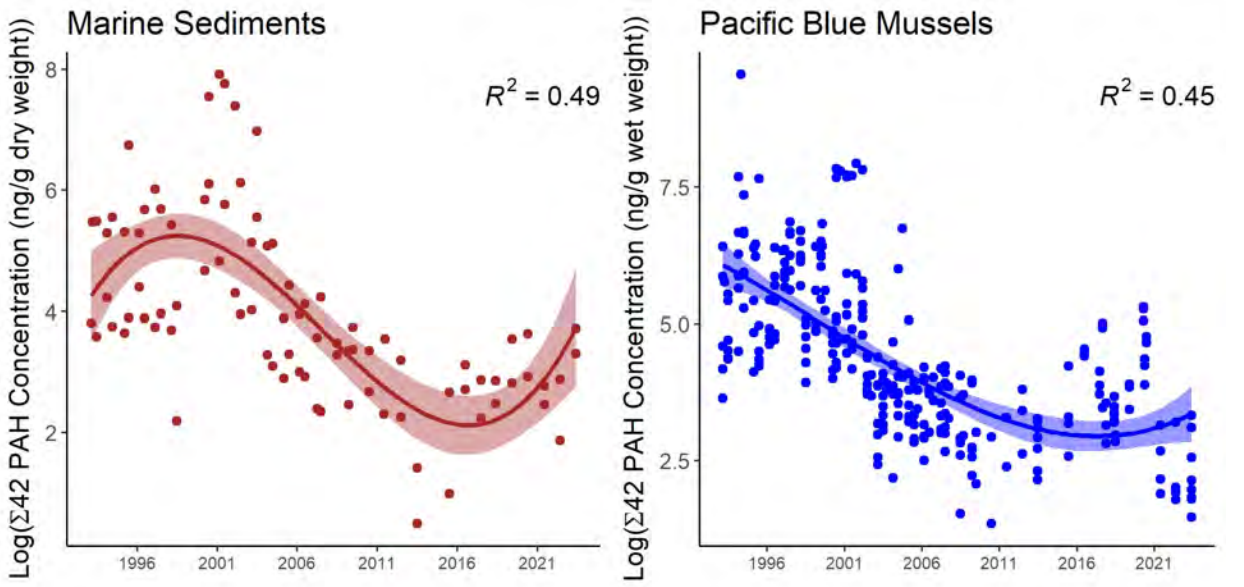


Figure 11. Polynomial trend line (3rd order) with standard error trend line fit to log transformed marine sediment (left) and Pacific Blue mussel tissue (right) PAH levels since 1993 for the sites sampled in 2023.

The forensic agreement between 2022 and 2023 samples is consistent with the mixed source petrogenic signal closer to the terminal and pyrogenic signal of stations further away. Again, string pyrogenic and mixed sources contribute to blue mussel hydrocarbons profiles at the Valdez Small Boat Harbor. As blue mussel tissues do not provide robust forensic data (e.g., few biomarkers of detection) interpretation of the expanded LTEMP sampling locations is limited. In a recent published study by Short and Maselko (2023) analyzing intertidal sediment oil samples from 2006 in western Prince William Sound, including Disk Island, crude oil from Exxon Valdez oil spill (EVOS) was determined to be the primary PAH contributor even when considering historical and ongoing human activities (e.g., mining, logging, fish processing, and fish hatcheries), and natural disasters such as the hydrocarbon pollution resulting from the 1964 earth quake and subsequent tank ruptures, and past forest fires.

The ecotoxicological risk to organisms from the hydrocarbon levels present in the sediments, mussel tissue, and dissolved in the water from 2022 and 2023 was low. Previous work focusing on how low levels of hydrocarbon exposure can influence ecologically and commercially important fish species in Prince William Sound has found profound effects on heart development (Incardona et al. 2021). In fact, recent herring research reveals that analytical chemistry with detection levels in the sub parts per billion level (ng/g) is not sensitive enough to distinguish between exposure and background concentrations in water or embryo tissue even when crude oil-induced effects on heart development and PAH-induced enzymatic response were detected (Incardona et al. 2023). Rather enzymatic induction related to nominal crude oil exposure (e.g., CYP1A induction) is directly related to cardiac deformities in herring and may provide a more sensitive assessment of injury at the low end of PAH exposure levels (Incardona et al. 2023). Targeted laboratory experiments have yet to confirm the link between early life stage oil exposure and sensitivity to pathogens later in life, which is the latest ecotoxicological hypothesis for the post-EVOS herring collapse (Whitehead et al. nd).

Current herring dynamics research has shifted focus away from hydrocarbon-induced direct effects and on to how ocean climate, freshwater input, and changes in timing of spawning have influenced survival of herring (Dias et al. 2022). Recent survey results indicate that herring may be rebounding with strong age classes observed in 2021 (Pegau et al. 2023).

3. FUTURE PERSPECTIVE

Recent work done by Harsha and Podgorski (2023) on hydrocarbon oxidation products and heavy metals in the BWTF and effluent has highlighted the presence and potential environmental risk of compounds not captured by the current LTEMP monitoring scheme. This work also argues that the assumption that stormwater and runoff from the terminal is "uncontaminated," is a finding supported from LTEMP sampling of sediments and blue mussels in the absence of spill events. Specifically, assessing the risk of toxic effects from the bioaccumulation of heavy metals, zinc, and arsenic, from BWTF effluent not removed in the filtration and biodegradation process has not been carried out in LTEMP or Alyeska pollution discharge permitting (i.e., APDES) monitoring (Shaw and Blanchard, 2021). In fact, the recent 2019 ADEC report cites that the biggest water quality concerns from the terminal BWTF effluent is zinc, total aromatic hydrocarbons, and whole effluent toxicity (ADEC 2019).

Heavy metal monitoring is routinely done in other petroleum and hydrocarbon monitoring efforts including in forensic studies in marine sediments and offshore petroleum industry monitoring efforts although typically focusing on mercury, lead, cadmium, and barium (e.g., Norwegian Environmental Agency, 2020).

Frequent reanalysis of LTEMP's aims and methodology is necessary to maintain the utility of such a powerful monitoring program even in its 30th year. While maintaining the integrity of the program with the three matrix approaches, efforts must be taken to ensure that future monitoring and reporting is conducted in a manner that guarantees comparability to previous analysis. The following represents a list of potential additions, subtractions, and alterations in methodology that could be considered for future LTEMP cycles.

1. Alter forensic analysis from its current and recent historical qualitative profile analysis to a quantitative statistical analysis using multidimensional scaling to allow greater comparative power over time, space, and between studies.
2. Place a passive sampling device at the Valdez Small Boat Harbor to allow for direct comparability for mussels sampled from this site.
3. Work with existing laboratories to expand analytical power to include emerging contaminants of environmental concern (e.g., PFAS, per- and polyfluoroalkyl substances, or the magnitude of the unresolved complex mixture which may include oxygenated products).
4. Perform a comprehensive evaluation of LTEMP in light of international environmental marine monitoring standards for planning, implementation, analysis, and reporting while still tailoring LTEMP to the needs of PWSRCAC.

5. Execute a "rat hunt" to explore the utility of the current and past LTEMP analyte and sampling regime. For example, assessing if running full hydrocarbon forensic analysis on blue mussels is necessary as a high frequency of geochemical biomarkers analytes are not detectable and therefore not useful in forensic analysis.
6. Investigate the potential to include additional biological information to reduce potential variability between biological samples including assessing spawning status, size, and condition in Pacific blue mussels.
7. Expand biological sampling. (1) Include PAH analysis in liver and bile of wild caught resident fish species (e.g., sculpin); (2) expand BWTF effluent testing as whole effluent testing reveals concerning toxicity (suggestion by Harsha and Podgorski 2023); and (3) include hydrocarbon specific biomarkers of PAH exposure and injury with mussel sampling.
8. Consider all phases of LTEMP in the current era of rapid environmental change, demand for scientific transparency, and environmental justice.

At this point in time many options mentioned above have not been fully investigated as this would require additional analysis. This list is intended for discussion purposes amongst the PWSRCAC Scientific Advisory Committee. Modernizing LTEMP could involve inclusion of biosensors for real time monitoring as was suggested by Harsha and Podgorski (2023) in their work on the hydrocarbon oxidation products in the BWTF effluent (Gavrilas et al. 2022) or remote sensing environmental monitoring of oil pollution using satellites, an emerging technique for remote areas with rapid environmental change and human activity (Sizov et al. 2014).

.

4. CONCLUSION

In the 30th year of the LTEMP run by PWSRCAC, two years of data were analyzed for the concentration, source, and potential ecotoxicological effects of hydrocarbons in marine subtidal sediments, Pacific blue mussels, and dissolved in the nearshore waters via passive sampling devices. The hydrocarbon fingerprints in the 2022 and 2023 samples vary by site with those at or near the Valdez Marine Terminal revealing ANS crude and its associated products (i.e., BWTF effluent) as the primary source for hydrocarbons. Hydrocarbons found in Pacific blue mussels from Gold Creek, Knowles Head, Disk Island, Sheep Bay, Sleepy Bay, Zaikof Bay, and the Valdez Small Boat Harbor cannot be linked directly to the terminal operations although these samples revealed a mix of sources. Low potential environmental and toxicological risk is posed by hydrocarbons contributed by the terminal and tankers in 2022 and 2023. Surprisingly, concentrations of toxic hydrocarbons were similar at the remote sites of Knowles Head and Disk Island and the Valdez Small Boat Harbor, a site of high human activity and potential chronic petroleum pollution. Passive sampling devices continue to report low levels of bioavailable hydrocarbons in the water column with higher concentration within Port Valdez compared to the remote, historically EVOS oiled site of Disk Island. Since 1993, hydrocarbon concentrations in Prince William Sound are generally low with localized spikes corresponding with spill events like the April 2020 oil spill at the terminal. Following an all-time low in the mid-2010s, hydrocarbon concentrations in sediments and mussels have slowly increased across all sites but are still below any threshold for adverse effects on aquatic life. Several suggestions have been made to expand, economize, and modernize LTEMP.

5. REFERENCES

Alaska Department of Environmental Conservation (ADEC). 2019. Alaska Pollutant Discharge Elimination System Permit - Alyeska Pipeline Service Company, Valdez Marine Terminal. In *AK0023248*, edited by Alaska Department of Environmental Conservation.

Alaska Department of Environmental Conservation (ADEC). 2022. Division of Spill Prevention and Response. PPR Spills Database. April 1, 2022. https://dec.alaska.gov/Applications/SPAR/PublicMVC/PERP/SpillSearch

Bender, M. L., J. Giebichenstein, R.N. Teisrud, J. Laurent, M. Frantzen, J. P. Meador, L. Sørensen, B. H. Hansen, H. C. Reinhardy, B. Laurel, and J. Nahrgang. 2021. Combined Effects of Crude Oil Exposure and Warming on Eggs and Larvae of an Arctic Forage Fish. *Scientific Reports* 11 (1): 8410. https://doi.org/10.1038/s41598-021-87932-2

Boehm, P.D., D.S. Page, J.S. Brown, J.M. Neff, and W.A. Burns. 2004. Polycyclic Aromatic Hydrocarbon Levels in Mussels from Prince William Sound, Alaska, USA, Document the Return to Baseline Conditions. *Environmental Toxicology and Chemistry* 23 (12): 2916–29. https://doi.org/10.1897/03-514.1

Bowen, L., W. B. Driskell, J.R. Payne, A. Love, E. Litman, and B. Ballachey. 2021. Mussel Oiling and Genetic Response to the April 2020 Valdez Marine Terminal Spill: Executive Summary 6.

Campbell, R.W. 2018. Hydrographic Trends in Prince William Sound, Alaska, 1960–2016. *Deep Sea Research Part II: Topical Studies in Oceanography*, Spatial And Temporal Ecological Variability In The Northern Gulf Of Alaska: What Have We Learned Since The Exxon Valdez Oil Spill?, 147 (January): 43–57. https://doi.org/10.1016/j.dsr2.2017.08.014

Carls, M.G., J.W. Short, and J. Payne. 2006. Accumulation of Polycyclic Aromatic Hydrocarbons by Neocalanus Copepods in Port Valdez, Alaska. *Marine Pollution Bulletin* 52 (11): 1480–89. https://doi.org/10.1016/j.marpolbul.2006.05.008

Davis, E., T. R. Walker, M. Adams, and R. Willis. 2018. Characterization of Polycyclic Aromatic Hydrocarbons (PAHs) in Small Craft Harbour (SCH) Sediments in Nova Scotia, Canada. *Marine Pollution Bulletin* 137 (December): 285–94. https://doi.org/10.1016/j.marpolbul.2018.10.043

Dias, B.S., D.W. McGowan, R. Campbell, T.A. Branch. 2022. Influence of environmental and population factors on Prince William Sound herring spawning phenology. 696 https://doi.org/10.3354/meps14133

Gavrilaș, S., C.Ș. Ursachi, S. Perța-Crișan, F.D. Munteanu. 2022. Recent Trends in Biosensors for Environmental Quality Monitoring. Sensors (Basel). Feb 15; 22(4):1513. doi: 10.3390/s22041513. PMID: 35214408; PMCID: PMC8879434.

Harsha, M.L., and D.C. Podgorski. 2023 Examining the Effectiveness of Ballast Water Treatment Processes: Insights into Hydrocarbon Oxidation Product Formation and Environmental Implications. Report to PWSRCAC 08-01-2023.

Incardona J.P., T.L. Linbo, J.R. Cameron, B.L. French, J.L. Bolton, J.L. Gregg, C.E. Donald, P.K. Hershberger, and N.L. Scholz. Environmental Science & Technology 2023 57 (48), 19214-19222, DOI: 10.1021/acs.est.3c04122

Incardona J.P., T.L. Linbo, B.L. French, J. Cameron, K.A. Peck, C.A. Laetz, M.B. Hicks, G, Hutchinson S.E. Allan, D.T. Boyd, G.M. Ylitalo, N.L. Scholz. 2021. Low-level embryonic crude oil exposure disrupts ventricular ballooning and subsequent trabeculation in Pacific herring. Aquat Toxicol. 2021 Jun; 235:105810. doi: 10.1016/j.aquatox.2021.105810. Epub 2021 Mar 22. PMID: 33823483.

Incardona, J P., M.G. Carls, L. Holland, T.L. Linbo, D.H. Baldwin, M.S. Myers, K. A. Peck, M. Tagal, S.D. Rice, and N.L. Scholz. 2015. Very Low Embryonic Crude Oil Exposures Cause Lasting Cardiac Defects in Salmon and Herring. *Scientific Reports* 5 (1): 13499. https://doi.org/10.1038/srep13499

Lehtonen, K.K., G. d'Errico, S. Korpinen, F. Regoli, H. Ahkola, T. Kinnunen, and A. Lastumäki. 2019. Mussel Caging and the Weight of Evidence Approach in the Assessment of Chemical Contamination in Coastal Waters of Finland (Baltic Sea). *Frontiers in Marine Science* 6. https://doi.org/10.3389/fmars.2019.00688

Lindeberg, M., J. Maselko, R. Heintz, C. Fugate, and L. Holland. 2017. Conditions of Persistent Oil on Beaches in Prince William Sound 26 Years after the Exxon Valdez Spill. *Deep Sea Research Part II: Topical Studies in Oceanography* 147 (July). https://doi.org/10.1016/j.dsr2.2017.07.011

Norwegian Environment Agency. 2020. Guidelines for environmental monitoring of petroleum activities on the Norwegian continental shelf. https://www.miljodirektoratet.no/globalassets/publikasjoner/M408/M408.pdf

Neff, J., and W. Burns. 1996. Estimation of Polycyclic Aromatic Hydrocarbon Concentrations in the Water Column Based on Tissue Residues in Mussels and Salmon: An Equilibrium Partitioning Approach. *Environmental Toxicology and Chemistry* 15 (December): 2240–53. https://doi.org/10.1002/etc.5620151218

Nesvacil, K., M. Carls, L. Holland, and S. Wright. 2016. Assessment of Bioavailable Hydrocarbons in Pribilof Island Rock Sandpiper Fall Staging Areas and Overwintering Habitat. *Marine Pollution Bulletin* 110 (1): 415–23. https://doi.org/10.1016/j.marpolbul.2016.06.032

Oen, A.M. P., G. Cornelissen, and G. D. Breedveld. 2006. Relation between PAH and Black Carbon Contents in Size Fractions of Norwegian Harbor Sediments. *Environmental Pollution* 141 (2): 370–80. https://doi.org/10.1016/j.envpol.2005.08.033

Payne, J.R., W.B. Driskell, J.F. Braddock, J. Bailey, J. W. Short, L. Ka'aihue, and T.H. Kuckertz. 2005. From Tankers to Tissues – Tracking the Degradation and Fate of Oil Discharges in Port Valdez, Alaska.

Payne, J.R., and W.B. Driskell. 2018. Long-Term Environmental Monitoring Program: 2017 sampling results and interpretations, 66.

Payne, J.R., and W.B. Driskell. 2021. Long-Term Environmental Monitoring Program: 2020 sampling results and interpretations, 104.

Pegau et al. 2023. Herring Research and Monitoring. https://pwssc.org/herring/. Accessed 10/19/2023

Whitehead et al. nd. Exposure to Oil Limits Herring Fitness. https://pwssc.org/exposure-to-oil-limits-herring-fitness/. accessed 10/19/2023

Pikkarainen, A. L. 2010. Polycyclic aromatic hydrocarbons in Baltic Sea sediments. *Polycyclic Aromatic Compounds*, August. https://doi.org/10.1080/10406630490472293

Rider, M. 2020. A Synthesis of Ten Years of Chemical Contaminants Monitoring in National Park Service - Southeast and Southwest Alaska Networks, a Collaboration with the NOAA National Mussel Watch Program. https://doi.org/10.25923/DBYQ-7Z17

Ruiz, P., M. Ortiz-Zarragoitia, A. Orbea, S. Vingen, A. Hjelle, T. Baussant, and M.P. Cajaraville. 2014. Short- and Long-Term Responses and Recovery of Mussels Mytilus Edulis Exposed to Heavy Fuel Oil No. 6 and Styrene. *Ecotoxicology* 23 (5): 861–79. https://doi.org/10.1007/s10646-014-1226-6

Schøyen, M., I.J. Allan, A. Ruus, J. Håvardstun, D. Ø. Hjermann, and J. Beyer. 2017. Comparison of Caged and Native Blue Mussels (Mytilus Edulis Spp.) for Environmental Monitoring of PAH, PCB and Trace Metals. *Marine Environmental Research* 130 (September): 221–32. https://doi.org/10.1016/j.marenvres.2017.07.025

Sizov, O., A. Agoltsov, N. Rubtsova. 2014. Methodological Issues of Elaborating and Implementing Remote Environmental Monitoring of Oil and Gas Exploration Applying Satellite Images: The Priobskoye Oil Field (Yugra, Russia), Energy Procedia,Volume 59, Pages 51-58, ISSN 1876-6102, https://doi.org/10.1016/j.egypro.2014.10.348.

Shaw, D.G., and A.L. Blanchard. 2021. Environmental sediment monitoring in Port Valdez, Alaska: 2021. 110.

Short, J.W., and J.M. Maselko. 2023. A Quantitative Comparison of Oil Sources on Shorelines of Prince William Sound, Alaska, 17 Years After the *Exxon Valdez* Oil Spill. *Arch Environ Contam Toxicol* 85, 140–146 (2023). https://doi.org/10.1007/s00244-023-01019-9

Short, J.W., K.R. Springman, M.R. Lindeberg, L.G. Holland, M.L. Larsen, C.A. Sloan, C. Khan, P.V. Hodson, and S.D. Rice. 2008. Semipermeable Membrane Devices Link Site-Specific Contaminants to Effects: PART II - A Comparison of Lingering Exxon Valdez Oil with Other Potential Sources of CYP1A Inducers in Prince William Sound, Alaska. *Marine Environmental Research* 66 (5): 487–98. https://doi.org/10.1016/j.marenvres.2008.08.007

U.S. Environmental Protection Agency (EPA). 2002. National Recommended Water Quality Criteria: 2002. https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table

U.S. Environmental Protection Agency (EPA). 2016. Sediment Benchmarks. Sediment Benchmarks for Aquatic Life. 2016. https://archive.epa.gov/emergency/bpspill/web/html/sediment-benchmarks.html#anthracenes.

Back to Agenda

Final

Long-Term Environmental

Monitoring Program

2022–2023 Technical Supplement

December 2023

Prepared for:
Prince William Sound Regional Citizens' Advisory Council
3709 Spenard Road, Suite 100
Anchorage, Alaska 99503

Prepared by:
Morgan L. Bender, Ph.D.
Owl Ridge Natural Resource Consultants, Inc.
4060 B Street, Suite 200
Anchorage, Alaska 99503
T: 907.344.3448
www.owlridgenrc.com

"The opinions expressed in this PWSRCAC commissioned report are not necessarily those of PWSRCAC. PWSRCAC Contract #951.24.04."

Document Number: PWS002-23-002F0

TABLE OF CONTENTS

Table of Contents ii

Acronyms and Abbreviations vii

Executive Summary viii

1. Methods 1
- 1.1. Field Methods 1
  - 1.1.1. Sediments and Mussel Tissue 1
  - 1.1.2. Passive Sampling Devices 1
- 1.2. Analytical Methods 2
  - 1.2.1. Sediments and Mussel Tissue 2
  - 1.2.2. Passive Sampling Device 2
- 1.3. Data Analysis 3
- 1.4. Source Identification, Petroleum Fingerprinting, and Biomarker Analysis 3
- 1.5. Toxicological Interpretations 4

2. Results 4
- 2.1. Sediments 4
  - 2.1.1. Analytical Results and Source Identification 4
  - 2.1.2. A Note on Toxicity 5
- 2.2. Pacific Blue Mussel Tissues 5
- 2.3. Water via Passive Sampling Device 5

3. References 7

Tables 8

Figures 22

Mussel Tissue Data 42

Laboratory Data 62

Water via Passive Sampler Data 64

List of Tables

Table 1. Long-term monitoring program sites sampled in 2022 and 2023 for subtidal marine sediments, Pacific blue mussels, and deployment/retrieval of the passive sampling devices. 9
Table 2. Analytes reported for 2022 and 2023 sediments and mussel tissue samples. 10
Table 3. 2022 Analytes quantified in water samples via passive sampling device. 13
Table 4. 2023 Analytes quantified in water samples via passive sampling device. 14
Table 5. 2022 and 2023 Sediment PAH loads and toxicity comparisons. 15
Table 6. 2022 and 2023 Tissue samples PAH summaries 17

Back to Agenda

Table 7. 2022 Water PAH concentrations quantified via passive sampling device.....18
Table 8. 2023 Water PAH concentrations quantified via passive sampling device.....19
Table 9. Saturated hydrocarbon (SHC) totals and diagnostic ratios of sediment and mussel tissues sampled in 2022 and 2023. 20

List of Figures

Figure 1. Long-Term Environmental Monitoring Program sites from 2022 and 2023 campaign. 23
Figure 2. PAH profiles from 2022 sediment samples plotted by mean ± 1 standard deviation. The analyte-specific method detection limit is superimposed as a dashed line. Sum 43 PAH values (mean ± 1 standard deviation) are found in the upper left corner of each site profile. 24
Figure 3. 2022 PAH profiles from individual sediment samples at the Valdez Marine Terminal (AMT) with three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines. 25
Figure 4. 2022 PAH profiles from individual sediment samples at Gold Creek (GOC) with the three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines. 26
Figure 5. PAH profiles from 2023 sediment samples plotted by mean ± 1 standard deviation. The analyte-specific method detection limit is superimposed as a dashed line. Sum 43 PAH values (mean ± 1 standard deviation) are found in the upper left corner of each site profile. 27
Figure 6. 2023 PAH profiles from individual sediment samples at Valdez Marine Terminal (AMT) with the three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines. 28
Figure 7. 2023 PAH profiles from individual sediment samples at Gold Creek (GOC) with the three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines. 29
Figure 8. 2022 Saturated hydrocarbons (SHC) profiles from sediment samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line. Sum SHC values (mean ± 1 standard deviation) are found in the upper left corner of each site profile. 30
Figure 9. 2022 Saturated hydrocarbons (SHC) profiles from individual sediment samples at the Valdez Marine Terminal (AMT) with the duplicate replicate, three possible ANS-related source profiles, and the analyte specific method detection limit superimposed as different lines. 31
Figure 10. 2023 Saturated hydrocarbons (SHC) profiles from individual sediment samples at Gold Creek (GOC) with three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines. 32
Figure 11. 2023 Saturated hydrocarbons (SHC) profiles from sediment samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line. Sum SHC values (mean ± 1 standard deviation) are found in the upper left corner of each site profile. 33

Figure 12. 2023 Saturated hydrocarbons (SHC) profiles from individual sediment samples at the Valdez Marine Terminal (AMT) with three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines. 34
Figure 13. 2023 Saturated hydrocarbons (SHC) profiles from individual sediment samples at Gold Creek (GOC) with three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines. 35
Figure 14. 2022 Petroleum chemical biomarker profiles from sediment samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line. 36
Figure 15. 2022 Petroleum chemical biomarker profiles from individual sediment samples at the Valdez Marine Terminal (AMT) with three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines. 37
Figure 16. 2022 Petroleum chemical biomarker profiles from individual sediment samples at Gold Creek with (GOC) three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines. 38
Figure 17. 2023 Petroleum chemical biomarker profiles from sediment samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line. 39
Figure 18. 2023 Petroleum chemical biomarker profiles from individual sediment samples at the Valdez Marine Terminal (AMT) with three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines. 40
Figure 19. 2023 Petroleum chemical biomarker profiles from individual sediment samples at Gold Creek (GOC) with three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines. 41
Figure 20. PAH profiles from 2022 mussel tissue samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line. Sum 42 PAH values (mean ± 1 standard deviation) are found in the upper left corner of each site profile. 42
Figure 21. 2022 PAH profiles from individual mussel tissue samples at Saw Island (SAW) with the analyte specific method detection limit superimposed as a dashed line.....43
Figure 22. 2022 PAH profiles from individual mussel tissue samples at Jackson Point (JAC) with the analyte specific method detection limit superimposed as a dashed line.....44
Figure 23. 2022 PAH profiles from individual mussel tissue samples at Gold Creek (GOC) with the analyte specific method detection limit superimposed as different lines.....45
Figure 24. 2022 PAH profiles from individual mussel tissue samples at the Valdez Small Boat Harbor entrance (RED) with the analyte specific method detection limit superimposed as a dashed line. 46
Figure 25. PAH profiles from 2023 mussel tissue samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line. Sum 42 PAH values (mean ± 1 standard deviation) are found in the upper left corner of each site profile. 47

Figure 26. 2023 PAH profiles from individual mussel tissue samples at the Valdez Marine Terminal / Saw Island (AMT/SAW) with the analyte specific method detection limit superimposed as a dashed line. 48
Figure 27. 2023 PAH profiles from individual mussel tissue samples at Gold Creek (GOC) with the analyte specific method detection limit superimposed as a dashed line. 49
Figure 28. 2023 PAH profiles from individual mussel tissue samples at Jackson Point (JAC) with the analyte specific method detection limit superimposed as a dashed line. 50
Figure 29. 2023 PAH profiles from individual mussel tissue samples at Disk Island (DII) with the analyte specific method detection limit superimposed as a dashed line. 51
Figure 30. 2023 PAH profiles from individual mussel tissue samples at Knowles Head (KNH) with the analyte specific method detection limit superimposed as a dashed line. 52
Figure 31. 2023 PAH profiles from individual mussel tissue samples at Sheep Bay (SHB) with the analyte specific method detection limit superimposed as a dashed line. 53
Figure 32. 2023 PAH profiles from individual mussel tissue samples at Sleepy Bay (SLB) with the analyte specific method detection limit superimposed as a dashed line. 54
Figure 33. 2023 PAH profiles from individual mussel tissue samples Zaikof Bay (ZAB) with the analyte specific method detection limit superimposed as a dashed line. 55
Figure 34. 2023 PAH profiles from individual mussel tissue samples at a new outer station in Zaikof Bay (ZAB) with the analyte specific method detection limit superimposed as a dashed line. 56
Figure 35. 2023 PAH profiles from individual mussel tissue samples at the Valdez Small Boat Harbor Red light (RED) with the analyte specific method detection limit superimposed as a dashed line. 57
Figure 36. 2022 Petroleum chemical biomarker profiles from mussel tissue samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line. 58
Figure 37. 2023 Petroleum chemical biomarker profiles from mussel tissue samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line. 59
Figure 38. 2022 Saturated hydrocarbons (SHC) profiles from mussel tissue samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line. Sum SHC values (mean ± 1 standard deviation) are found in the upper left corner of each site profile. 60
Figure 39. 2023 Saturated hydrocarbons (SHC) profiles from mussel tissue samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line. Sum SHC values (mean ± 1 standard deviation) are found in the upper left corner of each site profile. 61
Figure 40. 2022 PAH, biomarker, and saturated hydrocarbon (SHC) profiles from the NewFields laboratory blanks with the analyte specific method detection limit superimposed as a dashed line. 62
Figure 41. 2023 PAH, biomarker, and saturated hydrocarbon (SHC) profiles from the Alpha Analytical laboratory blanks with the analyte specific method detection limit superimposed as a dashed line. 63

Figure 42. PAH profiles from water sampled via passive sampling devices deployed during LTEMP 2022 at Gold Creek, Jackson Point, and Saw Island plotted by mean value ± standard deviation. 64
Figure 43. 2022 water PAH profiles and laboratory diagnostic ratios from individual passive sampling devices deployed at Gold Creek. 65
Figure 44. 2022 water PAH profiles and laboratory diagnostic ratios from individual passive sampling devices deployed at Jackson Point. 66
Figure 45. 2022 water PAH profiles and laboratory diagnostic ratios from individual passive sampling devices deployed at Saw Island. 67
Figure 46. PAH profiles from water sampled via passive sampling devices deployed during LTEMP 2023 at Disk Island, Gold Creek, Jackson Point, and Saw Island plotted by mean value ± standard deviation. 68
Figure 47. 2023 water PAH profiles from individual passive sampling devices deployed at Disk Island. 69
Figure 48. 2023 water PAH profiles from individual passive sampling devices deployed at Gold Creek. 70
Figure 49. 2023 water PAH profiles from individual passive sampling devices deployed at Jackson Point. 71
Figure 50. 2023 water PAH profiles from individual passive sampling devices deployed at Saw Island. 72

ACRONYMS AND ABBREVIATIONS

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

EXECUTIVE SUMMARY

This technical supplement contains information on field sampling, and analytical and data analysis methods used to monitor and assess environmental hydrocarbons and their potential environmental risk in Prince William Sound Regional Citizens' Advisory Council's (PWSRCAC) Long-Term Environmental Monitoring Program (LTEMP). Here we have plotted and summarized all sediment, Pacific blue mussel tissue, and passive samples collected in the 2022 campaign in Port Valdez and the 2023 campaign in Port Valdez and greater Prince William Sound. This document should function as an aid to the assertions made in the 2023 Long-Term Environmental Monitoring Program Summary Report (Owl Ridge 2023).

1. METHODS

1.1. Field Methods

1.1.1. Sediments and Mussel Tissue

In 2022, sediment sampling at Valdez Marine Terminal (Alyeska Marine Terminal (AMT)) took place on June 3 and at Gold Creek (GOC) on June 1 (Table 1, Figure 1). In 2023, sample dates were June 3 and 4 for GOC and AMT, respectively. Samples were collected using a modified Van Veen grab and deployed to a depth of 65–67 meters (m) at AMT and 26–27 m at GOC from a small research vessel. For each replicate, a ~ 250 milliliters (mL) sample of the surface 1–5 mL was collected at each site, placed in a hydrocarbon-free jar, and frozen for hydrocarbons and total organic carbon analysis. Samples were sent frozen to the lab for analysis.

The 2022 Pacific blue mussel sampling was performed at GOC, Jackson Point (JAC), and Saw Island (SAW) on June 1 and at the Valdez Small Boat Harbor – RED (RED) on June 3. In 2023, mussels were collected from Port Valdez station on June 3, RED on June 5, Disk Island and Knowles Head on June 6, and Sleepy Bay, Sheep Bay, and Zaikof Bay (2 sites) on June 7. Three replicates of ~30 large mussels were collected by hand at each site. Sample replicates are usually taken from multiple locations spaced along 30 m of shoreline. Mussel samples were wrapped in aluminum foil and double bagged in plastic zip-locks, frozen and shipped to the laboratory where they remained frozen until analysis. Dissections were performed by the analytical lab as a whole mussel including all internal organs.

1.1.2. Passive Sampling Devices

In 2022, the Passive Sampler Devices (PSDs) were retrieved June 1 at sites GOC, JAC, and SAW. In 2023, PSDs were deployed May 6 and retrieved June 3. The PSDs used are a low density polyethylene membrane submerged in shallow water to absorb passing hydrocarbons. The PSD is intended to only sample a fraction of the total hydrocarbon analytes present, namely, freely dissolved compounds and labile complexes that diffuse into the membrane that, for biota, are the most bioavailable hydrocarbons. As a critical part of the method, various deuterated surrogate compounds are pre-infused into the membrane prior to deployment. The PSDs were deployed in 4–7 m of water, attached to new polypropylene rope with hydrocarbon-free steel cables and shackles, anchored to a concrete cinder block at each location. At each site, three replicates of 5 PSDs were deployed such that they floated approximately 1 m above the seafloor. The PSDs were collected from stations and were transferred to hydrocarbon-free Teflon bags, sealed, and stored at room temperature following LTEMP field protocols (2019 LTEMP PSD SOP). A deployment field blank and a retrieval field blank was included in each annual analysis. Samples were sent to the Oregon State University Food Safety and Environmental Stewardship (FSES) lab in Corvallis, Oregon, for analysis and frozen at -20°C upon arrival.

1.2. Analytical Methods

1.2.1. Sediments and Mussel Tissue

Tissue and sediment samples were analyzed for semi-volatiles, biomarkers, and saturated hydrocarbons analytes at Alpha Analytical (previously NewFields 2022) lab in Mansfield, Massachusetts. Extractions used the ALPHA OP-018 method for tissues and ALPHA OP-013 method for sediments. The usual hydrocarbon data reported polycyclic aromatic hydrocarbons (PAH), sterane/triterpene biomarkers, and saturated hydrocarbons (SHC). Semi-volatile compounds, the PAH, alkylated PAH, and petroleum biomarkers, are analyzed using selected ion monitoring gas chromatography/mass spectrometry (SIM GC/MS) via a modified U.S. Environmental Protection Agency (EPA) Method 8270 (aka 8270M). This analysis provides the concentration of 1) approximately 80 PAH, alkylated PAH homologues, individual PAH isomers, and sulfur-containing aromatics, and 2) approximately 50 tricyclic and pentacyclic triterpenes, regular and rearranged steranes, and triaromatic and monoaromatic steroids. Complete lists of PAH, SHC, and biomarkers analytes are presented in Table 2, Table 3, and Table 4.

Using a modified EPA Method 8015B, SHC in sediments are quantified as total extractable materials (C_9-C_{44}), and as concentrations of n-alkanes (C_9-C_{40}) and selected (C_{15}-C_{20}) acyclic isoprenoids (e.g., pristane and phytane). A high-resolution gas chromatography-flame ionization detector (GC/FID) fingerprint of the sediment and tissue samples is also provided. Petroleum samples were diluted but not extracted. At the lab's discretion, extracts may be fractionated (F1) to improve the discrimination of biomarkers.

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

1.2.2. Passive Sampling Device

To remove any biofouling (e.g., periphyton or particulates), the PSD strips were cleaned in the laboratory by light scrubbing and sequential washing in 1 N HCl, 18 MΩ*cm water, and twice with isopropanol, then dried. PSDs were extracted twice at room temperature with 200 mL n-hexane before the volume was reduced. Briefly, 62 PAHs were quantified on a modified Agilent 7890 gas chromatograph (GC) and Agilent 7000 triple quadrupole mass spectrometer. The internal standard, Perylene-D12, was added to each sample or parallel aliquots of bioassay samples immediately prior to analyses. Calculation of freely dissolved water concentration of organic compounds was done following the lab specific standard operating procedure (SOP). Continuing calibration verification

(CV) analysis was performed at the start and end of every analytical batch (maximum of 15 samples). CVs met FSES data quality objectives (DQOs) with an average of 93% of the target analytes being within 30% of the known value. Instrument blanks were analyzed after each CV, and in all cases, FSES DQOs were met for all target analytes. To demonstrate instrument accuracy an over-spike analysis was performed where the sample was spiked with target compounds post extraction. The average percent recovery was 85%, meeting FSES DQO's. To demonstrate instrument precision, a duplicate analysis was performed. The average relative percent difference was 3.1%, meeting FSES DQO's. Field blanks are presented in pg/µL extract as time calculated C-free concentrations are not applicable.

1.3. Data Analysis

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

Passive sampling device data were extracted and merged into a single dataset. A group of PAHs aimed at forensic determinations was used to gather toxicological information and Oregon State University (OSU)-produced ratios were plotted for potential source determination. Common lab flags were "B" for background corrected and applied broadly to Naphthalene and Fluorene and "J" which is close to the detection level and therefore estimated.

1.4. Source Identification, Petroleum Fingerprinting, and Biomarker Analysis

Source identification through petroleum fingerprinting and biomarker analysis was performed using the following sources: Alaska North Slope (ANS) whole crude oil run as laboratory standard with 2022 and 2023 samples, filtered (0.7 µm glass fiber filter) Ballast Water Treatment Facility (BWTF) effluent collected in March 2017, oil/water sample collected from the April 2020 spill at the terminal (HOT), 2016 terminal spill (Barge), a weathered diesel spill in Port Chalmers from 2006 and a crude oil sample from Cook Inlet. The first three respective sources are displayed for each replicate sediment sample to avoid a single snapshot in time of a potential ANS source. Two additional non-ANS sources were investigated to provide an outside reference including a Cook Inlet whole crude oil sample and a heavily weathered diesel fuel spill collected opportunistically from Port Chalmers, Prince William Sound, in 2006, but not displayed in figures. Profiles were scaled to C2-naphthobenzothiophenes for PAHs, n-heptacosane (C27) for saturated hydrocarbons, and T19-hopane for biomarkers when possible, to aid in interpretation. Profiles were visually evaluated for

the best match between individual replicates and potential sources using expertise outlined in previous LTEMP reports (Payne and Driskell 2021; Wang et al. 2014; Stout and Wang 2016).

1.5. Toxicological Interpretations

Multiple avenues were used to investigate the possibility of toxicological effects as no single standard exists and development in the field of ecotoxicology is rapid. The most commonly accepted methods are through summing a select group of PAHs. This includes 42, 16, and other specific PAHs, referred to as summed (∑) PAHs due to the variety of methods used. This metric is similar to the Total PAH metric used prior to the BP Deepwater Horizon oil spill in 2010, but accounts for the complex mixture and multitude of calculations that can be used. Calculations were made of the relative proportion on low (2–3 ring) and high (4–6 ring) molecular weight PAHs as well as sum totals of known carcinogenic PAHs (i.e., benzo(a)pyrene, benz(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-c,d)pyrene). Furthermore, these values were adjusted for dry weight and lipid weight for mussel tissues to aid in cross study comparisons. Sediment values were compared to acute and chronic EPA sediment-quality benchmarks and tissue concentrations were compared against the most recently available published literature and concentration-of-concern guidelines, as appropriate. Concentrations were compared to other field measurements across similar environments (sub-arctic, temperate fjord systems), areas with moderate human activity converted for wet or dry weight in tissues as appropriate, other lab studies with analogous aims as LTEMP (e.g., monitoring of ongoing petroleum operations, sublethal effects, chronic exposure).

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

2. RESULTS

2.1. Sediments

2.1.1. Analytical Results and Source Identification

In the sediments, we detect hydrocarbons in all stations and replicates. Summed PAH levels between AMT and GOC alternate in ranking between 2022 and 2023 (Table 5; Figure 2). PAH profile patterns are largely petrogenic at AMT and some pyrogenic at GOC with some weathered/water washed petrogenic patterns at GOC. When overlaid with ANS related sources (i.e., ANS whole crude, BWTF filter effluent from spring 2017, and recovered oil/water from the April 2020 spill at AMT (HOT) there is good agreement between the PAH profiles (Figure 3 7). Elevated concentrations of higher molecular weight PAHs at both sites are indicative of combustion sources and could be related to exhaust, stormwater, or runoff (Figure 5–Figure 7). Sediments were moderately weathered with a near-complete loss of saturated hydrocarbons, except those present in terrestrial plants (i.e., C27, C29, C31, C33) at both sites in both years (Figure 8–Figure 10).

In the biomarkers, the ratio of T15-Norhopane and T19-Hopane indicates a crude oil source for AMT in both years (Table 9) but not GOC, which further supports the forensic differences found in the PAH pattern analysis (Figure 14–Figure 16).

2.1.2. A Note on Toxicity

The potential toxicity of hydrocarbons in the sediments was calculated using total organic matter conversions for 35 individual PAHs with EPA Sediment Benchmarks for Aquatic Life (Table 5; https://archive.epa.gov/emergency/bpspill/web/html/sediment-benchmarks.html#anthracenes).

Results show that no single PAH measured in AMT or GOC sites exceeded the chronic Potency Divisor, which represents the amount of an individual chemical (i.e., phenanthrene), by itself, that can cause an adverse effect. Correcting samples for total organic carbon content accounts for the difference in bioavailability between samples. These benchmarks are meant to be used for screening purposes only; they are not regulatory standards, site-specific cleanup levels, or remediation goals. These screening benchmarks are presented with the EPA data to help the public understand the condition of the environment as it relates to the oil spill. Additional research on PAH sediment levels from polluted and pristine areas are comparable to those found at AMT and GOC in 2022 and 2023 (see LTEMP Summary Report, Owl Ridge 2023).

2.2. Pacific Blue Mussel Tissues

Relatively few compounds were detected in the mussel tissue sampled from different locations in Port Valdez in 2022, and Port Valdez and Prince William Sound in 2023. The majority of the concentrations of PAHs, saturated hydrocarbons, and biomarkers were at or below the method level of detection (Table 6; Figure 20–Figure 25). PAH profiles, while sparse, do suggest a petrogenic source at JAC, SAW/AMT and GOC while mostly pyrogenic source at all other sites. High variability in PAH profiles and concentrations between duplicates from Knowles Head and Disk Island may require further investigation.

Biomarker ratios indicate more fresh pyrogenic sources in the Valdez Small Boat Harbor while greater biogenic sources are found at other stations (Table 6, Table 9; Figure 36, Figure 37).

Saturated hydrocarbons were similar in concentration across mussels from all sites (Table 9; Figure 38, Figure 39). GOC and JAC mussels had greater representation of larger C23-32 compounds, showing greater weathering of sources while the Valdez Small Boat Harbor, Sheep Bay, and Sleepy Bay had greater concentrations of lower molecular weight saturated hydrocarbons compared to the other sites indicating a less weathered and more recent source. Figures for laboratory blanks PAH, biomarkers, and SHC compounds show good laboratory quality control methods although higher PAH contaminant is found for 2023 samples compared to 2022 (Figure 40, Figure 41).

2.3. Water via Passive Sampling Device

Many compounds in the 2022 and 2023 passive sampling devices were not detected (Table 7, Table 8). However, naphthalene and alkylated naphthalenes were detected at all four sites in all years. Non-naphthalene PAH levels in 2022 Port Valdez stations were low (<0.1 ng/L) and in line with 2021 concentrations, while 2023 non-naphthalene PAHs were an order of magnitude higher especially at

Disk Island and Jackson Point (6–8 ng/L) (Figure 42–Figure 50). PAH patterns were generally water washed petrogenic and did not contain many higher molecular weight compounds. Laboratory calculated ratios developed for passive sampler forensics show petrogenic signal for all 2022 sites (P0/A0 > 30) (Stogiannidis and Laane 2015). No ratio was calculated for 2023 results, but PAH profiles indicate petrogenic sources for 2023 samples.

3. REFERENCES

Owl Ridge Natural Resource Consultants, Inc. 2023. Final Long-Term Environmental Monitoring Program. 2022-2023 Summary Report. December.

Passive Sampling of LTEMP SOP. May 2019. 1–6

Payne, J.R., and W.B Driskell. 2021. "Long-Term Environmental Monitoring Program" 104.

R Core Team. 2021. R: A Language and Environment for Statistical Computing. Vienna Austria: R Foundation for Statistical Computing. https://www.r-project.org/.

Stogiannidis, E., and R. Laane. 2015. "Source Characterization of Polycyclic Aromatic Hydrocarbons by Using Their Molecular Indices: An Overview of Possibilities." Reviews of Environmental Contamination and Toxicology 234: 49–133. https://doi.org/10.1007/978-3-319-10638-0_2.

Stout, S., and Z. Wang. 2016. Standard Handbook Oil Spill Environmental Forensics: Fingerprinting and Source Identification. Second. Academic Press. https://doi.org/10.1016/B978-0-12-809659-8.00008-5.

Wang, Z., C. Yang, J.L. Parrott, R.A. Frank, Z. Yang, C.E. Brown, and B.P. Hollebone. 2014. "Forensic Source Differentiation of Petrogenic, Pyrogenic, and Biogenic Hydrocarbons in Canadian Oil Sands Environmental Samples." *Journal of Hazardous Materials* 271 (April): 166–77. https://doi.org/10.1016/j.jhazmat.2014.02.021.

TABLES

Table 1. Long-Term Monitoring Program sites sampled in 2022 and 2023 for subtidal marine sediments, Pacific blue mussels and deployment/retrival of the passive sampling devices.

2022	2023	Site	Latitude	Longitude	Datum	Matrix
X	X	AMT-S	61.09056	-146.3928	WGS84	Sediment
X	X	GOC-S	61.12417	-146.4906	WGS84	Sediment
X	X	RED	61.123719	-146.35315	WGS84	Pacific Blue Mussel Tissue
X	X	JAC-B	61.090051	-146.375706	WGS84	Pacific Blue Mussel Tissue
X	X	GOC-B	61.1243682	-146.4961415	WGS84	Pacific Blue Mussel Tissue
X	X	GOC-PSD	61.1242561	-146.4946931	WGS84	Passive Sampler Device
X	X	SAW-B	61.0903062	-146.4091853	WGS84	Pacific Blue Mussel Tissue
X	X	JAC-PSD	61.0906991	-146.3757111	WGS84	Passive Sampler Device
X	X	SAW-PSD	61.0913844	-146.4091726	WGS84	Passive Sampler Device
	X	DII-B	60.49861	-147.6586	WGS84	Pacific Blue Mussel Tissue
	X	DII-PSD	60.49886	-147.66	WGS84	Passive Sampler Device
	X	SHP-B	60.64722	-145.995	WGS84	Pacific Blue Mussel Tissue
	X	SLB-B	60.0675	-147.8319445	WGS84	Pacific Blue Mussel Tissue
	X	KNH-B	60.69055	-146.5833	WGS84	Pacific Blue Mussel Tissue
	X	ZAB-B	60.26583	-147.08445	WGS84	Pacific Blue Mussel Tissue
	X	ZAB2-B	60.298926	-147.00218	WGS84	Pacific Blue Mussel Tissue

Table 2. Analytes reported for 2022 and 2023 sediments and mussel tissue samples.

Saturated Hydrocarbons	
Nonane (C9)	
Decane (C10)	
Undecane	
Dodecane (C12)	
Tridecane	
2,6,10 Trimethyldodecane (1380)	
n-Tetradecane (C14)	
2,6,10-Trimethyltridecane (1470)	
n-Pentadecane (C15)	
n-Hexadecane (C16)	
Norpristane (1650)	
n-Heptadecane (C17)	
Pristane	
n-Octadecane (C18)	
Phytane	
n-Nonadecane (C19)	
n-Eicosane (C20)	
n-Heneicosane (C21)	
n-Docosane (C22)	
n-Tricosane (C23)	
n-Tetracosane (C24)	
n-Pentacosane (C25)	
n-Hexacosane (C26)	
n-Heptacosane (C27)	
n-Octacosane (C28)	
n-Nonacosane (C29)	
n-Triacontane (C30)	
n-Hentriacontane (C31)	
n-Dotriacontane (C32)	
n-Tritriacontane (C33)	
n-Tetratriacontane (C34)	
n-Pentatriacontane (C35)	
n-Hexatriacontane (C36)	
n-Heptatriacontane (C37)	
n-Octatriacontane (C38)	
n-Nonatriacontane (C39)	
n-Tetracontane (C40)	
Total Petroleum Hydrocarbons (C9-C44)	Laboratory Calculation
Total Saturated Hydrocarbons	Laboratory Calculation
o-terphenyl	Surrogate
d50-Tetracosane	Surrogate

Table 2. Analytes reported for 2022 and 2023 sediments and mussel tissue samples.

PAHs
cis/trans-Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzo(b)thiophenes
C2-Benzo(b)thiophenes
C3-Benzo(b)thiophenes
C4-Benzo(b)thiophenes
Biphenyl
Dibenzofuran
Acenaphthylene
Acenaphthene
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Retene
Anthracene
Carbazole
Fluoranthene
Benzo[b]fluorene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophenes
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz[a]anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo[b]fluoranthene
Benzo[j]fluoranthene/Benzo[k]fluoranthene
Benzo[a]fluoranthene
Benzo[e]pyrene
Benzo[a]pyrene
Perylene
Indeno[1,2,3-cd]pyrene
Dibenz[a,h]anthracene/Dibenz[a,c]anthracene
Benzo[g,h,i]perylene
2-Methylnaphthalene
1-Methylnaphthalene
2,6-Dimethylnaphthalene
2,3,5-Trimethylnaphthalene
4-Methyldibenzothiophene(4MDT)
2/3-Methyldibenzothiophene(2MDT)
1-Methyldibenzothiophene(1MDT)
3-Methylphenanthrene
2-Methylphenanthrene (2MP)
2-Methylanthracene (2MA)
9/4-Methylphenanthrene (9MP)
1-Methylphenanthrene

Surrogates
Naphthalene-d8
Phenanthrene-d10
Benzo(a)pyrene-d12
5B(H)Cholane

Table 2. Analytes reported for 2022 and 2023 sediments and mussel tissue samples.

Geochemical Petroleum Biomarkers

Hopane (T19)
C23 Tricyclic Terpane (T4)
C24 Tricyclic Terpane (T5)
C25 Tricyclic Terpane (T6)
C24 Tetracyclic Terpane (T6a)
C26 Tricyclic Terpane-22S (T6b)
C26 Tricyclic Terpane-22R (T6c)
C28 Tricyclic Terpane-22S (T7)
C28 Tricyclic Terpane-22R (T8)
C29 Tricyclic Terpane-22S (T9)
C29 Tricyclic Terpane-22R (T10)
18a-22,29,30-Trisnorneohopane-TS (T11)
C30 Tricyclic Terpane-22S
C30 Tricyclic Terpane-22R
17a(H)-22,29,30-Trisnorhopane-TM
17a/b,21b/a 28,30-Bisnorhopane (T14a)
17a(H),21b(H)-25-Norhopane (T14b)
30-Norhopane (T15)
18a(H)-30-Norneohopane-C29Ts (T16)
17a(H)-Diahopane (X)
30-Normoretane (T17)
18a(H)&18b(H)-Oleananes (T18)
Moretane (T20)
30-Homohopane-22S (T21)
30-Homohopane-22R (T22)
Gammacerane/C32-Diahopane
30,31-Bishomohopane-22S (T26)
30,31-Bishomohopane-22R (T27)
30,31-Trishomohopane-22S (T30)
30,31-Trishomohopane-22R (T31)
Tetrakishomohopane-22S (T32)
Tetrakishomohopane-22R (T33)
Pentakishomohopane-22S (T34)
Pentakishomohopane-22R (T35)
13b(H),17a(H)-20S-Diacholestane (S4)
13b(H),17a(H)-20R-Diacholestane (S5)
13b,17a-20S-Methyldiacholestane (S8)
14b(H),17b(H)-20R-Cholestane (S14)
14b(H),17b(H)-20S-Cholestane (S15)
17a(H)20SC27/C29dia
17a(H)20rc27/C29dia
Unknown Sterane (S18)
13a,17b-20S-Ethyldiacholestane (S19)
14a,17a-20S-Methylcholestane (S20)
14a,17a-20R-Methylcholestane (S24)
14a(H),17a(H)-20S-Ethylcholestane (S25)
14a(H),17a(H)-20R-Ethylcholestane (S28)
14b,17b-20R-Methylcholestane (S22)
14b,17b-20S-Methylcholestane (S23)
14b(H),17b(H)-20R-Ethylcholestane (S26)
14b(H),17b(H)-20S-Ethylcholestane (S27)
C20 Pregnane
C21 20-Methylpregnane
C22 20-Ethylpregnane (a)
C22 20-Ethylpregnane (b)
C26,20S TAS
C26,20R+C27,20S TAS
C28,20S TAS
C27,20R TAS
C28,20R TAS
C29,20S TAS
C29,20R TAS
5b(H)-C27 (20S) MAS+
5b(H)-C27 (20R) MAS+
5a(H)-C27 (20S) MAS
5b(H)-C28 (20S) MAS+
5a(H)-C27 (20R) MAS
5a(H)-C28 (20S) MAS
5b(H)-C28 (20R) MAS+
5b(H)-C29 (20S) MAS+
5a(H)-C29 (20S) MAS
5a(H)-C28 (20R) MAS
5b(H)-C29 (20R) MAS+
5a(H)-C29 (20R) MAS

Surrogates

Naphthalene-d8
Phenanthrene-d10
Benzo[a]pyrene-d12
5B(H)Cholane

Other

Total Organic Carbon (Rep1)
Total Organic Carbon (Rep2)
Total Organic Carbon (Average)
Percent Lipids
Moisture

Table 3. 2022 Analytes quantified in water samples via passive sampling device.

#	Analytes	#	Analytes
1	1,2-dimethylnaphthalene	48	Dibenzo[e,l]pyrene
2	1,4-dimethylnaphthalene	49	Dibenzothiophene
3	1,5-dimethylnaphthalene	50	Fluoranthene
4	1,6and1,3-Dimethylnaphthalene	51	Fluorene
5	1,8-dimethylnaphthalene	52	Indeno[1,2,3-cd]pyrene
6	1-methylnaphthalene	53	Naphthalene
7	1-methylphenanthrene	54	Naphtho[1,2-b]fluoranthene
8	1-methylpyrene	55	Naphtho[2,3-a]pyrene
9	2,3-dimethylanthracene	56	Naphtho[2,3-b]fluoranthene
10	2,6-diethylnaphthalene	57	Naphtho[2,3-e]pyrene
11	2,6-dimethylnaphthalene	58	Naphtho[2,3-j]andNaphtho[1,2-k]fluoranthene
12	2-ethylnaphthalene	59	Naphtho[2,3-k]fluoranthene
13	2-methylanthracene	60	Perylene
14	2-methylnaphthalene	61	Phenanthrene
15	2-methylphenanthrene	62	Pyrene
16	3,6-dimethylphenanthrene	63	Retene
17	5-methylchrysene	64	Triphenylene
18	6-methylchrysene	65	A0/PA0
19	7,12-dimethylbenz[a]anthracene	66	BaA/228
20	9,10-dimethylanthracene	67	BaA/Ch0
21	9-methylanthracene	68	C1-benz[a]anthracenes&chrysenes&triphenylenes
22	Acenaphthene	69	C1-dibenzothiophenes
23	Acenaphthylene	70	C1-fluoranthenes&pyrenes
24	Anthanthrene	71	C1-fluorenes
25	Anthracene	72	C1-naphthalenes
26	Benz[a]anthracene	73	C1-phenanthrenes&anthracenes
27	Benz[j]and[e]aceanthrylene	74	C2-benz[a]anthracenes&chrysenes&triphenylenes
28	Benzo[a]chrysene	75	C2-dibenzothiophenes
29	Benzo[a]fluorene	76	C2-fluoranthenes&pyrenes
30	Benzo[a]pyrene	77	C2-fluorenes
31	Benzo[b]fluoranthene	78	C2-naphthalenes
32	Benzo[b]fluorene	79	C2-phenanthrenes&C2-anthracenes
33	Benzo[b]perylene	80	C3-dibenzothiophenes
34	Benzo[c]fluorene	81	C3-fluorenes
35	Benzo[e]pyrene	82	C3-naphthalenes
36	Benzo[ghi]perylene	83	C3-phenanthrenes&anthracenes
37	Benzo[j]fluoranthene	84	C4-naphthalenes
38	Benzo[k]fluoranthene	85	C4-phenanthrenes&C4-anthracenes
39	Chrysene	86	FL0/FLPY
40	Coronene	87	FL0/PY0
41	Cyclopenta[cd]pyrene	88	FLP1/FLPY0
42	Dibenzo[a,e]fluoranthene	89	FLP1/PY0
43	Dibenzo[a,e]pyrene	90	FLPY/(P2+P3+P4)
44	Dibenzo[a,h]anthracene	91	FLPY0/FLPY01
45	Dibenzo[a,h]pyrene	92	P0/A0
46	Dibenzo[a,i]pyrene	93	PA0/PA01
47	Dibenzo[a,l]pyrene	94	PA1/PA0

Table 4. 2023 Analytes quantified in water samples via passive sampling device.

#	Analyte	#	Analyte
1	1,2-dimethylnaphthalene	48	Dibenzo[e,l]pyrene
2	1,4-dimethylnaphthalene	49	Dibenzothiophene
3	1,5-dimethylnaphthalene	50	Fluoranthene
4	1,6and1,3-Dimethylnaphthalene	51	Fluorene
5	1,8-dimethylnaphthalene	52	Indeno[1,2,3-cd]pyrene
6	1-methylnaphthalene	53	Naphthalene
7	1-methylphenanthrene	54	Naphtho[1,2-b]fluoranthene
8	1-methylpyrene	55	Naphtho[2,3-a]pyrene
9	2,3-dimethylanthracene	56	Naphtho[2,3-b]fluoranthene
10	2,6-diethylnaphthalene	57	Naphtho[2,3-e]pyrene
11	2,6-dimethylnaphthalene	58	Naphtho[2,3-j]andNaphtho[1,2-k]fluoranthene
12	2-ethylnaphthalene	59	Naphtho[2,3-k]fluoranthene
13	2-methylanthracene	60	Perylene
14	2-methylnaphthalene	61	Phenanthrene
15	2-methylphenanthrene	62	Pyrene
16	3,6-dimethylphenanthrene	63	Retene
17	5-methylchrysene	64	Triphenylene
18	6-methylchrysene	65	C1-benz[a]anthracenes&chrysenes&triphenylenes
19	7,12-dimethylbenz[a]anthracene	66	C1-dibenzothiophenes
20	9,10-dimethylanthracene	67	C1-fluoranthenes&pyrenes
21	9-methylanthracene	68	C1-fluorenes
22	Acenaphthene	69	C1-naphthalenes
23	Acenaphthylene	70	C1-phenanthrenes&anthracenes
24	Anthanthrene	71	C2-benz[a]anthracenes&chrysenes&triphenylenes
25	Anthracene	72	C2-dibenzothiophenes
26	Benz[a]anthracene	73	C2-fluoranthenes&pyrenes
27	Benz[j]and[e]aceanthrylene	74	C2-fluorenes
28	Benzo[a]chrysene	75	C2-naphthalenes
29	Benzo[a]fluorene	76	C2-phenanthrenes&C2-anthracenes
30	Benzo[a]pyrene	77	C3-benz[a]anthracenes&chrysenes&triphenylenes
31	Benzo[b]fluoranthene	78	C3-dibenzothiophenes
32	Benzo[b]fluorene	79	C3-fluorenes
33	Benzo[b]perylene	80	C3-naphthalenes
34	Benzo[c]fluorene	81	C3-phenanthrenes&anthracenes
35	Benzo[e]pyrene	82	C4-benz[a]anthracenes&chrysenes&triphenylenes
36	Benzo[ghi]perylene	83	C4-dibenzothiophenes
37	Benzo[j]fluoranthene	84	C4-fluorenes
38	Benzo[k]fluoranthene	85	C4-naphthalenes
39	Chrysene	86	C4-phenanthrenes&C4-anthracenes
40	Coronene		
41	Cyclopenta[cd]pyrene		
42	Dibenzo[a,e]fluoranthene		
43	Dibenzo[a,e]pyrene		
44	Dibenzo[a,h]anthracene		
45	Dibenzo[a,h]pyrene		
46	Dibenzo[a,i]pyrene		
47	Dibenzo[a,l]pyrene		

Table 5. 2022 and 2023 Sediment PAH loads and toxicity comparisons.

	2022 Sediment Samples								2023 Sediment Samples							Acute Toxicity Threshold (ng/g)*	Chronic Toxicity Threshold (ng/g)*
Analyte (ng/g dry weight)	GOC-S-22-1	GOC-S-22-2	GOC-S-22-3	GOC-SAND-22	AMT-S-22-1	AMT-S-22-2	AMT-S-22-3	AMT-SAND-22	GOC-S-22-1-DUP	GOC-S-23-1	GOC-S-23-2	GOC-S-23-3	AMT-S-23-1	AMT-S-23-2	AMT-S-23-3		
Naphthalene	1.77	2.5	2.87	0.319	2.69	1.96	2.57	0.249	2.05	1.46	1.31	1.24	2.34	1.92	2.12	1600000	385000
C1-Naphthalenes	1.46	1.79	2.02	0.242	2.38	1.89	2.55	0.304	1.65	1.26	0.893	0.878	2	2.14	2.02	1850000	444000
C2-Naphthalenes	2.3	2.94	3.12	0.841	4.44	3.25	4.14	0.836	2.58	2.42	2	1.69	4.11	3.38	3.75	2120000	510000
C3-Naphthalenes	1.97	2.72	2.83	0.841	3.71	2.95	3.9	0.836	1.92	2.3	1.75	1.38	3.92	3.76	3.74	2420000	581000
C4-Naphthalenes	1.56	2.25	1.85	0.841	3.12	2.37	2.91	0.836	1.54	1.42	0.996	1.34	1.35	2.42	2.17	2730000	657000
Acenaphthylene	0.257	0.278	0.332	0.841	0.196	0.214	0.381	0.836	0.587	1.71	0.719	0.739	1.1	1.31	1.09	1880000	452000
Acenaphthene	0.569	0.714	0.663	0.841	0.517	0.559	1.26	0.836	0.724	0.636	0.586	0.519	0.785	0.629	0.624	2040000	491000
Fluorene	1.22	1.56	1.61	0.084	1.48	1.27	1.97	0.093	1.13	0.728	0.738	0.669	1.05	1.16	1.27	2240000	538000
C1-Fluorenes	1.38	2.04	2.36	0.841	2.75	2.12	2.68	0.836	1.43	1.22	1.01	0.955	1.91	1.9	2.12	2540000	611000
C2-Fluorenes	1.95	2.47	2.27	0.841	3.42	2.59	2.91	0.836	1.98	1.42	0.996	1.34	1.35	2.15	2.89	2850000	686000
C3-Fluorenes	1.56	1.13	1.11	0.841	5.43	5.35	10.8	0.836	1.54	1.42	0.996	1.34	1.35	1.23	5.91	3200000	769000
Dibenzothiophene	0.447	0.548	0.568	0.035	0.608	0.568	1.1	0.04	0.405	0.311	0.241	0.208	0.535	0.694	0.612	-	-
C1-Dibenzothiophenes	0.626	0.696	0.541	0.841	1.09	0.82	1.2	0.242	0.576	0.316	0.246	0.302	0.895	0.802	0.743	-	-
C2-Dibenzothiophenes	1.27	1.13	1.34	0.841	2.54	2.15	2.86	0.836	1.19	0.822	0.646	0.704	2.48	2.04	2.2	-	-
C3-Dibenzothiophenes	1.56	1.13	1.11	0.841	3.14	2.68	3.5	0.836	1.54	1.42	0.996	1.34	3.3	2.9	2.86	-	-
C4-Dibenzothiophenes	1.56	1.13	1.11	0.841	3.02	2.21	3.38	0.836	1.54	1.42	0.996	1.34	11.3	2.73	2.81	-	-
Phenanthrene	3.71	5.17	5.22	0.151	5.12	4.51	11.8	0.184	3.67	2.45	1.93	1.63	3.55	4.19	4.06	2480000	596000
C1-Phenanthrenes/Anthracenes	6.67	6.6	4.87	0.294	5.84	3.6	6.47	0.306	5.96	2.16	1.74	1.4	4.2	4.54	4.24	2790000	670000
C2-Phenanthrenes/Anthracenes	1.59	1.97	2.05	0.841	4.33	3.16	4.68	0.836	1.83	2.22	0.942	1.26	3.62	3.18	3.55	3100000	746000
C3-Phenanthrenes/Anthracenes	1.08	1.46	1.37	0.841	3.82	2.72	3.7	0.836	1.21	1.15	0.724	0.804	3.87	3.27	2.69	3450000	829000
C4-Phenanthrenes/Anthracenes	1.56	0.786	0.993	0.841	2.35	2.3	2.79	0.836	1.54	0.93	0.996	1.34	3.61	2.32	2.48	3790000	912000
Anthracene	0.618	0.666	0.678	0.841	0.594	0.681	1.78	0.836	0.525	0.781	0.405	0.359	0.934	1.48	1.28	2470000	594000
Fluoranthene	2.96	5.27	6.81	0.065	3.8	3.77	22.1	0.1	5.1	1.96	1.34	1.04	1.83	2.5	2.58	2940000	707000
Pyrene	1.81	3.34	4.25	0.053	2.81	2.68	9.67	0.071	4.71	1.81	1.14	0.885	1.78	2.84	2.82	2900000	697000
C1-Fluoranthenes/Pyrenes	1.91	2.43	2.79	0.841	3.2	2.85	4.78	0.836	3.08	2.68	1.18	1.22	3.52	3.57	3.11	3200000	770000
C2-Fluoranthenes/Pyrenes	1.32	1.92	1.83	0.841	3.32	3.12	5.77	0.836	1.99	1.35	0.932	0.731	2.14	2.54	2.58	-	-
C3-Fluoranthenes/Pyrenes	1.56	1.51	1.54	0.841	3.31	3.09	4.74	0.836	1.54	1.42	0.996	1.34	2.75	2.8	3.05	-	-
C4-Fluoranthenes/Pyrenes	1.56	1.13	1.11	0.841	4.26	3.84	5.31	0.836	1.54	1.42	0.996	1.34	2.89	3.48	3.71	-	-
Benz[a]anthracene	0.714	1.15	1.09	0.026	0.86	1.16	1.02	0.029	1.4	1.97	0.606	0.324	1.29	2.58	1.88	3500000	841000
Chrysene/Triphenylene	1.44	1.96	1.78	0.072	2.08	2.42	5.37	0.076	1.86	2.78	0.819	0.524	2.02	5.31	2.62	3510000	844000
C1-Chrysenes	0.657	1.17	0.944	0.841	2.1	1.83	2.42	0.836	1.19	1.54	0.719	0.663	2.35	2.92	2.9	3870000	929000
C2-Chrysenes	2.94	2.21	1.77	0.841	3.46	3.26	4.37	0.836	2.13	1.42	1.41	1.34	3.79	4.13	4.95	4200000	1010000
C3-Chrysenes	1.56	1.13	1.11	0.841	8.1	1.23	8.83	0.836	1.54	1.42	0.996	1.34	1.35	1.23	1.34	4620000	1110000
C4-Chrysenes	1.56	1.13	1.11	0.841	1.18	1.23	1.23	0.836	1.54	1.42	0.996	1.34	1.35	1.23	1.34	5030000	1210000
Benzo[b]fluoranthene	0.769	1.34	1.17	0.085	1.36	1.38	2.52	0.836	1.77	2.09	0.71	0.348	1.22	2.24	1.87	4070000	979000
Benzo[j]fluoranthene/Benzo[k]fluoranthene	0.609	1.1	0.859	0.841	0.775	1.06	1.15	0.836	1.44	2.12	0.521	0.313	1.11	2.11	1.64	4080000	981000
Benzo[e]pyrene	0.616	1.09	0.919	0.841	1.24	1.22	1.56	0.836	1.3	1.84	0.603	0.426	1.24	2.2	2.08	4020000	967000
Benzo[a]pyrene	0.432	0.934	0.719	0.841	0.822	1.19	0.689	0.836	1.48	1.94	0.67	0.348	1.17	2.3	1.8	4020000	965000
Indeno[1,2,3-cd]pyrene	0.448	0.545	0.426	0.841	0.59	0.63	0.548	0.836	0.872	1.96	0.455	0.312	1.16	2.35	1.85	4620000	1110000
Dibenz[a,h]anthracene/Dibenz[a,c]anthracene	0.261	0.18	0.15	0.841	0.126	0.222	0.172	0.836	0.256	1.14	0.2	0.11	0.468	1.23	0.878	4660000	1120000
Benzo[g,h,i]perylene	0.5	0.78	0.593	0.841	1.18	1.04	1.04	0.836	1.08	2	0.503	0.391	1.32	2.49	1.96	4540000	1090000

Table 5. 2022 and 2023 Sediment PAH loads and toxicity comparisons.

	2022 Sediment Samples								2023 Sediment Samples							Acute Toxicity Threshold (ng/g)*	Chronic Toxicity Threshold (ng/g)*
Analyte (ng/g dry weight)	GOC-S-22-1	GOC-S-22-2	GOC-S-22-3	GOC-SAND-22	AMT-S-22-1	AMT-S-22-2	AMT-S-22-3	AMT-SAND-22	GOC-S-22-1-DUP	GOC-S-23-1	GOC-S-23-2	GOC-S-23-3	AMT-S-23-1	AMT-S-23-2	AMT-S-23-3		
Total Organic Carbon (%)	0.459	0.629	0.601	NA	0.487	0.463	0.547	NA	0.491	0.509	0.56	0.452	0.626	0.52	0.596		
Ratio of Acute Benchmark to TOC	3.8E-05	3.6E-05	3.8E-05	-	6E-05	5.1E-05	8.4E-05	-	4.4E-05	3.6E-05	2E-05	2.3E-05	3.7E-05	5.2E-05	4.6E-05		
Risk for Acute Toxic Effects	Low	Low	Low	-	Low	Low	Low	-	Low	Low	Low	Low	Low	Low	Low		
Ratio of Chronic Benchmark to	0.00016	0.00015	0.00016	-	0.00025	0.00021	0.00035	-	0.00018	0.00015	8.3E-05	9.6E-05	0.00016	0.00022	0.00019		
Risk for Chronic Toxic Effects	Low	Low	Low	-	Low	Low	Low	-	Low	Low	Low	Low	Low	Low	Low		
Sum 42 PAHs	60.3	72.0	71.9	26.7	107.2	87.1	162.6	26.8	72.9	64.3	37.6	37.1	94.3	100.2	100.2		
Sum 16 PAHs	18.1	27.5	29.2	7.6	25.0	24.7	64.0	8.3	28.7	27.5	12.7	9.8	23.1	36.6	30.3		
Low Molecular weight PAH[1]	36.7	41.7	40.9	14.6	62.6	49.9	79.3	14.0	37.1	30.0	21.9	22.8	59.6	50.1	55.2		
High Molecular weight PAH[2]	23.6	30.3	31.0	12.1	44.6	37.2	83.3	12.8	35.8	34.3	15.8	14.3	34.7	50.1	45.0		
%LMW PAH	60.8	57.9	56.9	54.7	58.4	57.3	48.8	52.1	50.9	46.6	58.1	61.4	63.2	50.0	55.1		
%HMW PAH	39.2	42.1	43.1	45.3	41.6	42.7	51.2	47.9	49.1	53.4	41.9	38.6	36.8	50.0	44.9		
Sum of Carcinogenic PAHs [3]	4.7	7.2	6.2	3.5	6.6	8.1	11.5	4.3	9.1	14.0	4.0	2.3	8.4	18.1	12.5		

* EPA Sediment Toxicity Benchmarks : https://archive.epa.gov/emergency/Bpspill/web/html/sediment-Benchmarks.html

[1] Low Molecular Weight PAHs : naphthalenes - phenanthrenes (2-3-ring PAH)

[2] High Molecular weight PAHs: fluoranthene - Benzo (g,h,i)perylene (3-6 ring PAH)

[3] Carcinogenic PAHs: Benz[a]anthracene, Chrysene/Triphenylene, Benzo[b]fluoranthene, Benzo[j]fluoranthene/Benzo[k]fluoranthene, Benzo[a]pyrene, Indeno[1,2,3-cd]pyrene, Dibenz[a,h]anthracene/Dibenz[a,c]anthracene

Table 6. 2022 and 2023 tissue samples PAH summaries.

Sample	Sum 42 PAH (wet weight)	Sum 42 PAH (dry weight)	Sum 42 PAH (lipid weight)	Sum 16 PAH[1] (wet weight)	Sum 16 PAH (dry weight)	Sum low molecular weight PAH[2]	Sum high molecular weight PAH[3]	% low molecular weight PAH	% high molecular weight PAH	Sum of carcin-ogenic PAH4
JAC-B-22-1	9.60	55.15	278.95	7.45	42.83	5.71	3.89	59.51	40.49	1.60
JAC-B-22-2	5.72	46.90	301.16	4.59	37.61	3.73	1.99	65.24	34.76	0.46
JAC-B-22-3	5.05	34.60	237.14	4.43	30.34	3.75	1.30	74.26	25.74	0.40
SAW-B-22-1	7.01	57.01	381.09	3.88	31.54	5.93	1.09	84.53	15.47	0.29
SAW-B-22-2	4.75	32.95	227.03	4.16	28.89	3.46	1.28	72.96	27.04	0.39
SAW-B-22-3	5.99	44.70	290.78	3.81	28.44	4.95	1.04	82.67	17.33	0.25
GOC-B-22-1	7.05	45.20	284.31	5.74	36.78	4.80	2.26	68.00	32.00	0.53
GOC-B-22-2	6.38	45.92	320.75	5.23	37.61	4.22	2.16	66.11	33.89	0.55
GOC-B-22-3	8.78	65.54	513.57	5.08	37.87	6.77	2.02	77.06	22.94	0.58
RED-B-22-1	23.24	173.43	1408.48	7.77	57.97	18.28	4.97	78.64	21.36	0.50
RED-B-22-2	15.93	136.11	925.87	7.30	62.43	10.73	5.20	67.35	32.65	2.70
RED-B-22-3	18.38	159.83	1038.47	5.88	51.16	14.38	4.01	78.21	21.79	1.18
RED-B-22-2-DUP	16.33	120.05	850.36	7.33	53.90	11.02	5.31	67.48	32.52	2.72
JAC-B-23-1	6.30	-	-	4.91	-	4.25	2.04	67.56	32.44	0.69
JAC-B-23-2	6.30	42.58	263.68	5.01	33.85	4.75	1.56	75.33	24.67	0.40
JAC-B-23-3	6.04	35.30	183.50	4.56	26.69	4.03	2.01	66.74	33.26	0.59
AMT-B-23-1	6.15	39.69	232.15	4.60	29.70	4.80	1.35	78.01	21.99	0.27
AMT-B-23-2	6.03	35.45	171.71	4.32	25.44	5.03	1.00	83.47	16.53	0.23
AMT-B-23-3	5.90	34.10	174.56	4.57	26.40	4.41	1.49	74.71	25.29	0.33
GOC-B-23-1	7.42	43.65	234.84	5.61	33.02	5.66	1.76	76.32	23.68	0.54
GOC-B-23-2	7.59	43.59	226.42	5.92	34.05	5.58	2.00	73.61	26.39	0.55
GOC-B-23-3	10.44	56.42	278.35	6.11	33.04	8.48	1.96	81.26	18.74	0.55
DII-B-23-1	32.14	158.33	728.80	27.98	137.83	12.98	19.16	40.39	59.61	10.48
DII-B-23-2	3.43	17.31	-	2.40	12.12	2.80	0.63	81.56	18.44	0.15
DII-B-23-3	2.85	-	115.85	2.53	-	2.19	0.66	76.98	23.02	0.18
KNH-B-23-1	7.24	43.62	274.28	5.83	35.13	4.98	2.26	68.80	31.20	0.50
KNH-B-23-2	2.85	18.50	175.86	2.08	13.47	2.28	0.57	79.85	20.15	0.18
KNH-B-23-3	73.76	501.77	-	62.20	423.13	26.70	47.06	36.20	63.80	26.77
SLB-B-23-1	6.47	38.28	306.59	5.45	32.23	3.45	3.02	53.39	46.61	1.49
SLB-B-23-2	3.50	21.89	152.30	2.63	16.46	2.83	0.68	80.65	19.35	0.21
SLB-B-23-3	2.92	17.19	135.32	2.15	12.65	2.33	0.59	79.71	20.29	0.17
RED-B-23-1	17.54	110.30	759.18	7.01	44.08	12.05	5.49	68.71	31.29	0.43
RED-B-23-2	29.73	203.65	1327.37	13.98	95.73	20.36	9.37	68.48	31.52	4.27
RED-B-23-3	19.58	123.11	755.79	7.71	48.48	13.50	6.08	68.96	31.04	0.52
ZAB-B-23-1	4.04	23.22	171.23	2.85	16.35	3.34	0.70	82.68	17.32	0.17
ZAB-B-23-2	4.71	32.06	157.63	3.01	20.48	4.07	0.65	86.31	13.69	0.13
ZAB-B-23-3	12.63	66.85	473.18	9.58	50.70	7.35	5.28	58.21	41.79	4.34
ZAB2-B-23-1	5.79	40.47	208.17	4.37	30.57	4.07	1.72	70.30	29.70	0.59
ZAB2-B-23-2	5.47	36.25	316.36	5.09	33.69	3.20	2.28	58.41	41.59	1.14
ZAB2-B-23-3	7.92	48.61	257.24	6.06	37.17	5.31	2.61	67.07	32.93	1.06
SHB-B-23-1	3.84	22.60	199.07	2.56	15.06	3.12	0.72	81.18	18.82	0.15
SHB-B-23-2	3.78	22.76	119.56	2.57	15.48	3.38	0.40	89.33	10.67	0.00
SHB-B-23-3	5.24	29.76	256.76	3.40	19.33	4.27	0.97	81.56	18.44	0.21

[1] 16 EPA Priority PAHs - naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo[a]anthracene, chrysene, benzo[b]fluoranthene, benzo[k]fluoranthene , benzo[a]pyrene, benzo[g,h,i]perylene, indeno[1,2,3-c,d]pyrene, and dibenz[a,h]anthracene

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

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

[4] Carcinogenic PAHs: benzo[a]pyrene, benz[a]anthracene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenz[a,h]anthracene, indeno[1,2,3-cd]pyrene

Table 7. 2022 Water PAH concentrations quantified via passive sampling device.

Analyte (ng/L C-Free)	GOC 01	GOC 02	GOC 03	SAW 01	SAW 02	SAW 03	JAC 01	JAC 02	JAC 03	Field Blk SAW	Field Blk JAC	Trip Blk Deploy	Trip Blk Retrieve
Naphthalene	1.12	1.41	1.15	-	-	-	-	-	-	7.1	7.3	-	7.2
C1-naphthalenes	-	-	-	-	-	-	-	-	-	22.9	29	-	17.5
C2-naphthalenes	2.57	3.42	3.67	4.57	3.61	4.13	3.38	3.84	4.22	16.6	21.4	-	9.41
C3-naphthalenes	11.9	15	17.4	18.4	20.2	16.9	14.9	21.2	19.7	-	-	-	-
C4-naphthalenes	23.6	24.1	34.9	21.9	18.7	25.7	20.9	32.6	34.1	-	-	-	-
Acenaphthylene	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	0.176	0.265	0.223	0.00489	0.0699	0.0409	0.0834	0.0851	0.0847	1.07	1.07	1.07	1.07
Fluorene	0.14	0.174	0.19	0.0891	0.0851	0.0939	0.082	0.119	0.134	1.55	0.81	-	-
C1-fluorenes	0.112	0.147	0.179	0.115	0.0925	0.148	0.0828	0.181	0.152	8.86	5.77	-	-
C2-fluorenes	0.452	0.0216	0.605	0.347	0.34	0.3	0.359	0.68	0.555	-	-	-	-
C3-fluorenes	0.638	0.664	0.706	0.522	0.426	0.491	0.443	0.764	0.776	-	-	-	-
Anthracene	0.00106	0.00125	0.00123	0.0134	0.0157	0.00209	0.00155	0.00208	0.00216	1.05	1.05	1.05	1.05
Phenanthrene	0.271	0.392	0.384	0.162	0.163	0.185	0.155	0.25	0.279	-	-	-	-
C1-phenanthrenes&anthracenes	0.1	0.156	0.148	0.14	0.137	0.155	0.108	0.195	0.191	-	-	-	-
C3-phenanthrenes&anthracenes	-	-	-	0.77	0.444	0.625	0.364	0.614	-	-	-	-	-
Dibenzothiophene	0.0128	0.018	0.017	0.011	0.0121	0.0128	0.00866	0.0135	0.0157	0.75	0.24	0.24	0.33
C1-dibenzothiophenes	0.018	0.0234	0.0223	0.0419	0.0328	0.0444	0.028	0.0469	0.0377	-	-	-	-
C2-dibenzothiophenes	0.0179	0.02	0.025	0.0503	0.0381	0.041	0.0324	0.0527	0.0549	-	-	-	-
C3-dibenzothiophenes	-	-	-	-	-	-	-	-	0.153	-	-	-	-
Fluoranthene	0.106	0.216	0.201	0.0678	0.062	0.0704	0.0672	0.12	0.131	0.54	0.54	0.54	0.54
Pyrene	0.0223	0.0404	0.0402	0.014	0.012	0.0158	0.0123	0.0252	0.0216	0.42	0.42	0.42	0.42
C1-fluoranthenes&pyrenes	0.0219	0.0443	0.0265	0.0366	-	-	-	-	-	-	-	-	-
C2-fluoranthenes&pyrenes	-	-	-	-	-	-	-	-	-	-	-	-	-
Benz[a]anthracene	0.00206	0.00488	0.00425	0.000998	0.000978	0.00105	0.000669	0.00104	0.00109	0.75	0.75	0.75	0.75
Perylene	0.000332	0.000635	0.00061	0.00158	0.00155	0.00166	0.00106	0.00164	0.00173	1	1	1	1
Benzo[b]fluoranthene	0.00102	0.00226	0.00194	0.000495	0.000485	0.00052	0.000331	0.000514	0.000541	0.37	0.37	0.37	0.37
Benzo[e]pyrene	0.000871	0.000494	0.000474	0.00123	0.00121	0.0013	0.000822	0.00128	0.00135	0.71	0.71	0.71	0.71
Benzo[a]pyrene	0.000373	0.000713	0.000685	0.00177	0.00174	0.00186	0.00118	0.00184	0.00194	1.18	1.18	1.18	1.18
Indeno[1,2,3-cd]pyrene	0.000109	0.000209	0.00020	0.000521	0.00051	0.000548	0.000348	0.000542	0.00057	0.26	0.26	0.26	0.26
Sum 42 PAHs[1]	41.284	46.122	59.896	47.262	44.447	48.962	41.012	60.795	60.615	65.110	71.870	7.590	41.790
Sum 42 PAH w/o Naphthalene	2.094	2.192	2.776	2.392	1.937	2.232	1.832	3.155	2.595	18.510	14.170	7.590	7.680
Sum 16 PAHs[2]	1.841	2.508	2.198	0.358	0.414	0.415	0.406	0.608	0.660	16.000	15.460	7.350	14.550
Sum low molecular weight PAH[3]	41.129	45.812	59.621	47.137	44.366	48.869	40.928	60.643	60.455	59.880	66.640	2.360	36.560
Sum high molecular weight PAH[4]	0.155	0.310	0.276	0.125	0.080	0.093	0.084	0.152	0.160	5.230	5.230	5.230	5.230
Percent low molecular weight PAH	0.996	0.993	0.995	0.997	0.998	0.998	0.998	0.997	0.997	0.920	0.927	0.311	0.875
Percent high molecular weight PAH	0.004	0.007	0.005	0.003	0.002	0.002	0.002	0.003	0.003	0.080	0.073	0.689	0.125
Sum of Carcinogenic PAHs[5]	0.004	0.008	0.007	0.004	0.004	0.004	0.003	0.004	0.004	2.560	2.560	2.560	2.560
Analyte Count	24	24	24	24	23	23	23	23	23	16	16	11	14
Percent Naphthalene	0.949	0.952	0.954	0.949	0.956	0.954	0.955	0.948	0.957	0.716	0.803	0.000	0.816

[1] All PAHs listed

[2] 16 EPA Priority PAHs - naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo[a]anthracene, chrysene, benzo[b]fluoranthene, benzo[k]fluoranthene , benzo[a]pyrene, benzo[g,h,i]perylene, indeno[1,2,3-c,d]pyrene, and dibenz[a,h]anthracene

[3] Low molecular weight PAHs:napthalenes - phenanthrenes (2-3-ring PAH)

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

[5] Carcinogenic PAHs: benzo[a]pyrene, benz[a]anthracene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenz[a,h]anthracene, indeno[1,2,3-cd]pyrene

Table 8. 2023 Water PAH concentrations quantified via passive sampling device

Analyte (ng/L C-Free)	GOC_PSD_23_1 F23-06	GOC_PSD_23_2 F23-06	GOC_PSD_23_3 F23-06	DII_PSD_23_1 F23-06	DII_PSD_23_2 F23-06	DII_PSD_23_3 F23-06	JAC_PSD_23_1 F23-06	JAC_PSD_23_2 F23-06	JAC_PSD_23_3 F23-06	SAW_PSD_23_1 F23-06	SAW_PSD_23_2 F23-06	SAW_PSD_23_3 F23-06	F23-06 trip blank 1	F23-06 trip blank 02	F23-06 field blank 5/6/23	F23-06 field blank 6/3/23
Naphthalene	2.47	2.31	1.83	1.6	0.936	1.25	1.18	1.67	1.84	12.2	5.4	3.2	23.5	23.5	48.9	17.2
C1-naphthalenes	1.67	1.46	1.68	0.403	0.276	0.368	1.49	1.45	1.08	1.31	1.01	1.03	15.7	15	30.7	11.3
C2-naphthalenes	5.69	4.6	5.72	1.44	1.75	1.92	4.94	4.43	5.54	5.65	4.6	4.11	26.2	25	38.5	26.6
C3-naphthalenes	23.9	21.3	30.4	12.6	9.12	9.26	20.8	17.9	21	31.8	21.8	20	41.8	37.8	67.6	43
C4-naphthalenes	39.2	36.9	56.7	25.4	16	16.4	35	35.5	49.5	57.3	40.9	36.8	-	-	-	-
Acenaphthylene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	0.245	0.204	0.261	-	-	-	0.181	-	-	-	-	-	-	-	-	-
Fluorene	0.0905	0.0907	-	-	-	-	0.0668	0.0651	0.101	0.15	0.0926	0.0956	-	-	-	-
C1-fluorenes	0.605	0.704	0.43	1.13	0.283	0.156	0.502	1.5	0.457	0.617	0.478	0.479	-	-	-	-
C2-fluorenes	1.99	2.57	3.22	7.16	1.15	1.24	2.76	8	5.37	3.04	3.13	2.76	-	-	-	-
C3-fluorenes	-	-	1.4	6.77	-	-	1.42	7.15	1.81	2.15	1.6	2.8	-	-	-	-
Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	0.242	0.254	0.264	0.0711	0.0684	0.0937	0.267	0.248	0.313	0.284	0.22	0.255	-	-	-	-
C1-phenanthrenes&anthracenes	0.159	0.166	0.172	0.122	0.0677	0.101	0.166	0.206	0.197	0.23	0.161	0.198	-	-	-	-
C3-phenanthrenes&anthracenes	0.598	0.577	0.581	0.583	-	-	-	1.05	1.09	1.16	0.984	0.886	-	-	-	-
Dibenzothiophene	0.012	0.0109	0.012	0.0218	-	-	0.00963	0.0253	0.0222	0.024	0.0202	0.024	-	-	-	-
C1-dibenzothiophenes	0.0353	0.0417	0.0441	0.215	0.0191	0.0261	0.0417	0.225	0.176	0.191	0.158	0.189	0	0	0	3.39
C2-dibenzothiophenes	0.0381	0.0267	0.0427	0.46	-	-	0.0486	0.364	0.306	0.36	0.285	0.312	-	-	-	-
C3-dibenzothiophenes	-	-	-	0.348	-	-	-	0.283	0.206	0.287	0.176	0.213	-	-	-	-
C4-dibenzothiophenes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	0.136	0.129	0.14	0.016	0.0127	0.0175	0.115	0.124	0.142	0.0975	0.0742	0.0893	-	-	-	-
Pyrene	0.0295	0.0305	0.0313	-	-	-	0.0198	0.019	0.0294	0.0151	0.0123	0.0159	-	-	-	-
C1-fluoranthenes&pyrenes	0.0474	0.0371	0.0298	-	-	-	-	0.0617	0.057	0.0575	0.0278	0.0483	-	-	-	-
C2-fluoranthenes&pyrenes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benz[a]anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perylene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[b]fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[e]pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[a]pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno[1,2,3-cd]pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sum 42 PAHs[1]	77.1578	71.4116	102.9579	58.3399	29.6829	30.8323	69.00753	80.2711	89.2366	116.9231	81.1291	73.5051	107.2	101.3	185.7	101.49
Sum 42 PAH w/o Naphthalene	4.228	4.842	6.628	16.897	1.601	1.634	5.598	19.321	10.277	8.663	7.419	8.365	0.000	0.000	0.000	3.390
Sum 16 PAHs[2]	3.213	3.018	2.526	1.687	1.017	1.361	1.830	2.126	2.425	12.747	5.799	3.656	23.500	23.500	48.900	17.200
Sum low molecular weight PAH[3]	76.945	71.215	102.757	58.324	29.670	30.815	68.873	80.066	89.008	116.753	81.015	73.352	107.200	101.300	185.700	101.490
Sum high molecular weight PAH[4]	0.213	0.197	0.201	0.016	0.013	0.018	0.135	0.205	0.228	0.170	0.114	0.154	0.000	0.000	0.000	0.000
Percent low molecular weight PAH	0.997	0.997	0.998	1.000	1.000	0.999	0.998	0.997	0.997	0.999	0.999	0.998	1.000	1.000	1.000	1.000
Percent high molecular weight PAH	0.003	0.003	0.002	0.000	0.000	0.001	0.002	0.003	0.003	0.001	0.001	0.002	0.000	0.000	0.000	0.000
Sum of Carcinogenic PAHs[5]	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Analyte Count	18	18	18	16	11	11	17	19	19	19	19	19	5	5	5	5
Percent Naphthalene	0.945	0.932	0.936	0.710	0.946	0.947	0.919	0.759	0.885	0.926	0.909	0.886	1.000	1.000	1.000	0.967

[1] All PAHs listed

[2] 16 EPA Priority PAHs - naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo[a]anthracene, chrysene, benzo[b]fluoranthene, benzo[k]fluoranthene , benzo[a]pyrene, benzo[g,h,i]perylene, indeno[1,2,3-c,d]pyrene, and dibenz[a,h]anthracene

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

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

[5] Carcinogenic PAHs: benzo[a]pyrene, benz[a]anthracene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenz[a,h]anthracene, indeno[1,2,3-cd]pyrene

Table 9. Saturated hydrocarbon (SHC) totals and diagnostic ratios of sediment and mussel tissues sampled in 2022 and 2023.

		Saturated Hydrocarbons (µg/g)		Diagonistic Ratios			
	Sample ID	Total Petroleum Hydrocarbons (C9-C44)	Total Saturated Hydrocarbons	Ratio of T15/T19[1]	Ratio of Pristane/ Phytane[2]	Ratio of Pristane/ C17[3]	Ratio of Phytane/ C18[4]
Sediments	GOC-S-22-1	5.25	1.75	1.005	0.857	0.500	0.636
	GOC-S-22-2	21.6	2.7	0.615	1.833	0.846	0.667
	GOC-S-22-3	22.6	2.38	0.713	1.833	0.786	0.667
	GOC-SAND-22	0.213	0.052	-	-	-	-
	AMT-S-22-1	38.6	2.41	0.648	2.700	1.350	0.714
	AMT-S-22-2	28.5	1.43	0.569	0.917	0.423	0.857
	AMT-S-22-3	33.3	2.38	0.528	3.636	2.222	1.100
	AMT-SAND-22	-	0.052	-	-	-	-
	GOC-S-22-1-DUP	5.57	1.68	0.608	1.400	0.778	0.625
	GOC-S-23-1	19.1	2.18	-	-	0.818	-
	GOC-S-23-2	32.2	3.27	0.681	4.667	1.167	0.500
	GOC-S-23-3	21.5	1.63	-	-	0.500	-
	AMT-S-23-1	69.6	2.1	0.540	1.154	0.214	1.444
	AMT-S-23-2	44.4	1.66	0.542	1.500	0.191	0.667
	AMT-S-23-3	63	2.08	0.527	1.100	0.183	1.000
Pacific Blue Mussel Tissue*	JAC-B-22-1	1.45	0.92	-	14.286	1.887	0.304
	JAC-B-22-2	-	0.689	-	15.250	1.794	0.222
	JAC-B-22-3	-	0.586	-	20.667	2.000	0.231
	SAW-B-22-1	-	0.677	-	9.800	1.690	0.294
	SAW-B-22-2	-	0.607	-	12.250	1.400	0.235
	SAW-B-22-3	-	0.685	-	22.000	1.467	0.231
	GOC-B-22-1	0.488	0.768	-	10.500	1.400	0.400
	GOC-B-22-2	-	0.716	-	10.800	1.256	0.294
	GOC-B-22-3	6.09	0.646	-	8.800	1.100	0.357
	RED-B-22-1	13.5	0.786	-	3.556	0.696	0.529
	RED-B-22-2	8.75	0.467	-	4.167	0.926	0.667
	RED-B-22-3	12.2	0.692	-	3.750	0.732	0.500
	RED-B-22-2-DUP	11.4	0.582	-	3.250	0.765	0.667
	JAC-B-23-1	8.88	2.9	-	41.400	4.929	0.385
	JAC-B-23-2	3.73	1.65	-	29.500	3.218	0.545
	JAC-B-23-3	3.16	1.57	0.774	32.500	3.250	0.308
	AMT-B-23-1	7.41	4.11	0.361	29.600	2.596	0.385
	AMT-B-23-2	0.961	1.59	-	35.600	3.179	0.357
	AMT-B-23-3	2.44	1.41	0.866	-	2.940	-
	GOC-B-23-1	3.6	3.64	-	14.500	2.109	0.667
	GOC-B-23-2	0.64	1.73	0.740	21.429	2.586	0.778
	GOC-B-23-3	1.92	1.88	-	29.857	2.155	0.778
	DII-B-23-1	3.19	3.64	-	-	3.533	-
	DII-B-23-2	10.1	2.73	-	114.500	5.089	0.154
	DII-B-23-3	7.02	2.38	0.570	-	4.556	-
	KNH-B-23-1	17.8	3.32	-	-	0.658	-
	KNH-B-23-2	7.62	1.77	-	-	0.904	-

Table 9. Saturated hydrocarbon (SHC) totals and diagnostic ratios of sediment and mussel tissues sampled in 2022 and 2023.

	Saturated Hydrocarbons (µg/g)		Diagonistic Ratios			
Sample ID	Total Petroleum Hydrocarbons (C9-C44)	Total Saturated Hydrocarbons	Ratio of T15/T19[1]	Ratio of Pristane/ Phytane[2]	Ratio of Pristane/ C17[3]	Ratio of Phytane/ C18[4]
KNH-B-23-3	18.9	5.61	-	-	0.836	-
SLB-B-23-1	-	2.91	-	-	43.429	-
SLB-B-23-2	-	1.69	-	-	19.921	-
SLB-B-23-3	-	1.68	-	-	17.400	-
RED-B-23-1	3.35	1.48	1.107	2.085	2.722	3.615
RED-B-23-2	4.1	1.73	0.860	2.214	3.263	4.000
RED-B-23-3	4.91	1.49	0.741	2.313	2.581	4.364
ZAB-B-23-1	9.91	3.32	-	-	1.353	-
ZAB-B-23-2	7.35	3.27	-	-	1.294	-
ZAB-B-23-3	9.1	3.51	-	-	1.432	-
ZAB2-B-23-1	1.07	3.41	-	-	9.667	-
ZAB2-B-23-2	12.3	3.07	-	-	10.383	-
ZAB2-B-23-3	9.81	3.34	-	-	10.542	-
SHB-B-23-1	5.57	1.41	-	8.333	0.284	0.300
SHB-B-23-2	5.75	1.42	-	5.750	0.295	0.308
SHB-B-23-3	9.16	1.63	-	8.000	0.296	0.235
Whole ANS Crude Oil	563000	77351.80	0.557	1.729	0.863	0.578

* Wet weight

[1] T15-Norhopane to T19-Hopane is a diagnostic ratio that identifies crude oil presence

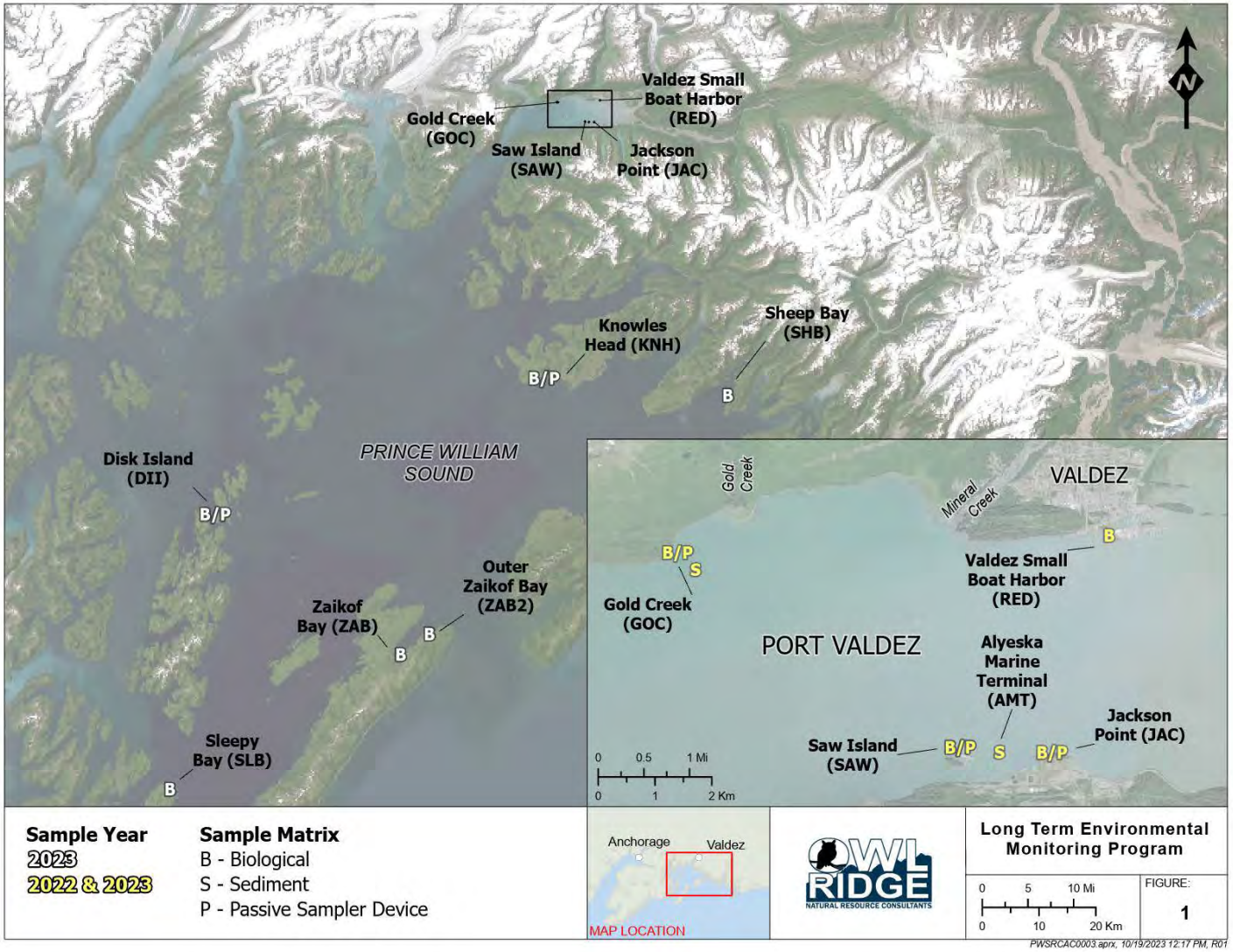
[2] Higher values are indicative of greater marine biogenic sources over oil

[3] Higher values are indicative of greater weathering for oil and biogenic mixtures

[4] Higher values are indicative of oil-derived material and microbial degradation of the straight-chain alkanes

FIGURES

Figure 1. Long-Term Environmental Monitoring Program sites from 2022 and 2023 campaign.



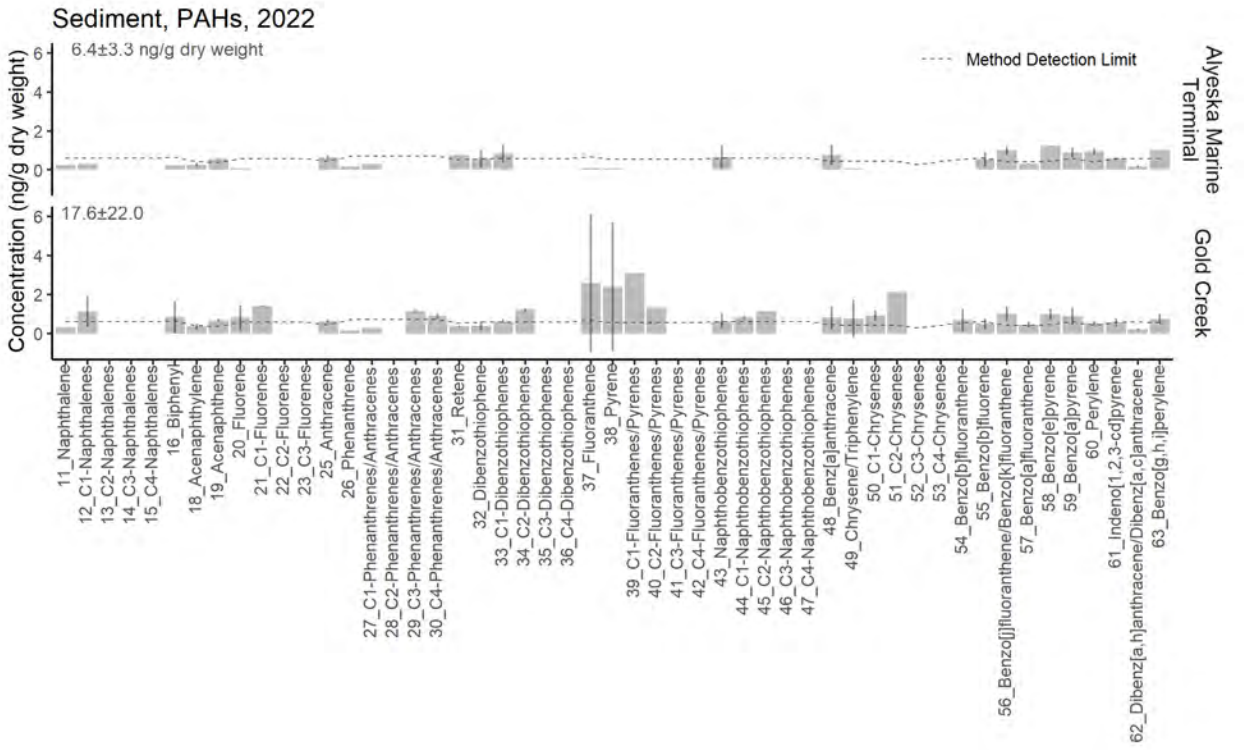


Figure 2. PAH profiles from 2022 sediment samples plotted by mean ± 1 standard deviation. The analyte-specific method detection limit is superimposed as a dashed line. Sum 43 PAH values (mean ± 1 standard deviation) are found in the upper left corner of each site profile.

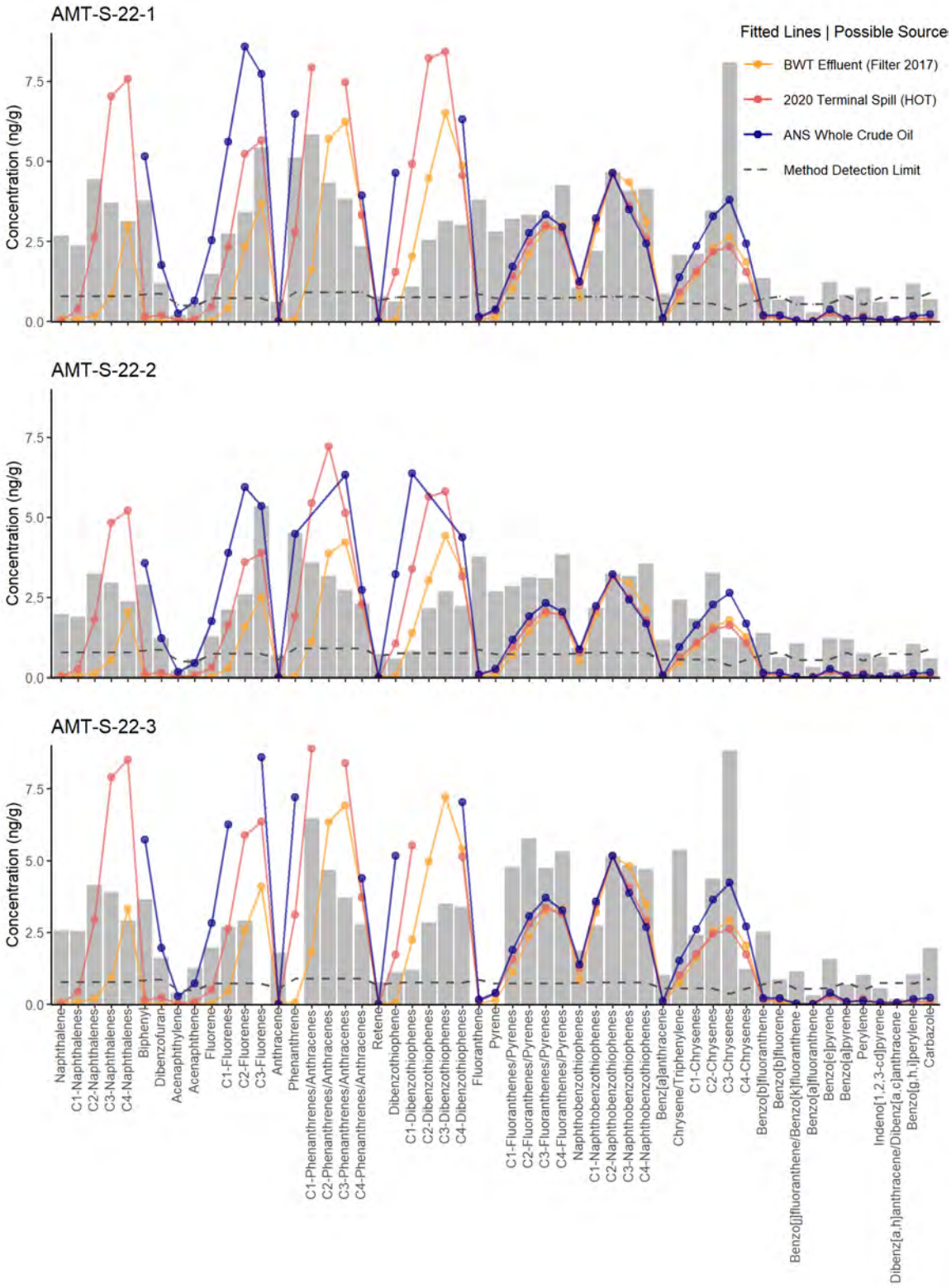


Figure 3. 2022 PAH profiles from individual sediment samples at the Valdez Marine Terminal (AMT) with three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines.

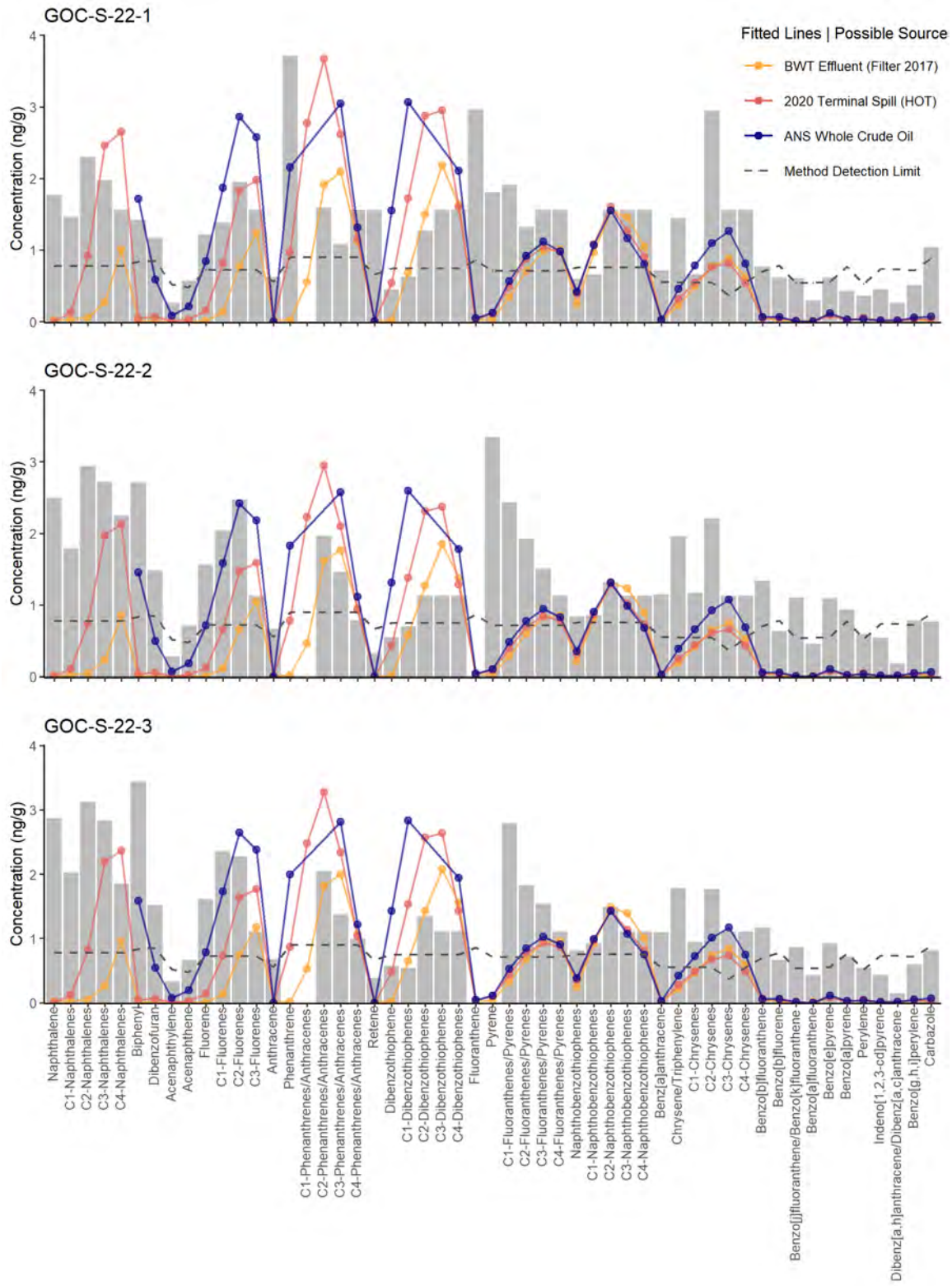


Figure 4. 2022 PAH profiles from individual sediment samples at Gold Creek (GOC) with the three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines.

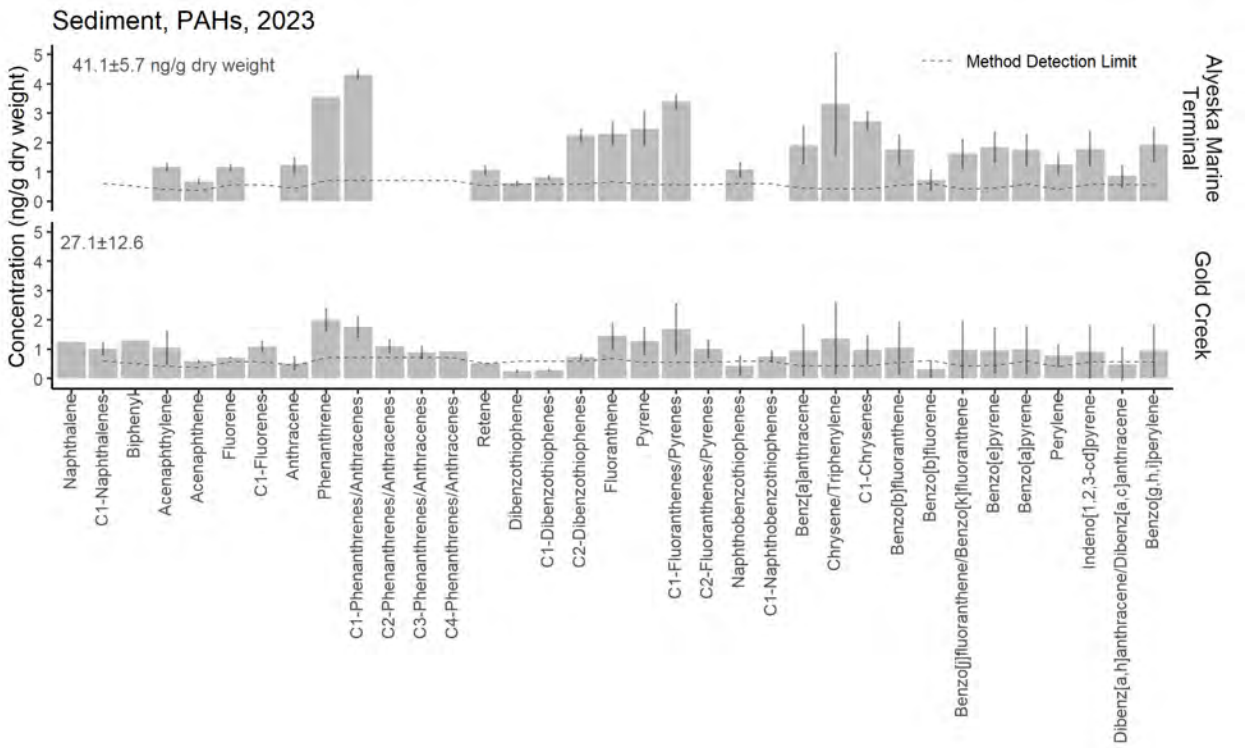


Figure 5. PAH profiles from 2023 sediment samples plotted by mean ± 1 standard deviation. The analyte-specific method detection limit is superimposed as a dashed line. Sum 43 PAH values (mean ± 1 standard deviation) are found in the upper left corner of each site profile.

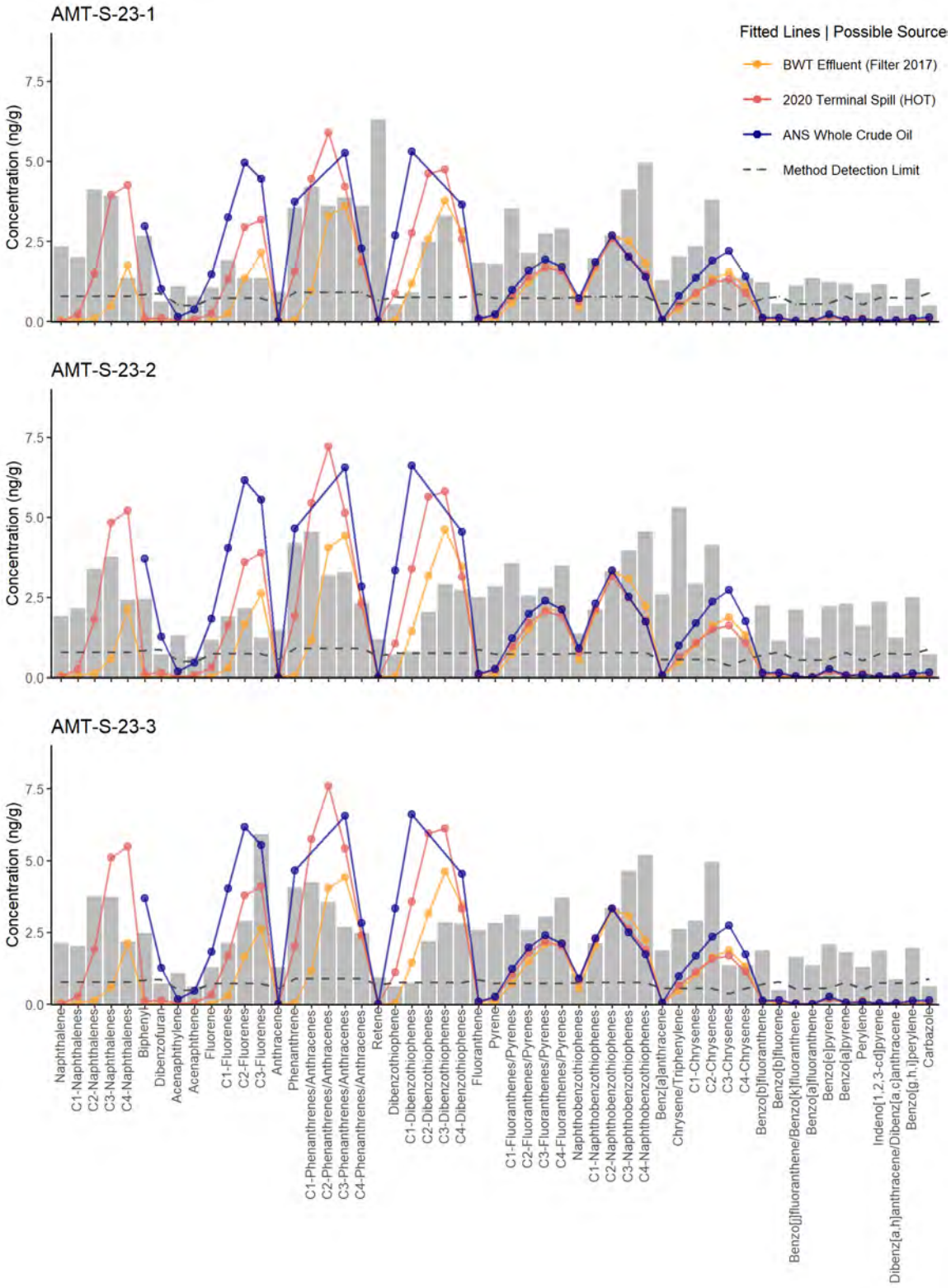


Figure 6. 2023 PAH profiles from individual sediment samples at Valdez Marine Terminal (AMT) with the three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines.

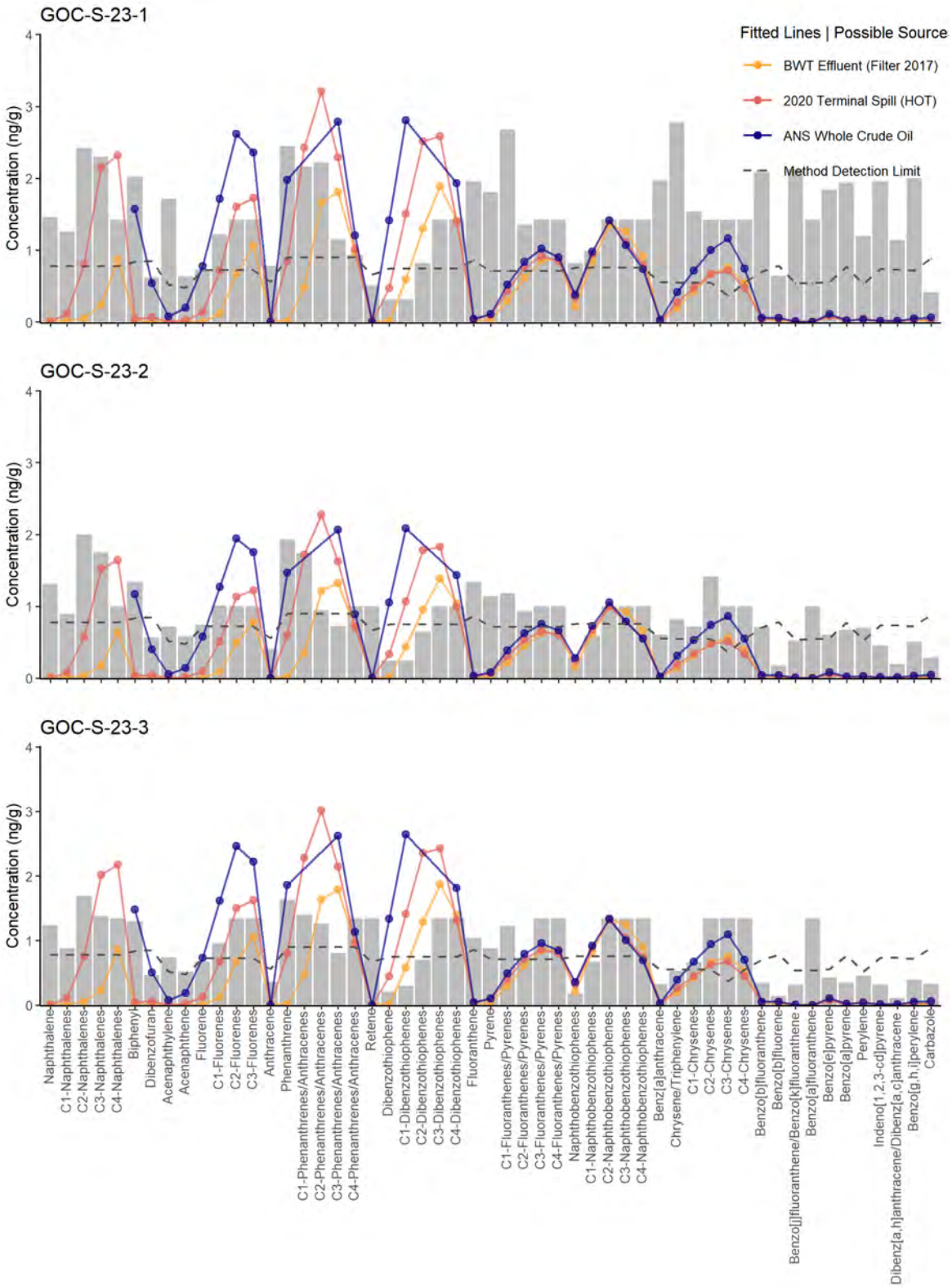


Figure 7. 2023 PAH profiles from individual sediment samples at Gold Creek (GOC) with the three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines.

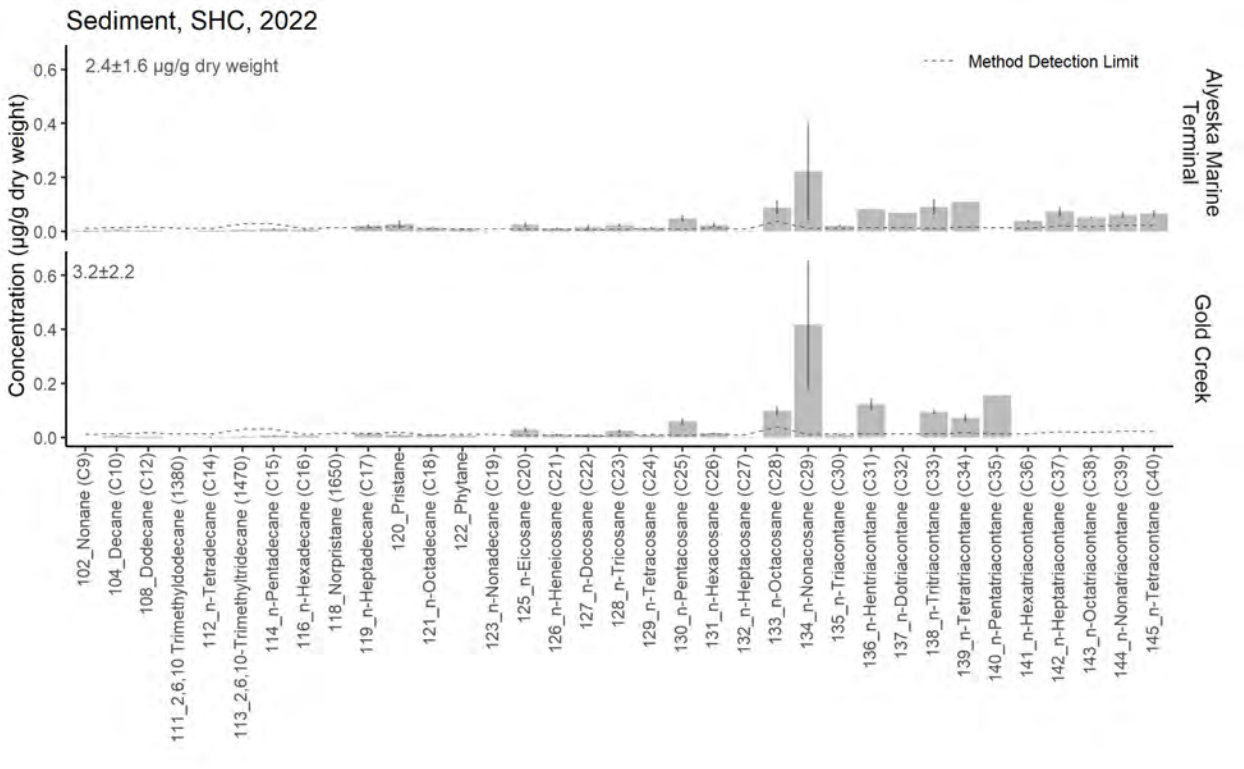


Figure 8. 2022 Saturated hydrocarbons (SHC) profiles from sediment samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line. Sum SHC values (mean ± 1 standard deviation) are found in the upper left corner of each site profile.

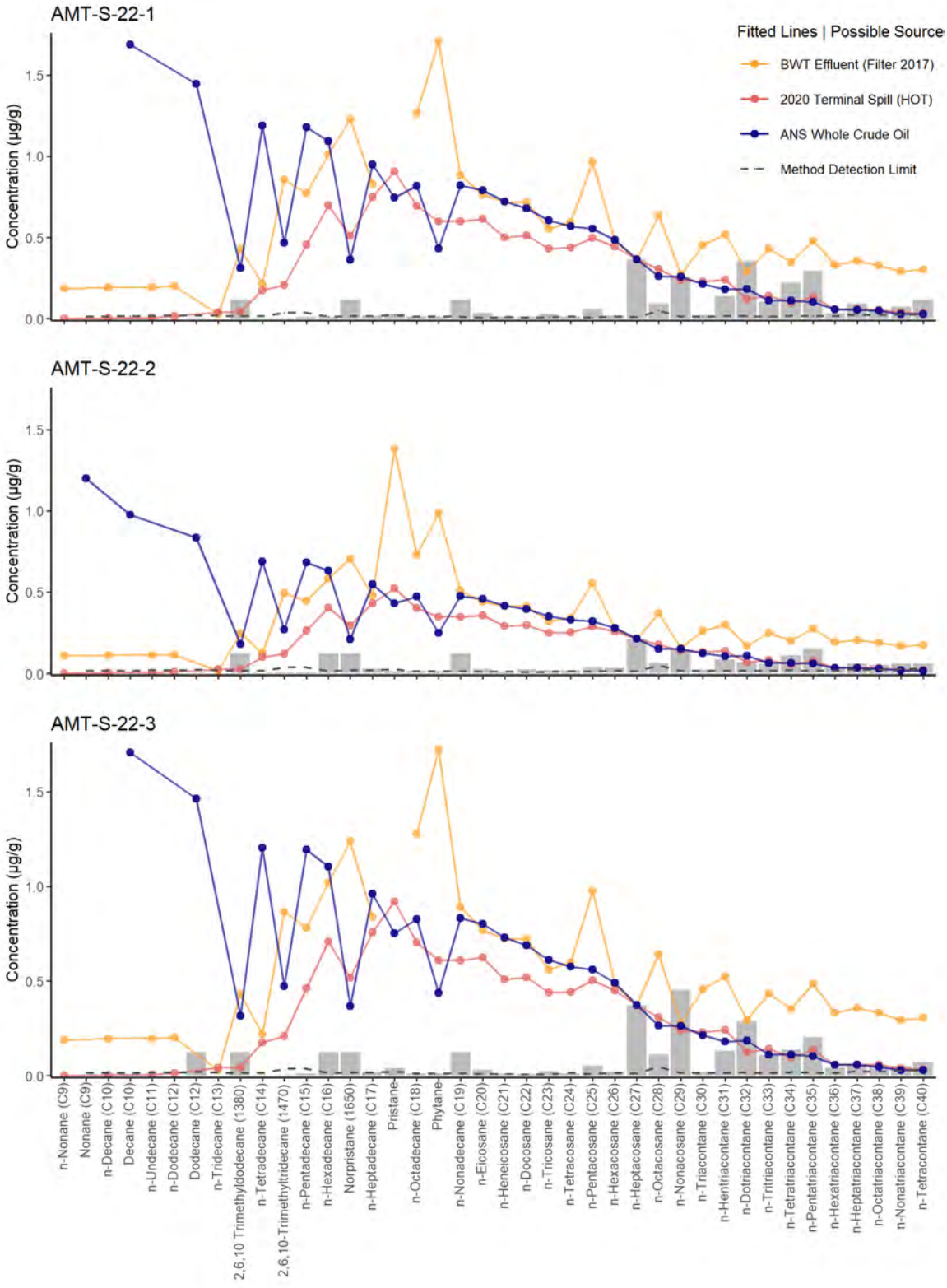


Figure 9. 2022 Saturated hydrocarbons (SHC) profiles from individual sediment samples at the Valdez Marine Terminal (AMT) with the duplicate replicate, three possible ANS-related source profiles, and the analyte specific method detection limit superimposed as different lines.

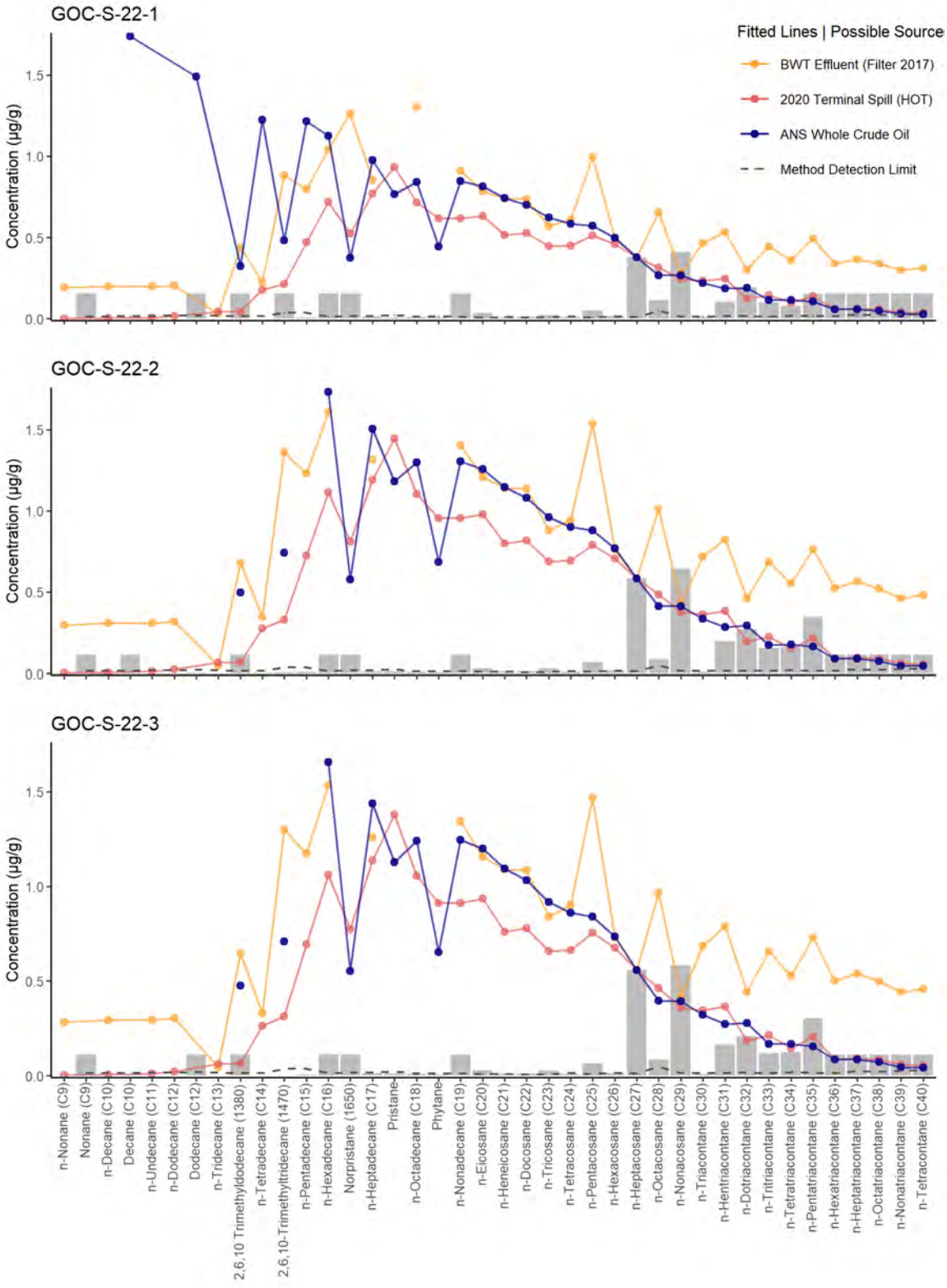


Figure 10. 2023 Saturated hydrocarbons (SHC) profiles from individual sediment samples at Gold Creek (GOC) with three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines.

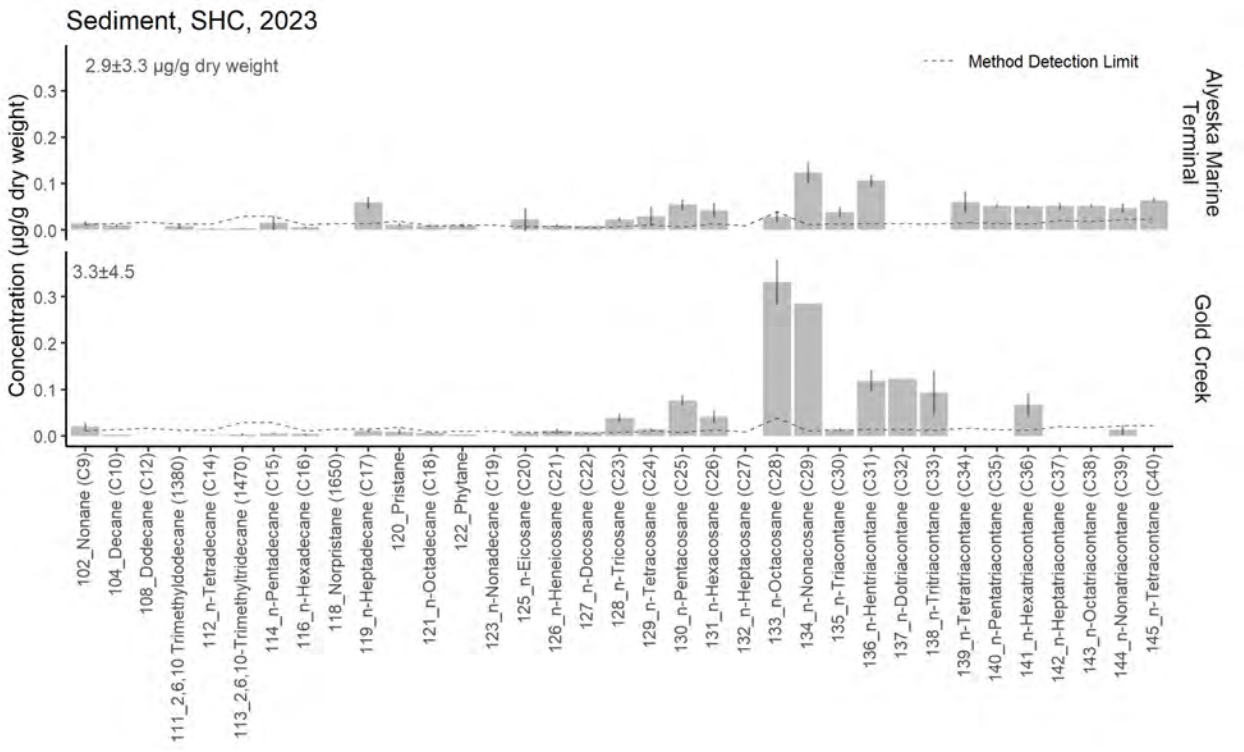


Figure 11. 2023 Saturated hydrocarbons (SHC) profiles from sediment samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line. Sum SHC values (mean ± 1 standard deviation) are found in the upper left corner of each site profile.

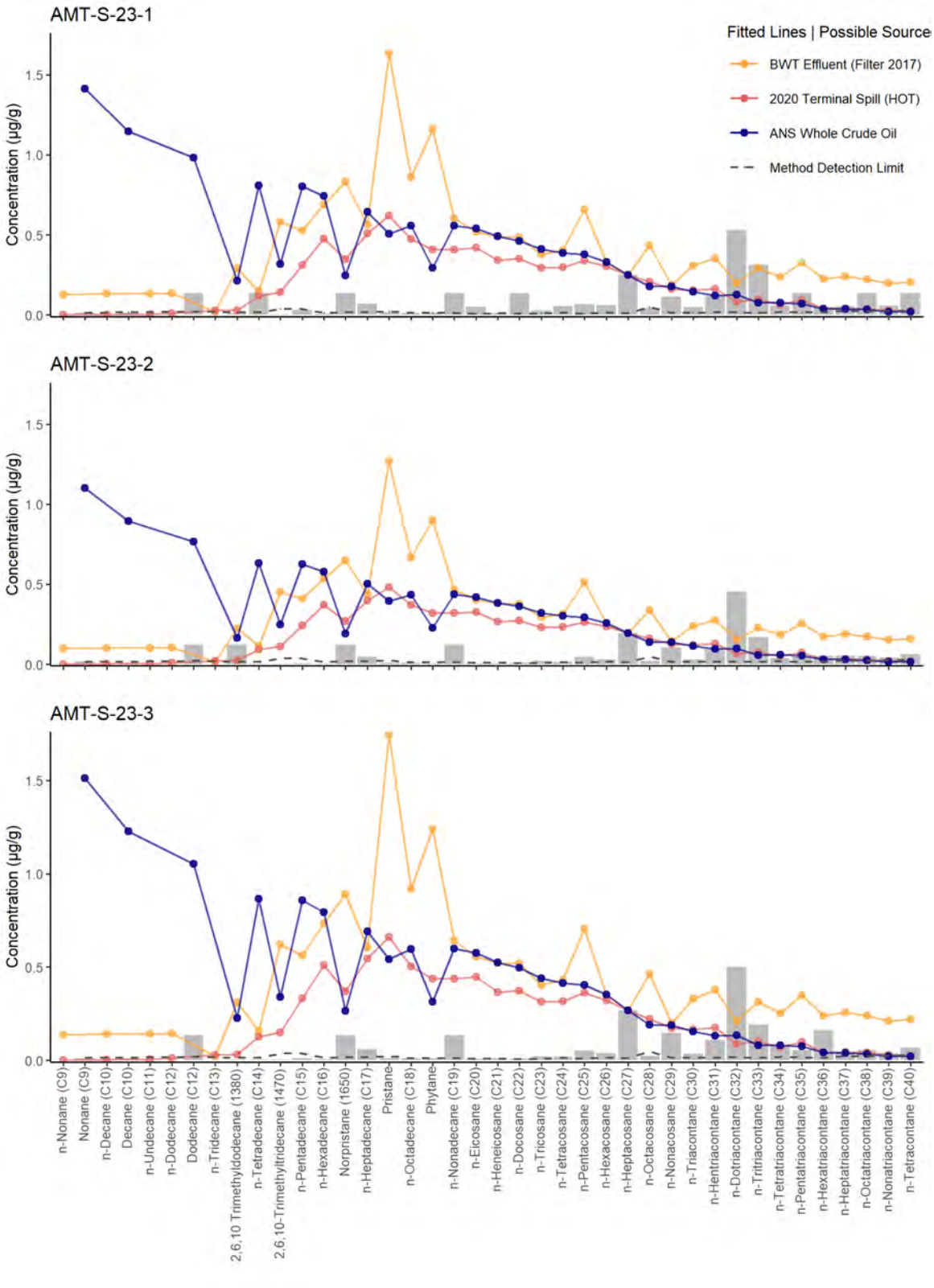


Figure 12. 2023 Saturated hydrocarbons (SHC) profiles from individual sediment samples at the Valdez Marine Terminal (AMT) with three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines.

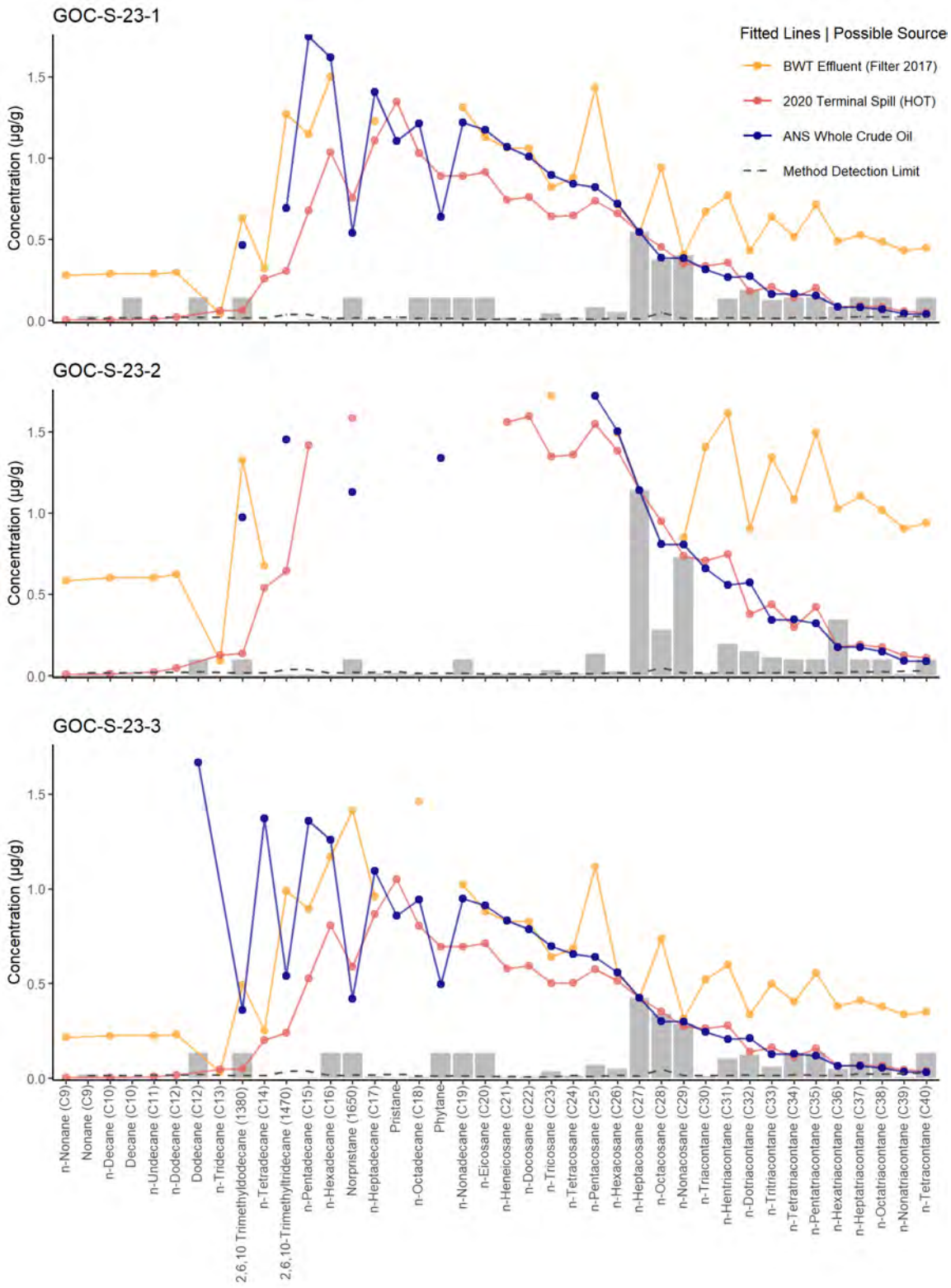


Figure 13. 2023 Saturated hydrocarbons (SHC) profiles from individual sediment samples at Gold Creek (GOC) with three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines.

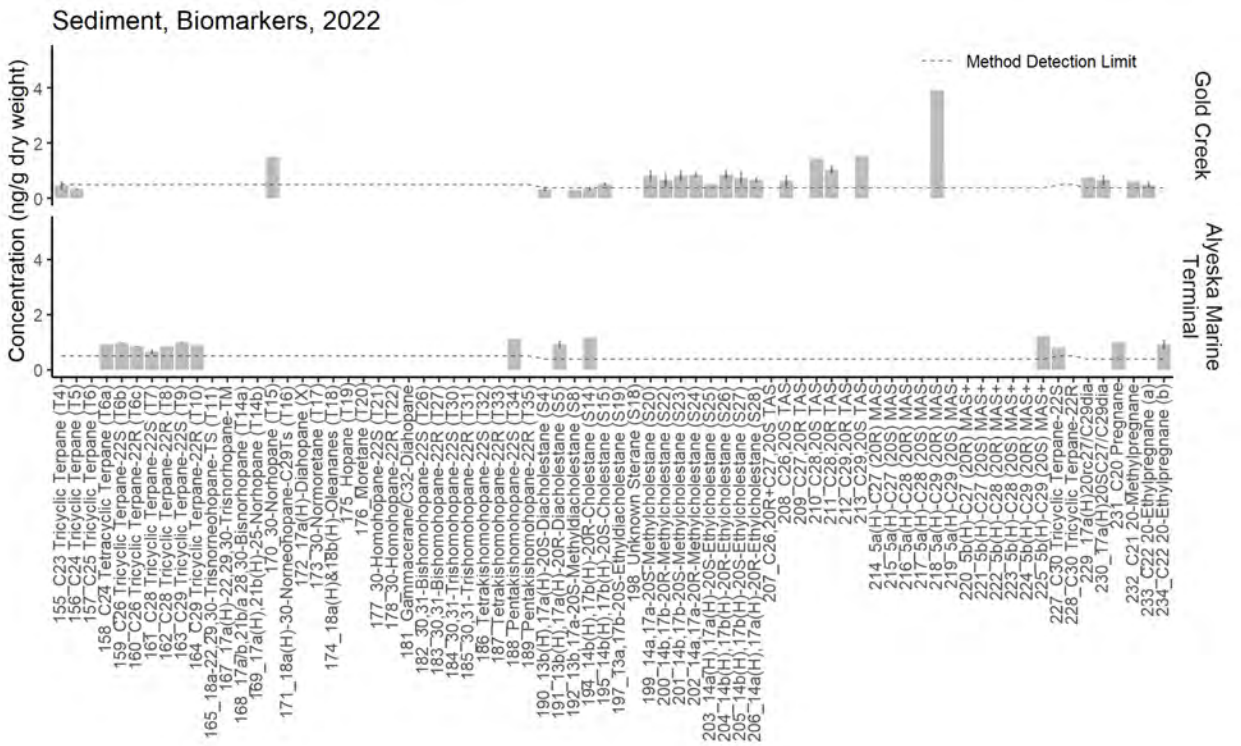


Figure 14. 2022 Petroleum chemical biomarker profiles from sediment samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line.

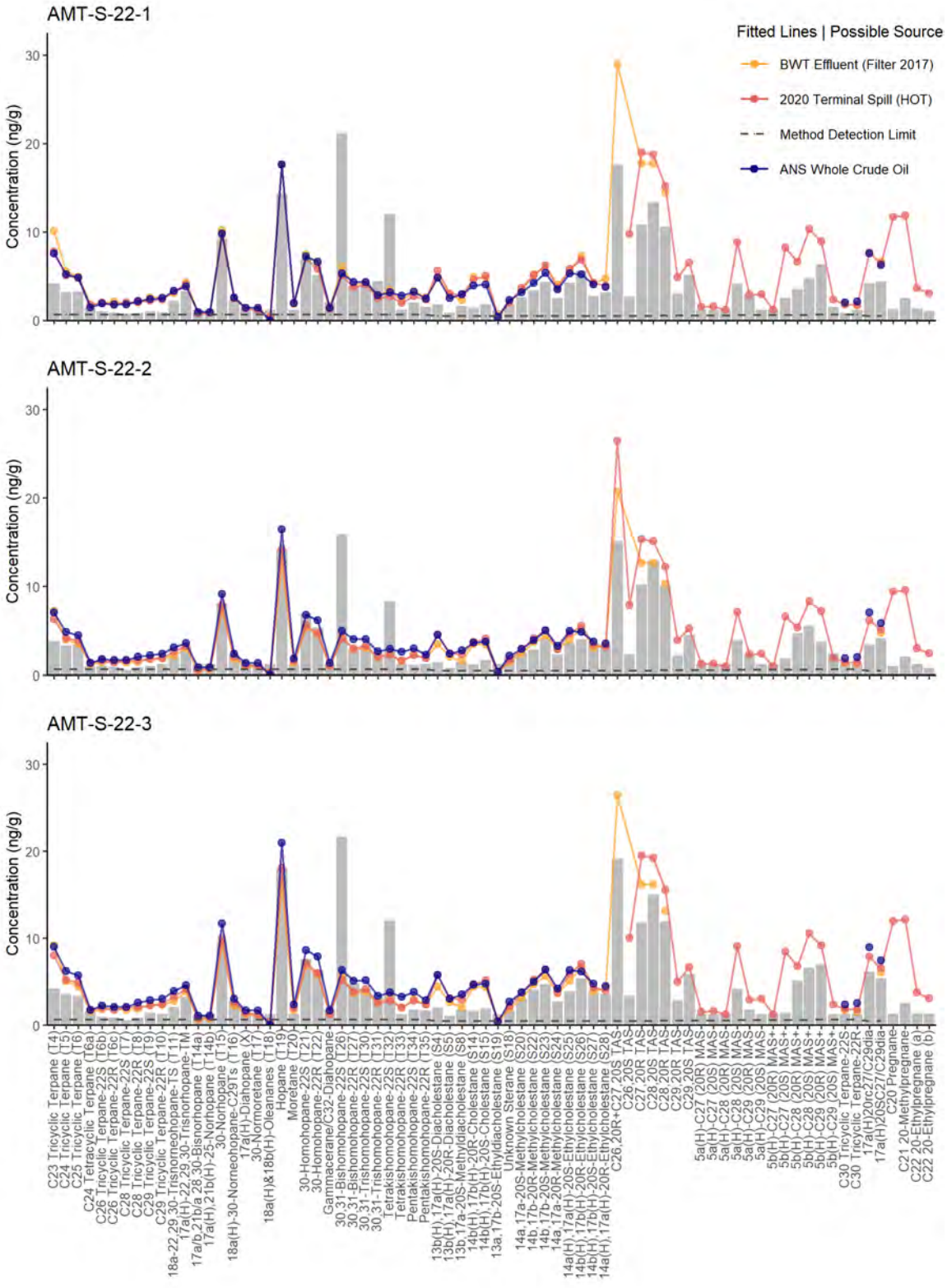


Figure 15. 2022 Petroleum chemical biomarker profiles from individual sediment samples at the Valdez Marine Terminal (AMT) with three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines.

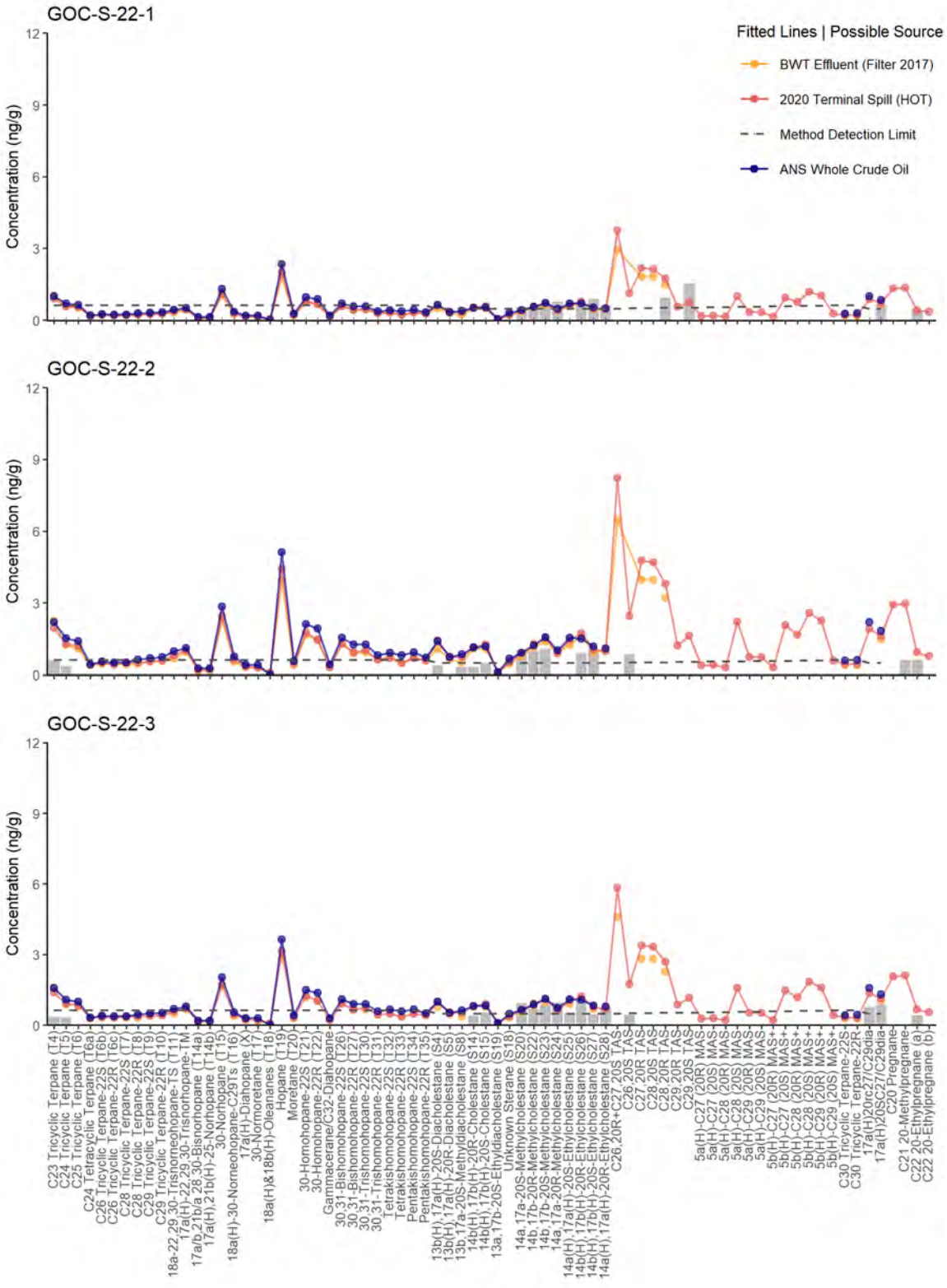


Figure 16. 2022 Petroleum chemical biomarker profiles from individual sediment samples at Gold Creek with (GOC) three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines.

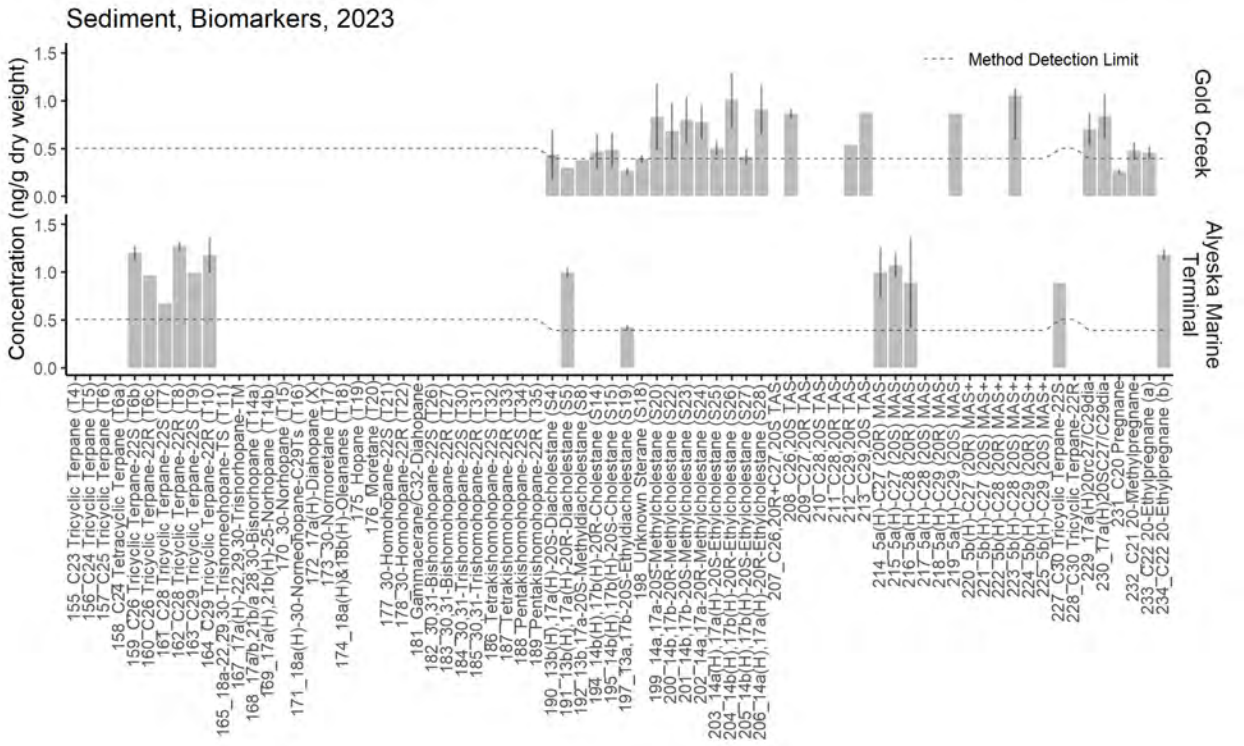


Figure 17. 2023 Petroleum chemical biomarker profiles from sediment samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line.

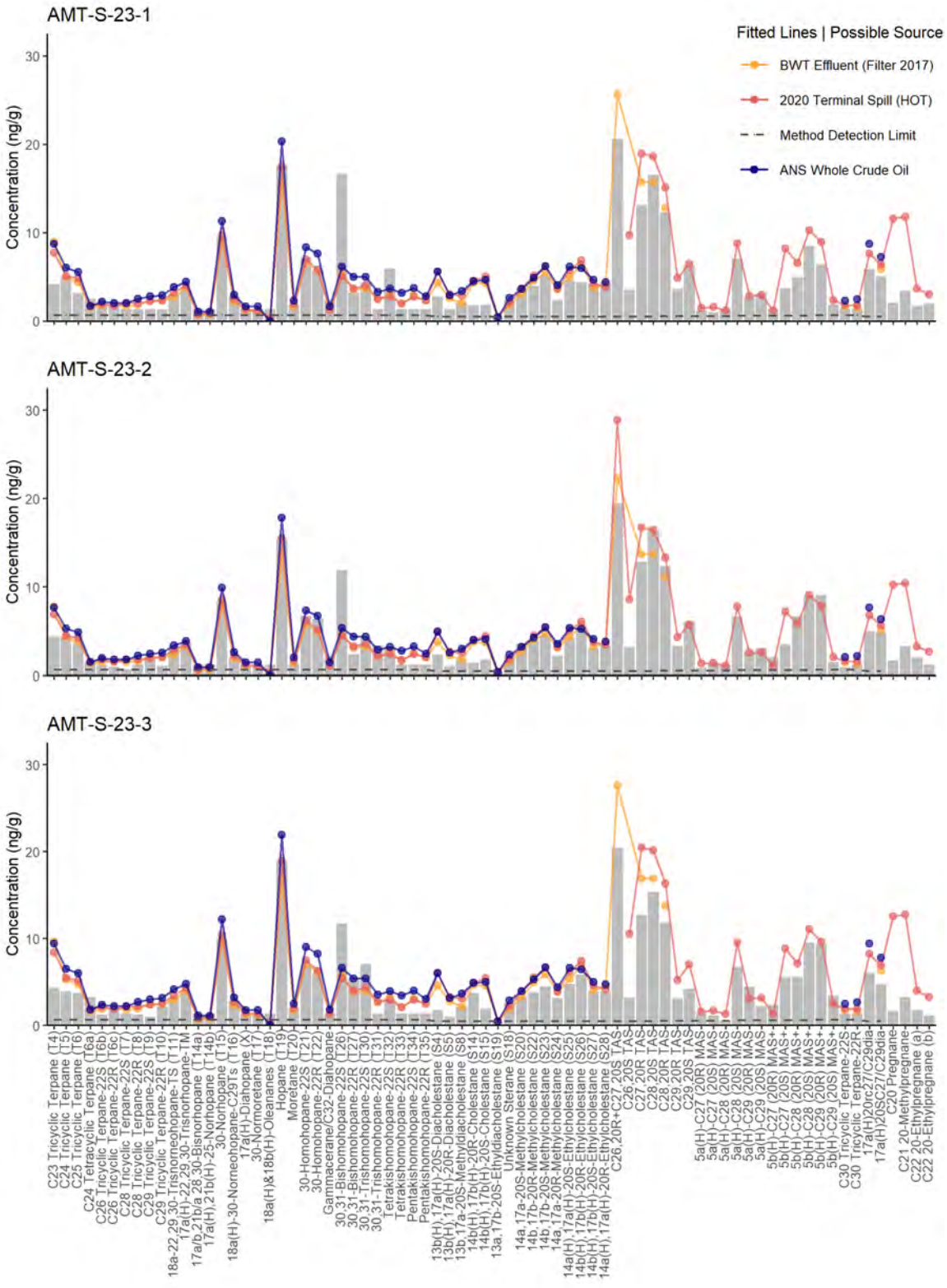


Figure 18. 2023 Petroleum chemical biomarker profiles from individual sediment samples at the Valdez Marine Terminal (AMT) with three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines.

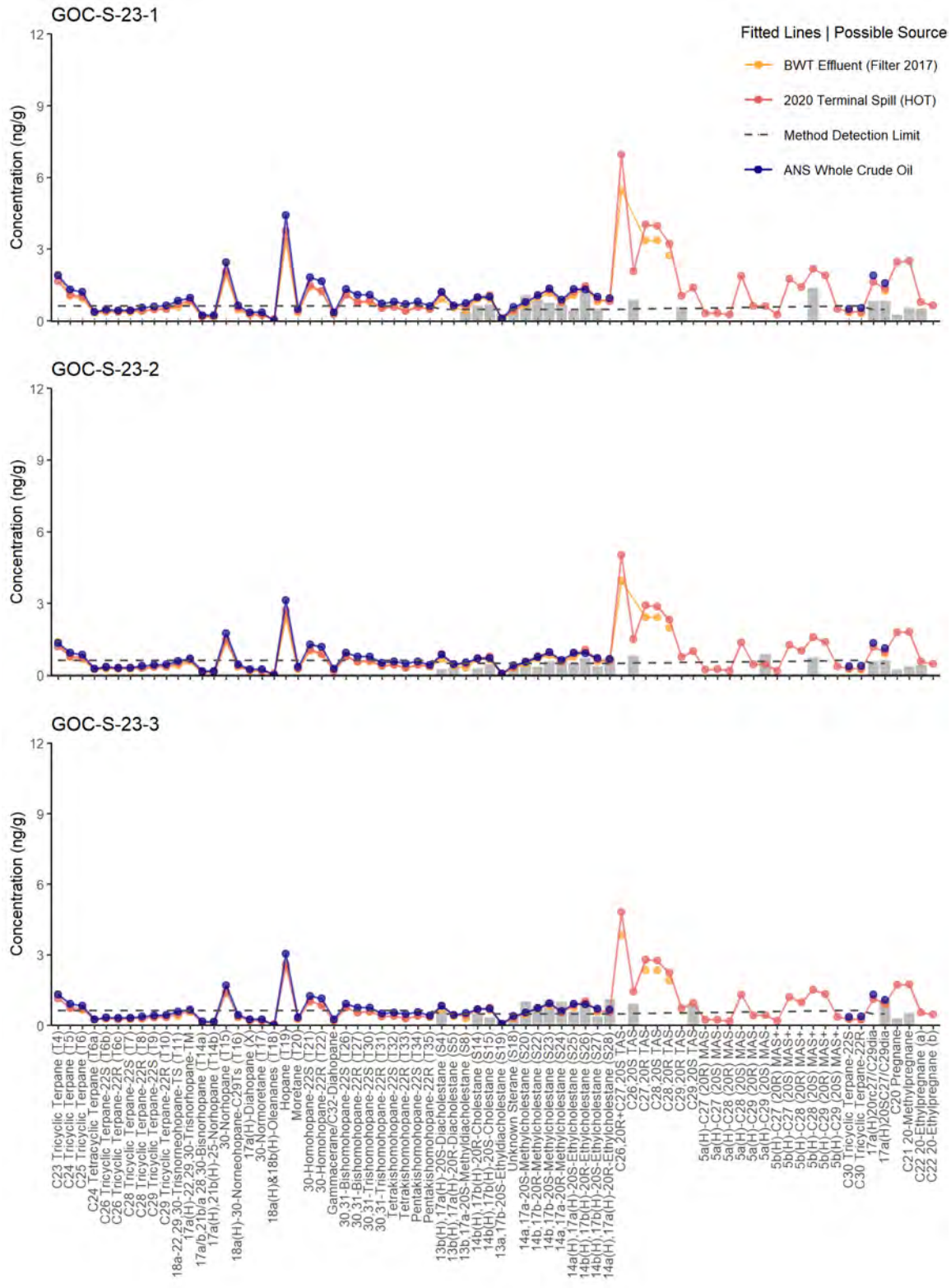


Figure 19. 2023 Petroleum chemical biomarker profiles from individual sediment samples at Gold Creek (GOC) with three possible ANS-related source profiles and the analyte specific method detection limit superimposed as different lines.

Mussel Tissue Data

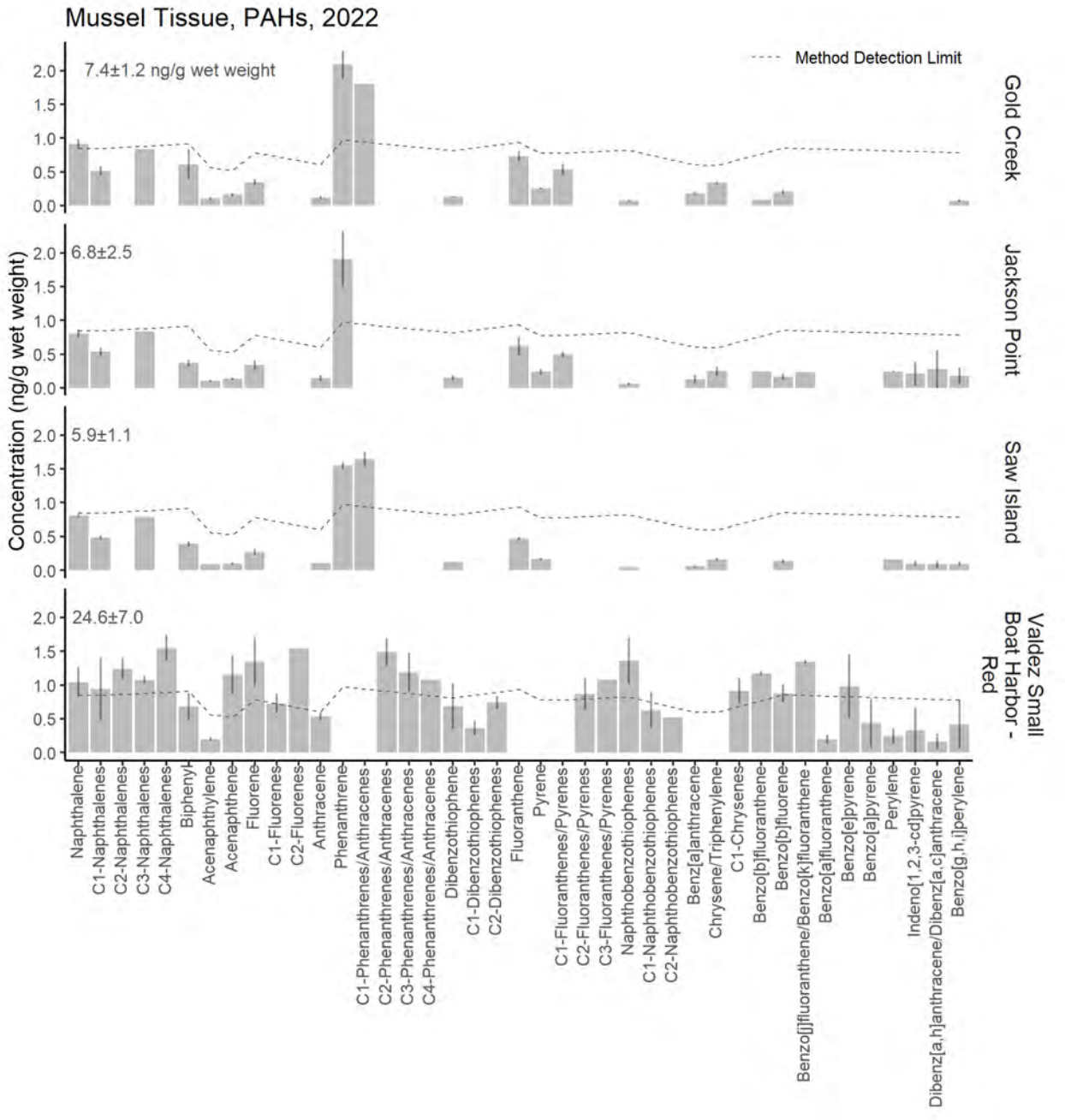


Figure 20. PAH profiles from 2022 mussel tissue samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line. Sum 42 PAH values (mean ± 1 standard deviation) are found in the upper left corner of each site profile.

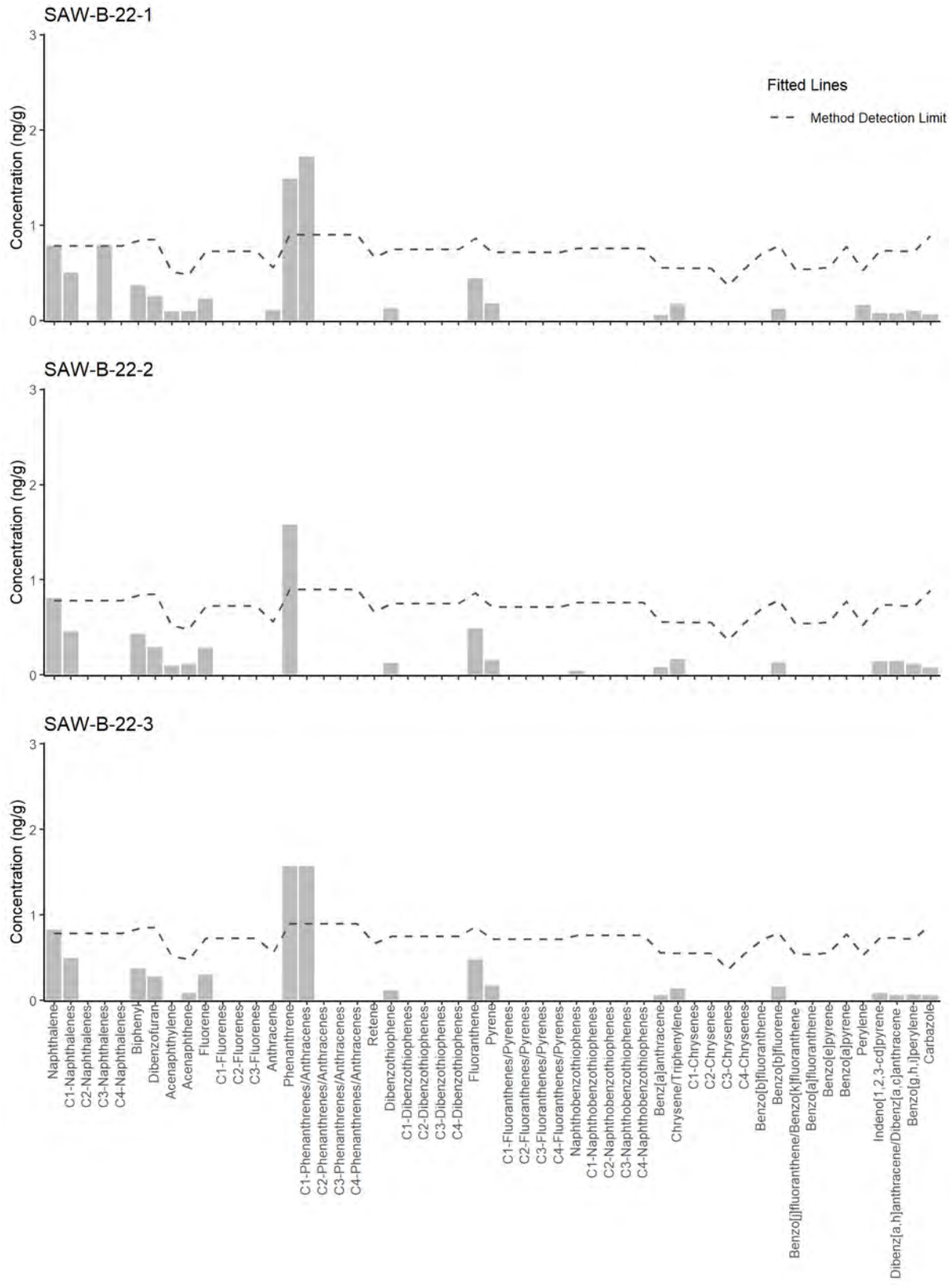


Figure 21. 2022 PAH profiles from individual mussel tissue samples at Saw Island (SAW) with the analyte specific method detection limit superimposed as a dashed line.

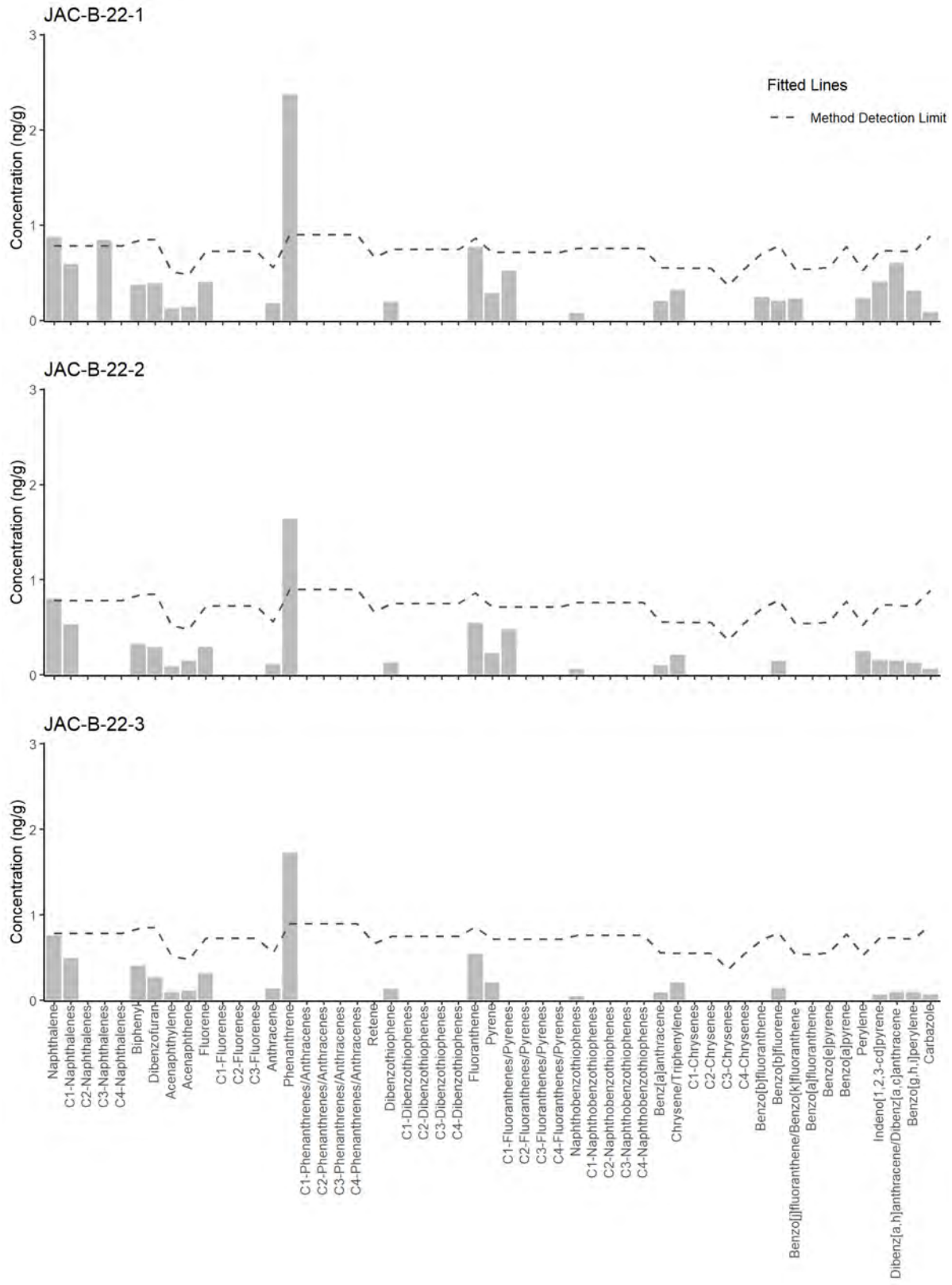


Figure 22. 2022 PAH profiles from individual mussel tissue samples at Jackson Point (JAC) with the analyte specific method detection limit superimposed as a dashed line.

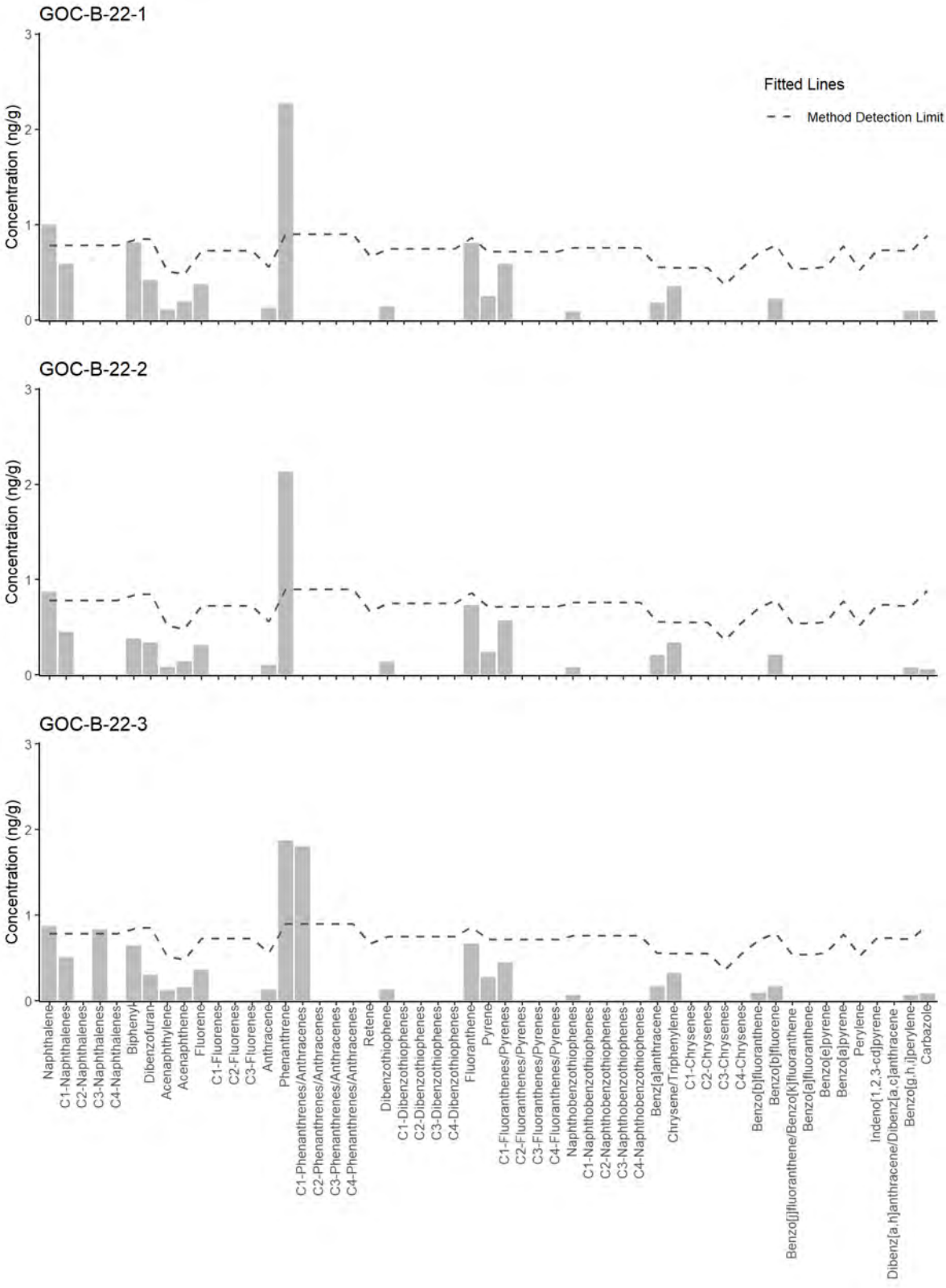


Figure 23. 2022 PAH profiles from individual mussel tissue samples at Gold Creek (GOC) with the analyte specific method detection limit superimposed as different lines.

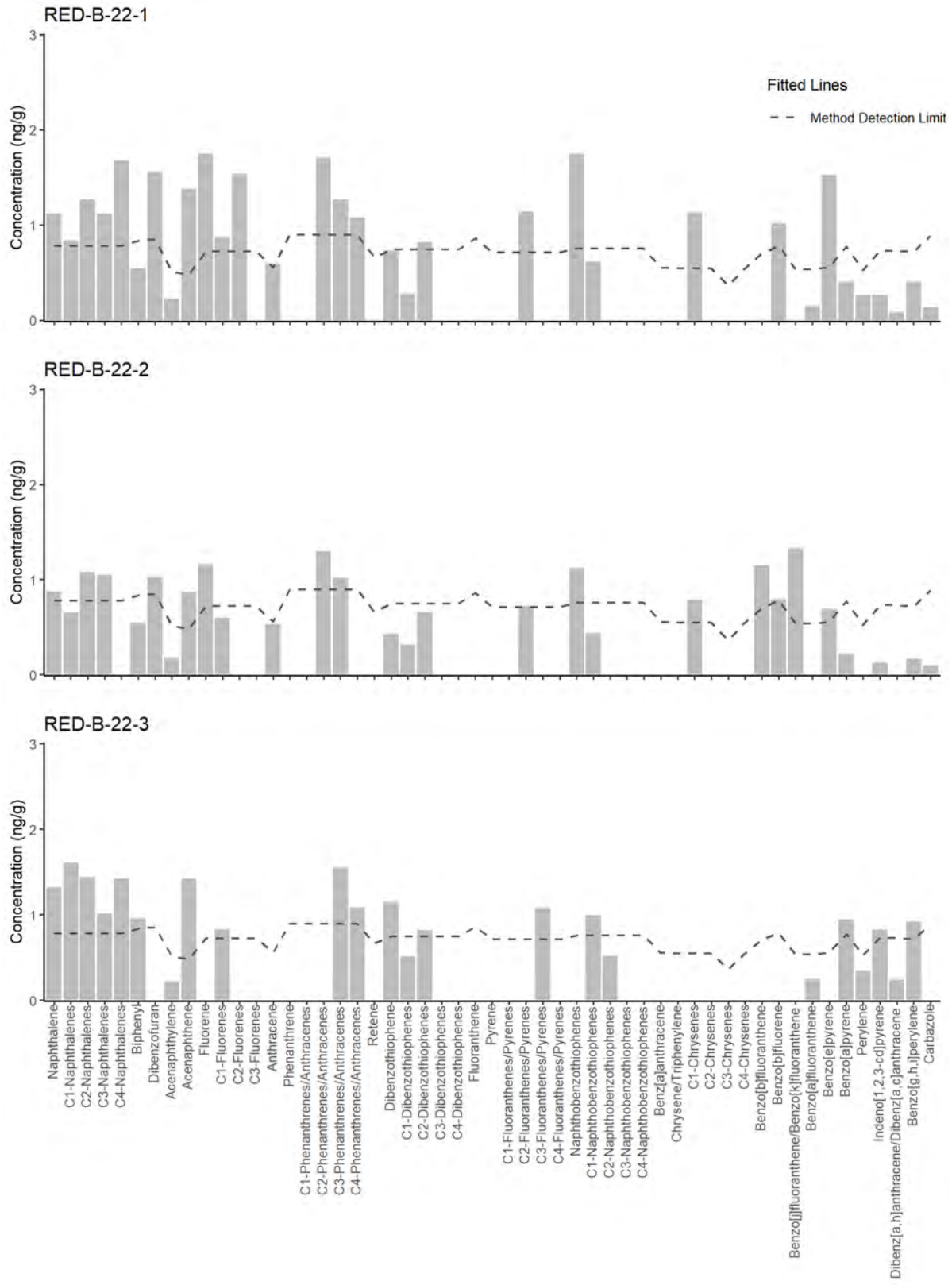


Figure 24. 2022 PAH profiles from individual mussel tissue samples at the Valdez Small Boat Harbor entrance (RED) with the analyte specific method detection limit superimposed as a dashed line.

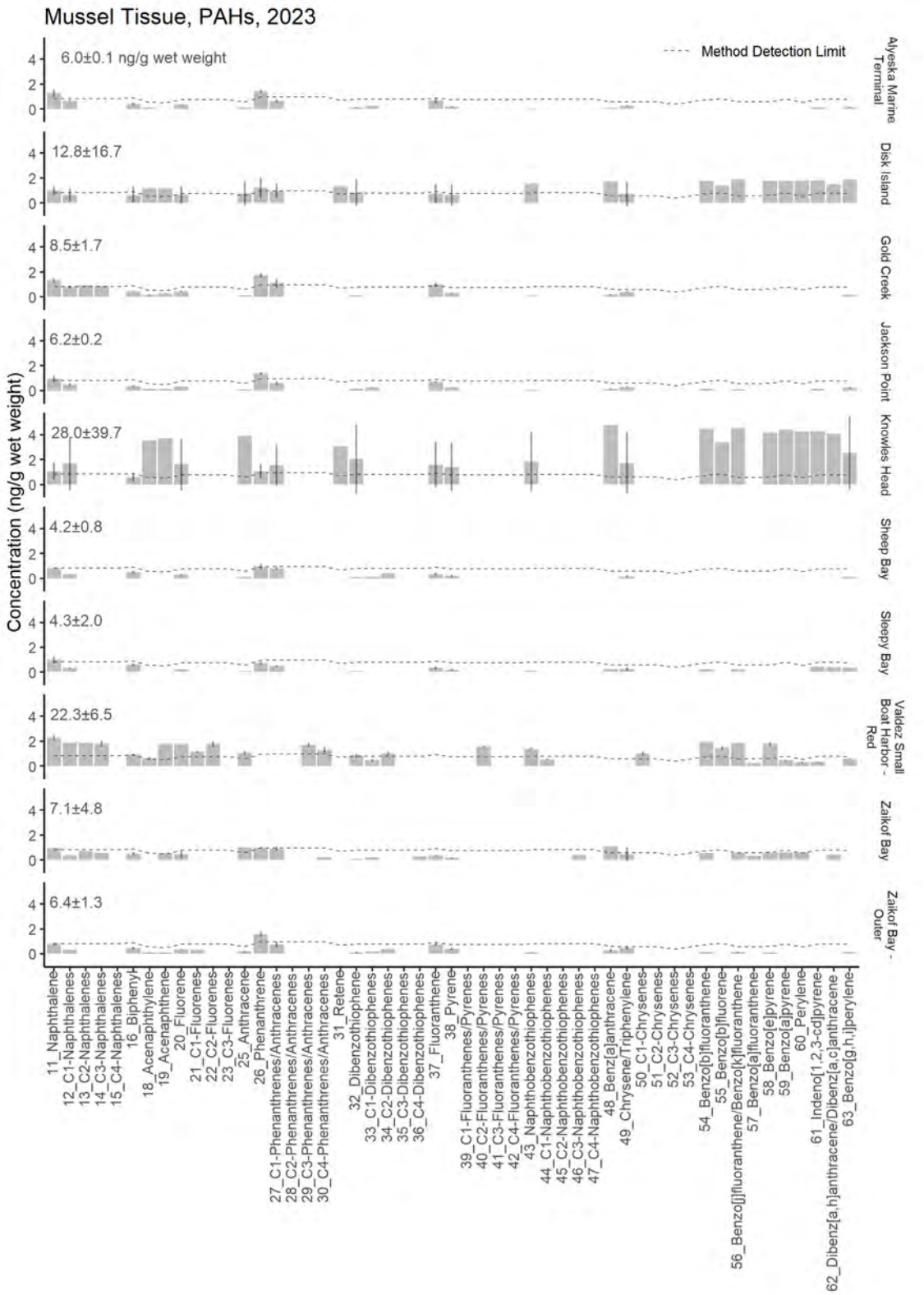


Figure 25. PAH profiles from 2023 mussel tissue samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line. Sum 42 PAH values (mean ± 1 standard deviation) are found in the upper left corner of each site profile.

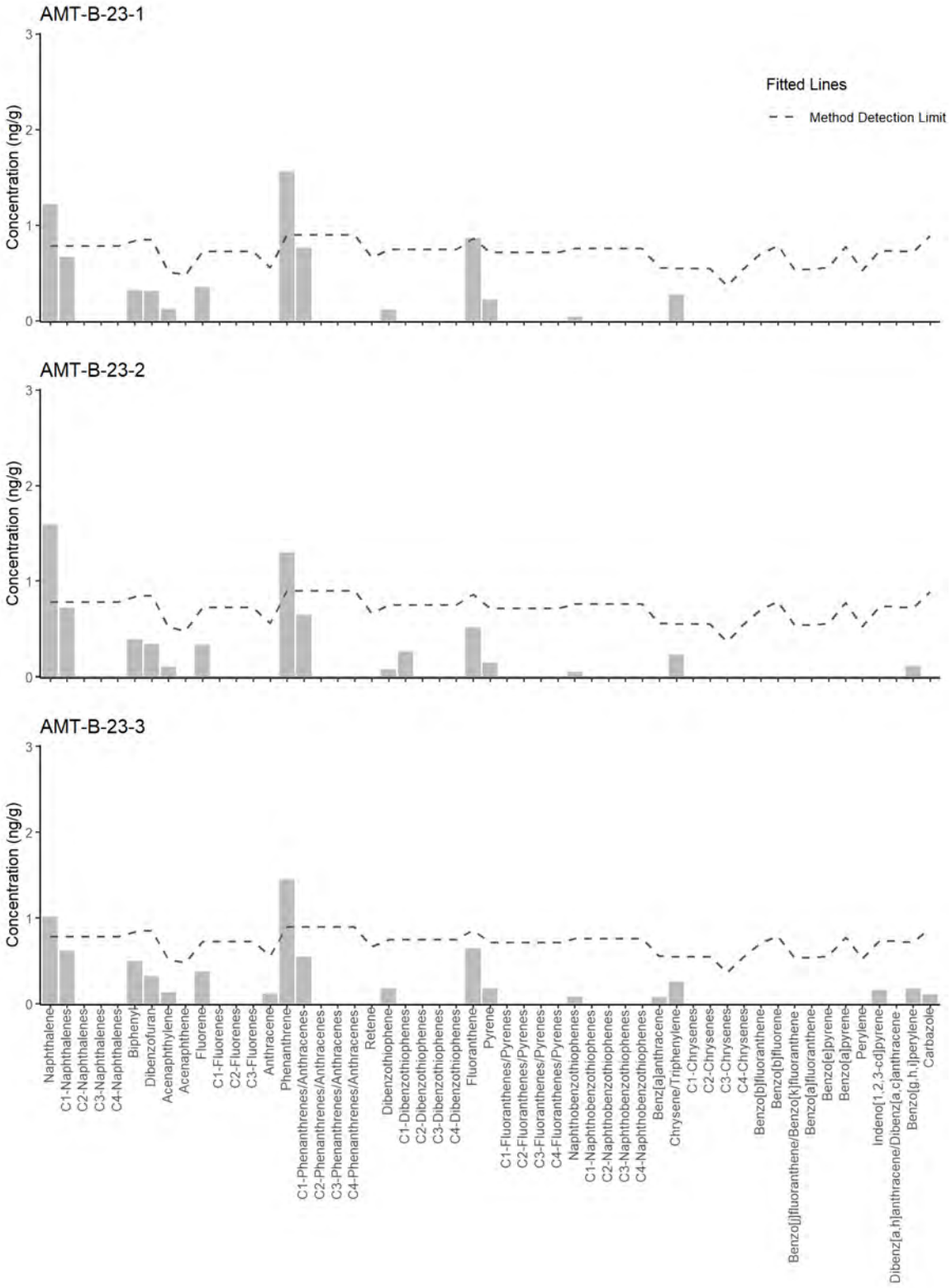


Figure 26. 2023 PAH profiles from individual mussel tissue samples at the Valdez Marine Terminal / Saw Island (AMT/SAW) with the analyte specific method detection limit superimposed as a dashed line.

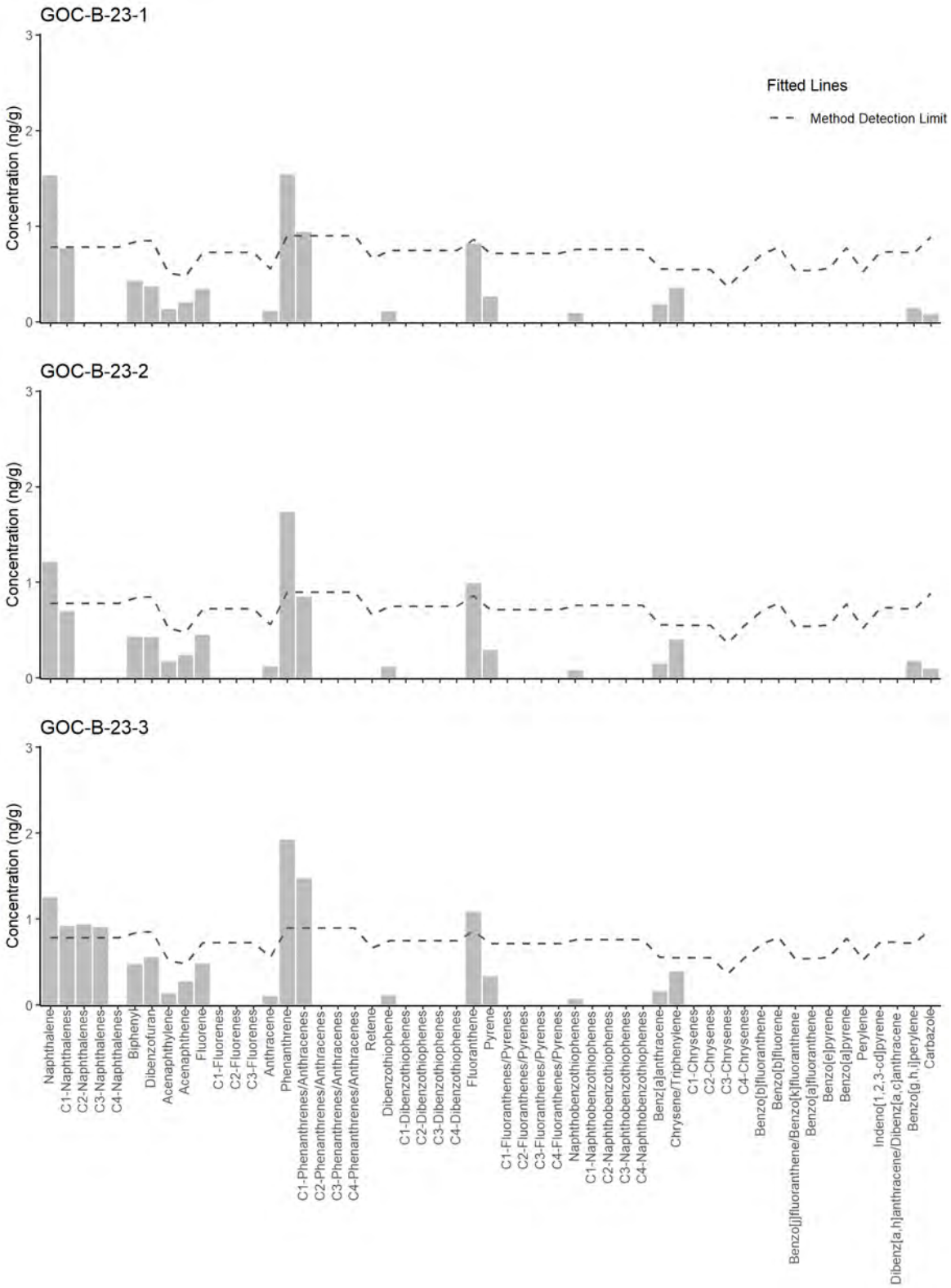


Figure 27. 2023 PAH profiles from individual mussel tissue samples at Gold Creek (GOC) with the analyte specific method detection limit superimposed as a dashed line.

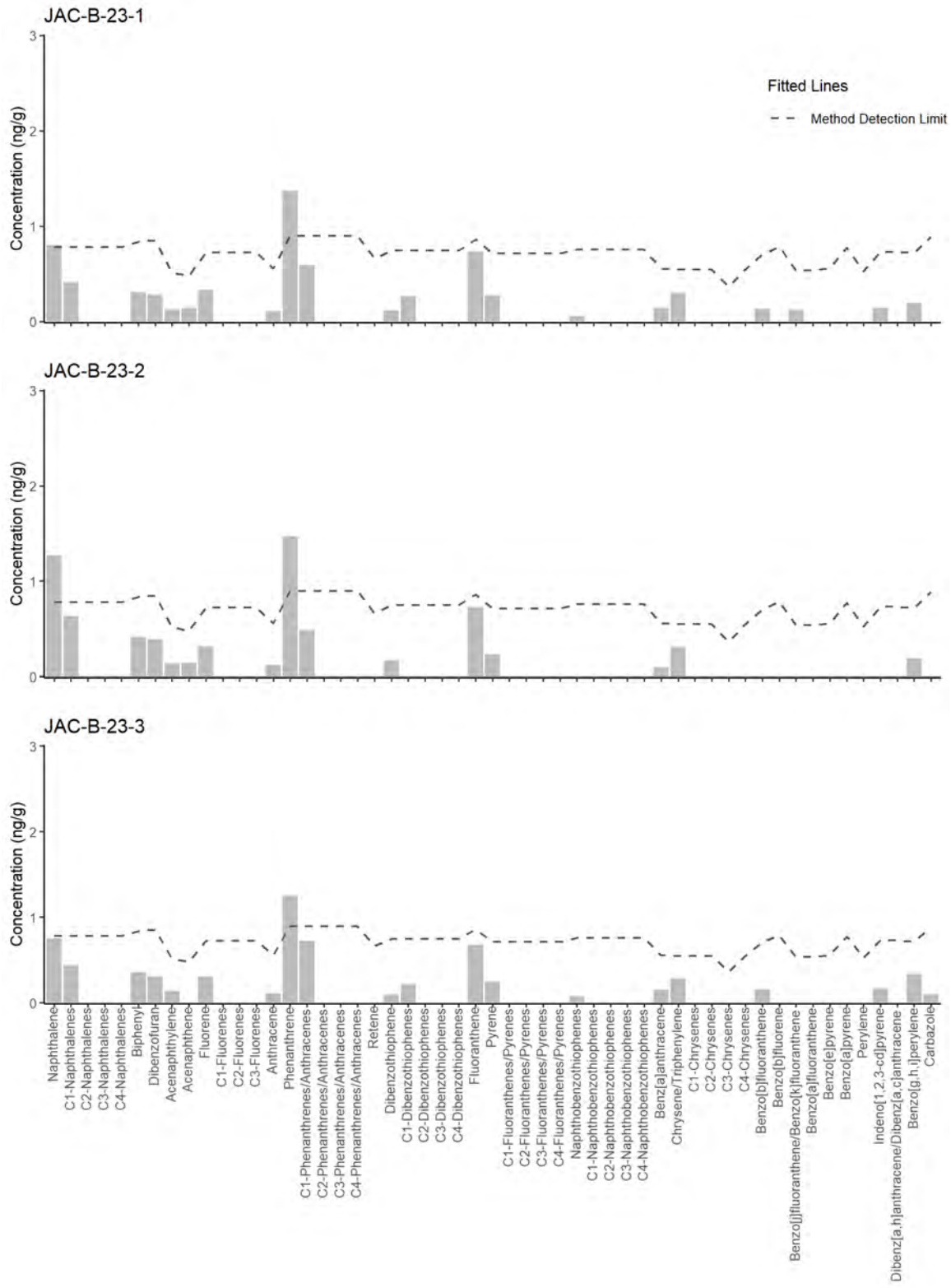


Figure 28. 2023 PAH profiles from individual mussel tissue samples at Jackson Point (JAC) with the analyte specific method detection limit superimposed as a dashed line.

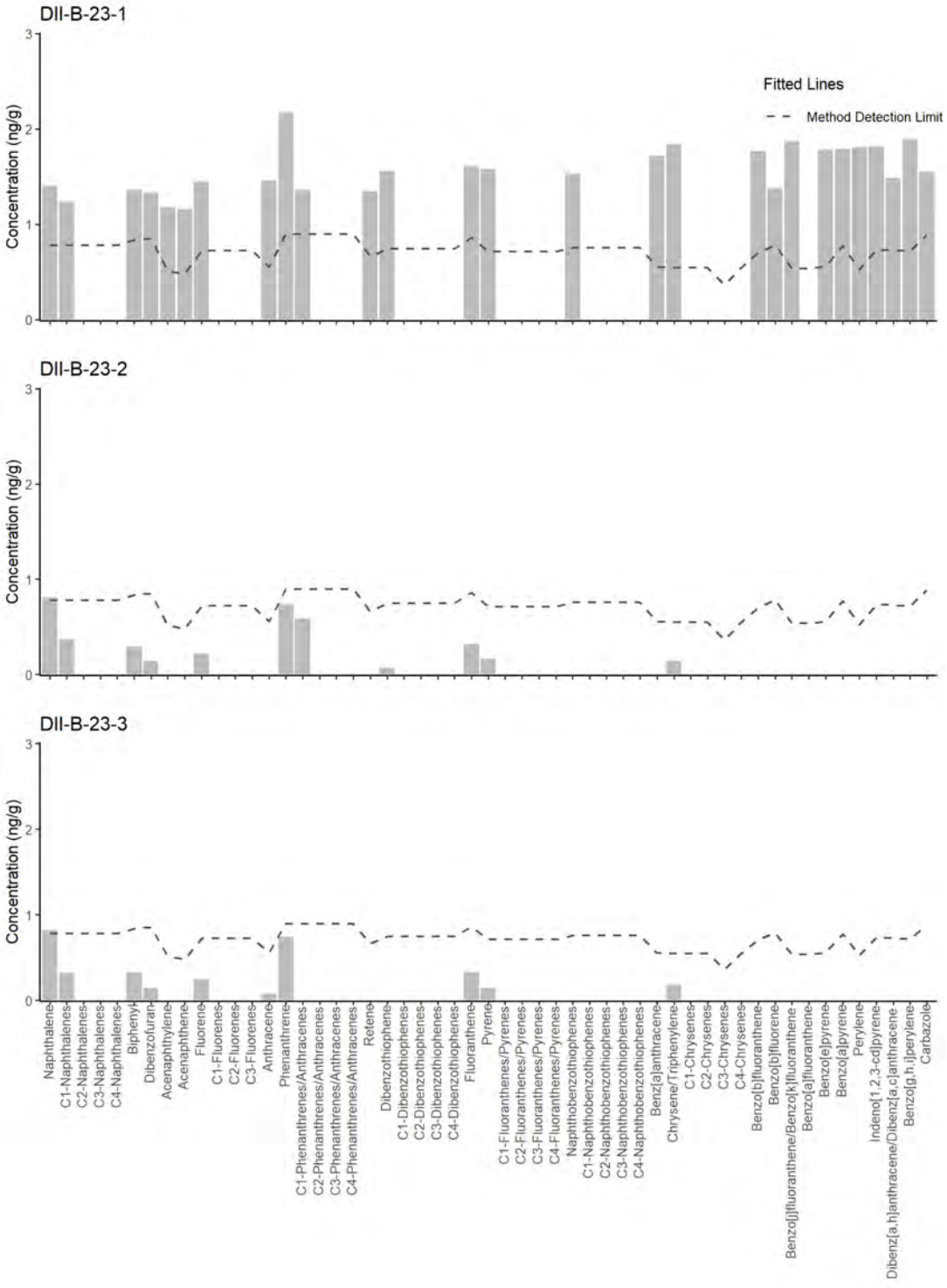


Figure 29. 2023 PAH profiles from individual mussel tissue samples at Disk Island (DII) with the analyte specific method detection limit superimposed as a dashed line.

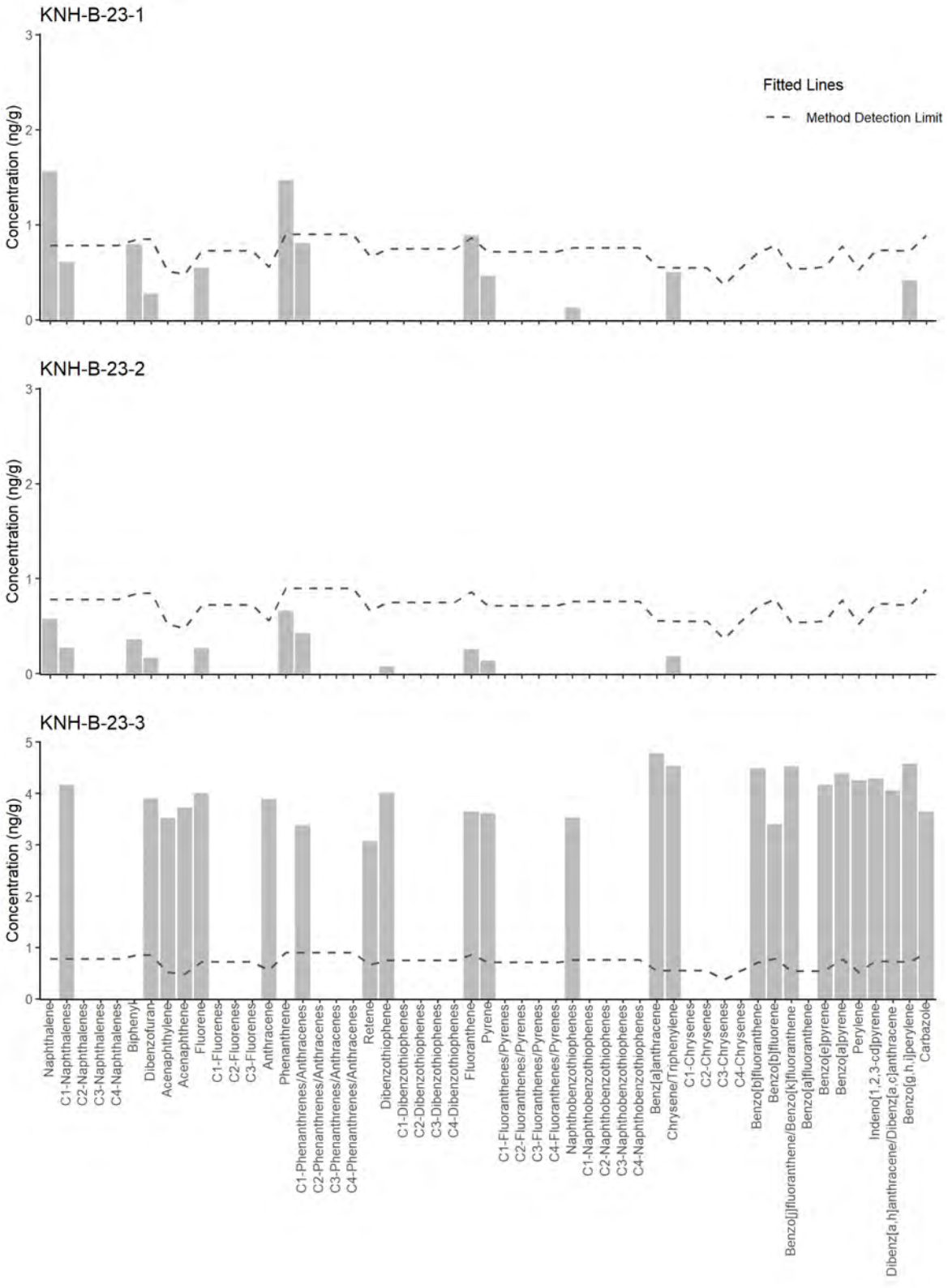


Figure 30. 2023 PAH profiles from individual mussel tissue samples at Knowles Head (KNH) with the analyte specific method detection limit superimposed as a dashed line.

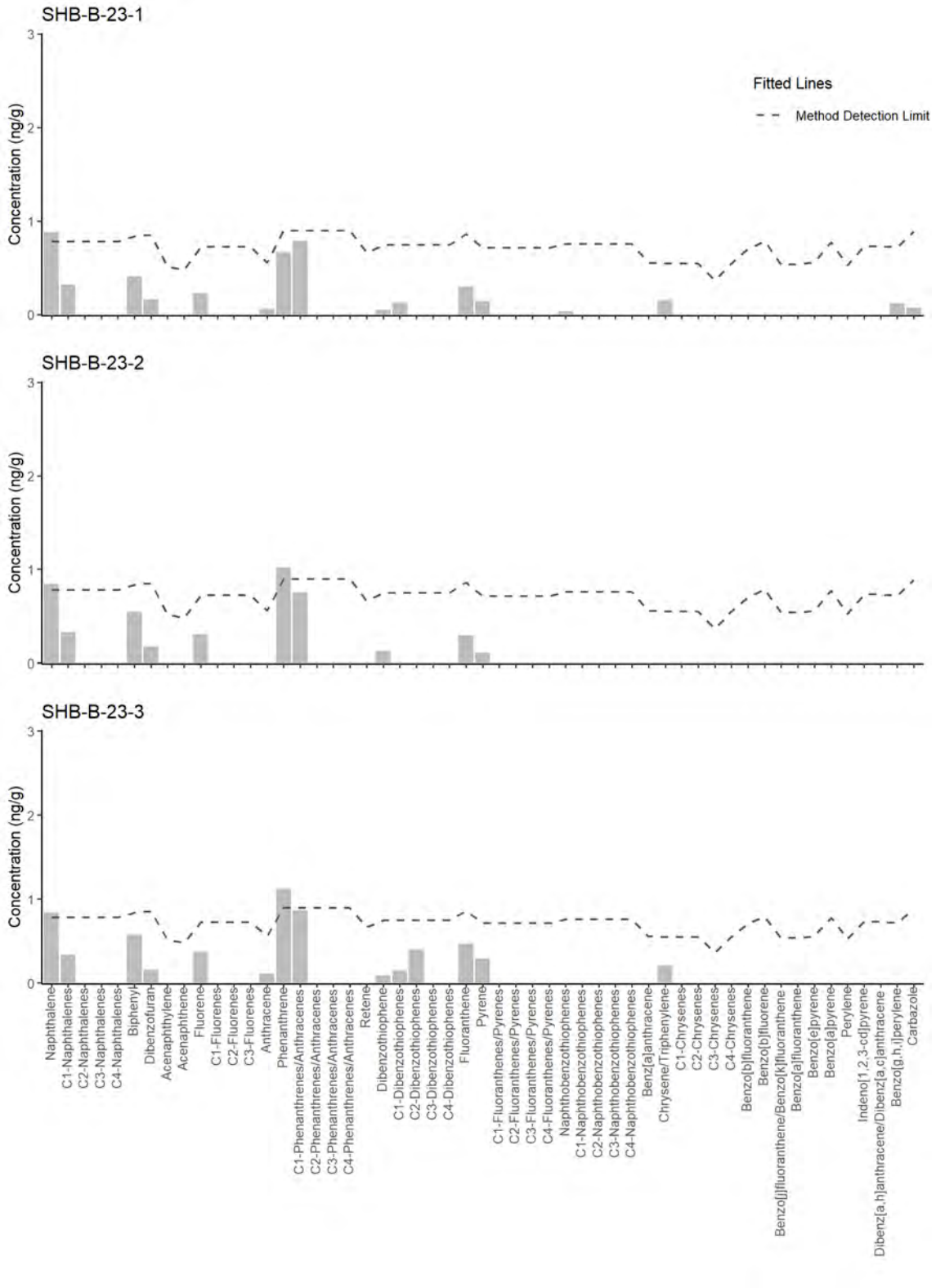


Figure 31. 2023 PAH profiles from individual mussel tissue samples at Sheep Bay (SHB) with the analyte specific method detection limit superimposed as a dashed line.

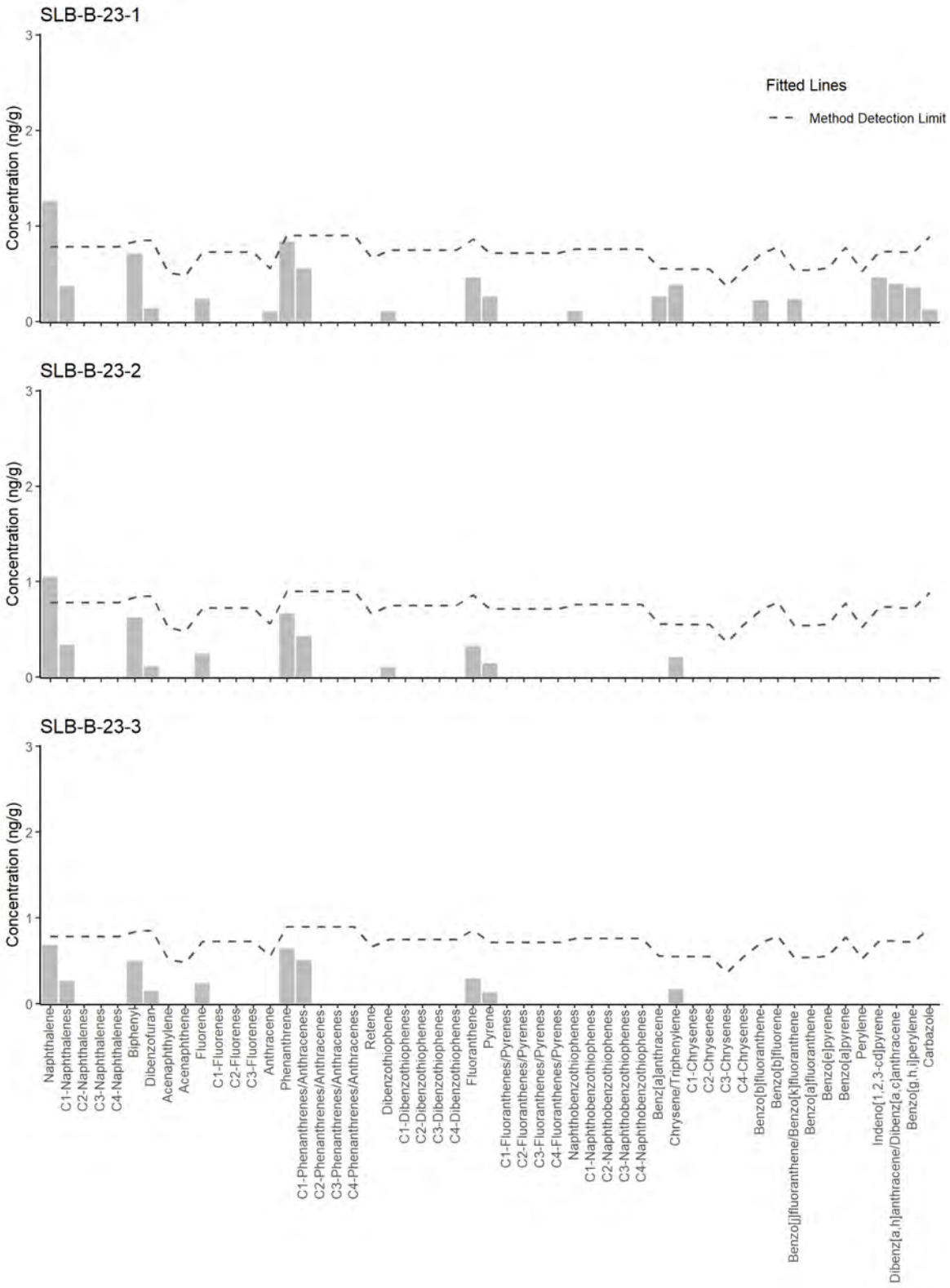


Figure 32. 2023 PAH profiles from individual mussel tissue samples at Sleepy Bay (SLB) with the analyte specific method detection limit superimposed as a dashed line.

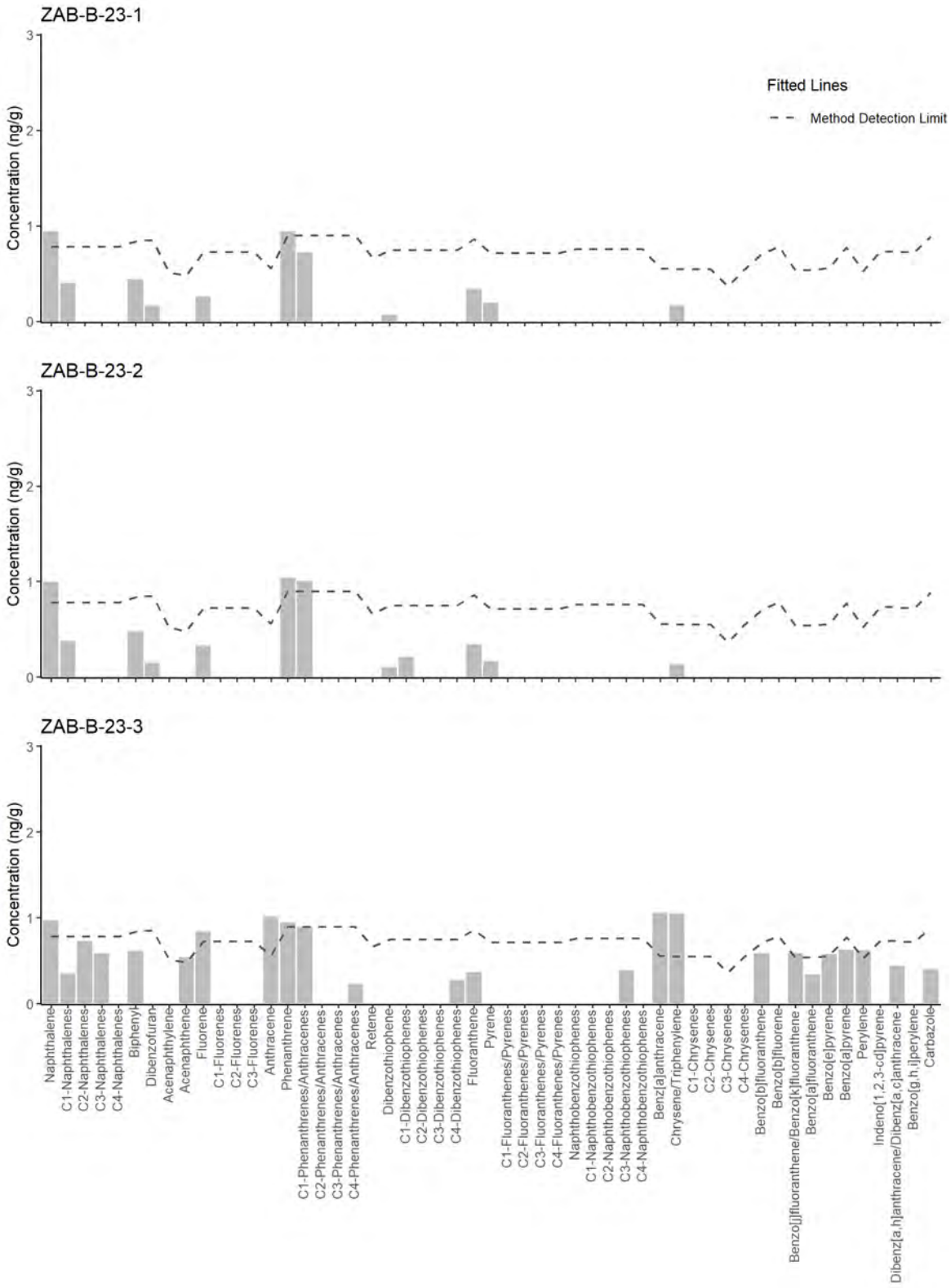


Figure 33. 2023 PAH profiles from individual mussel tissue samples Zaikof Bay (ZAB) with the analyte specific method detection limit superimposed as a dashed line.

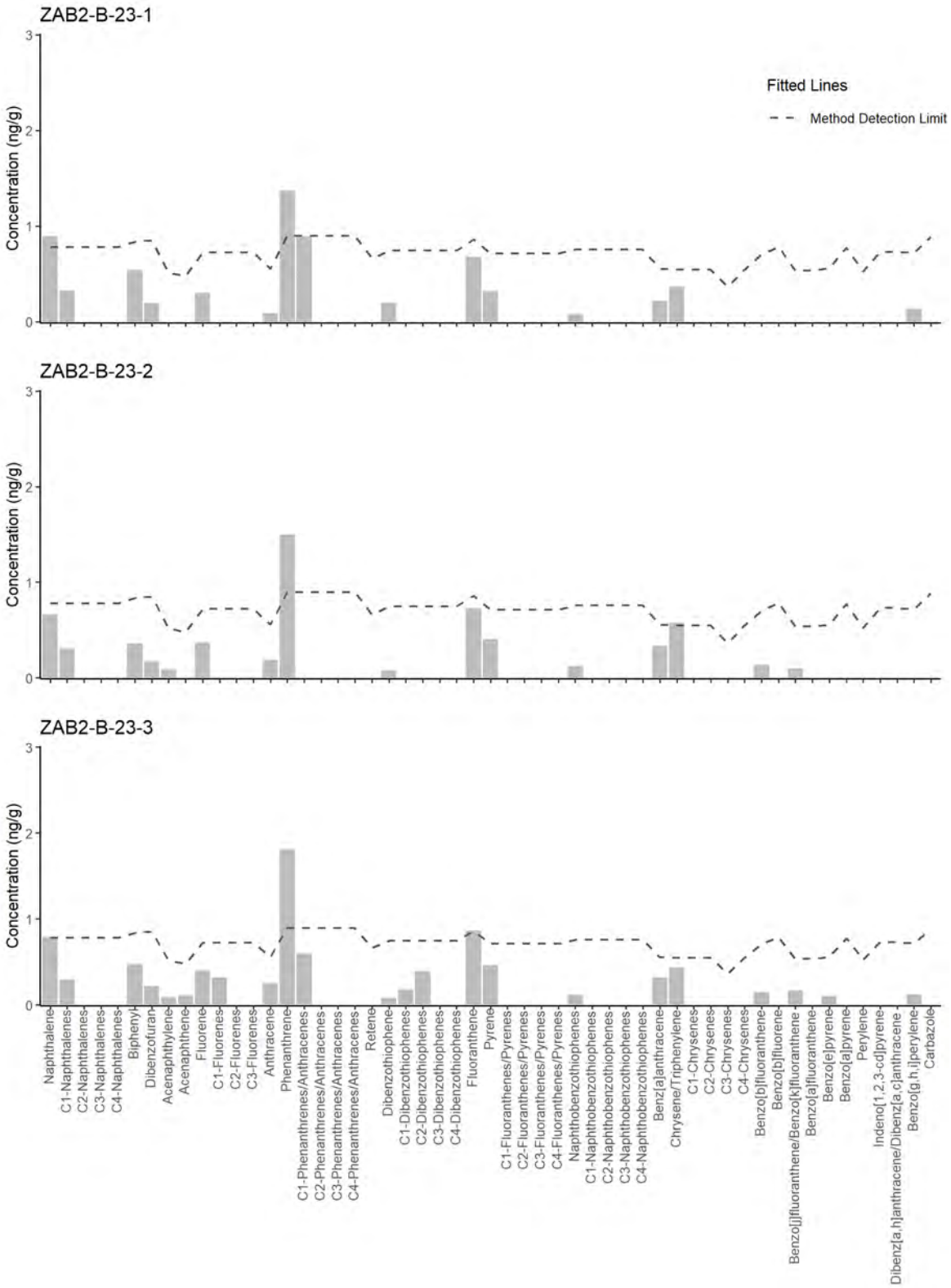


Figure 34. 2023 PAH profiles from individual mussel tissue samples at a new outer station in Zaikof Bay (ZAB) with the analyte specific method detection limit superimposed as a dashed line.

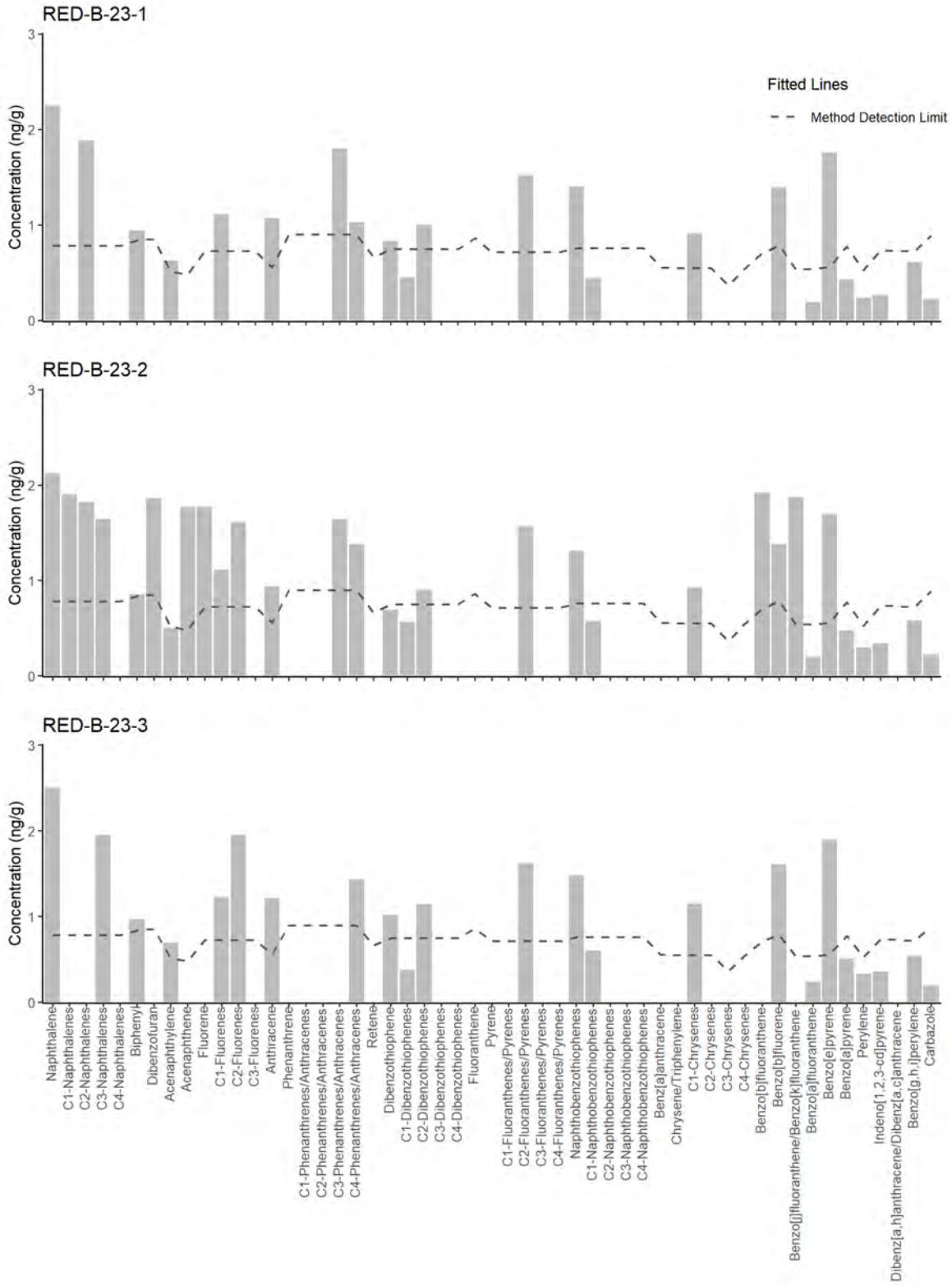


Figure 35. 2023 PAH profiles from individual mussel tissue samples at the Valdez Small Boat Harbor Red light (RED) with the analyte specific method detection limit superimposed as a dashed line.

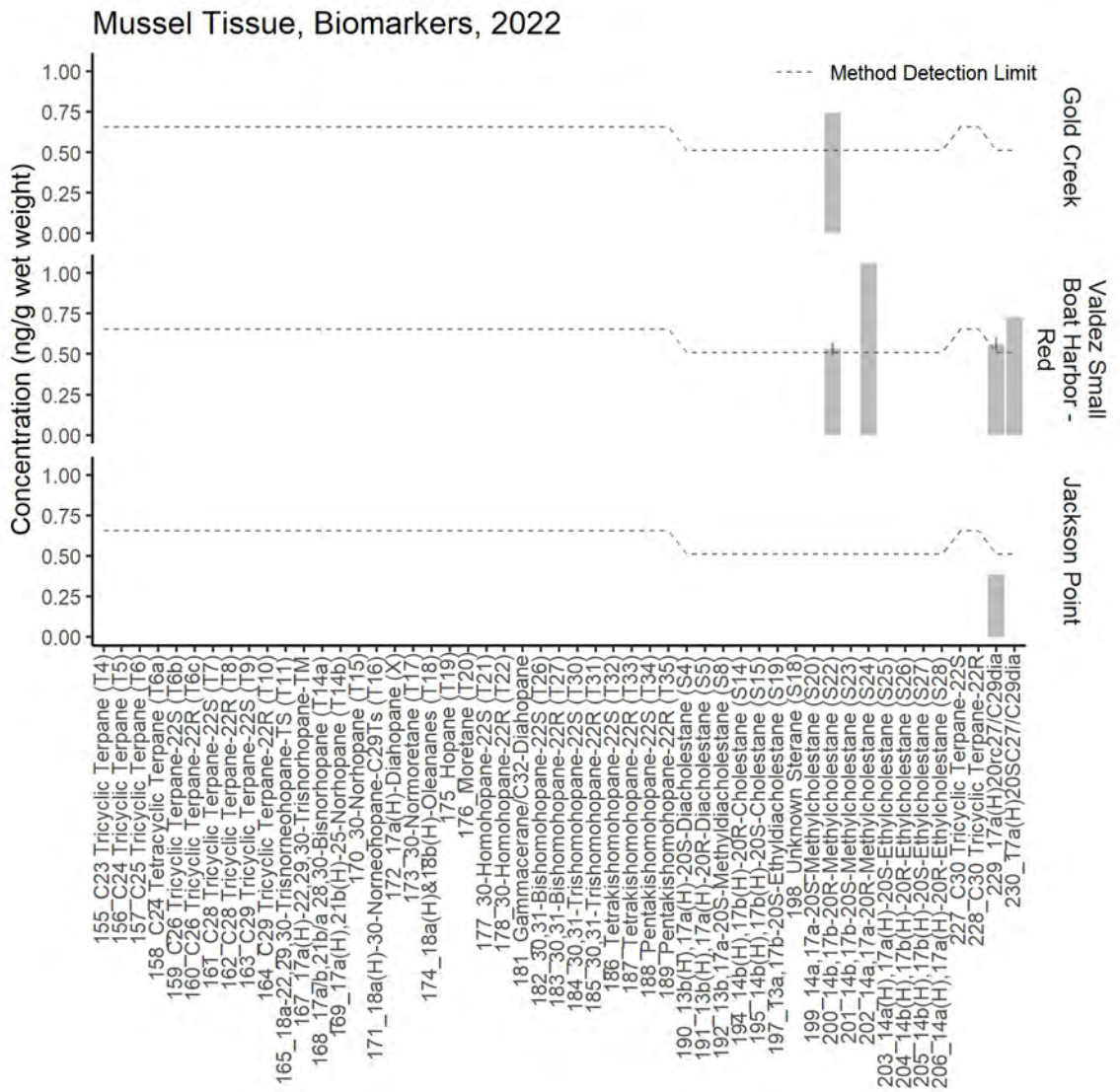


Figure 36. 2022 Petroleum chemical biomarker profiles from mussel tissue samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line.

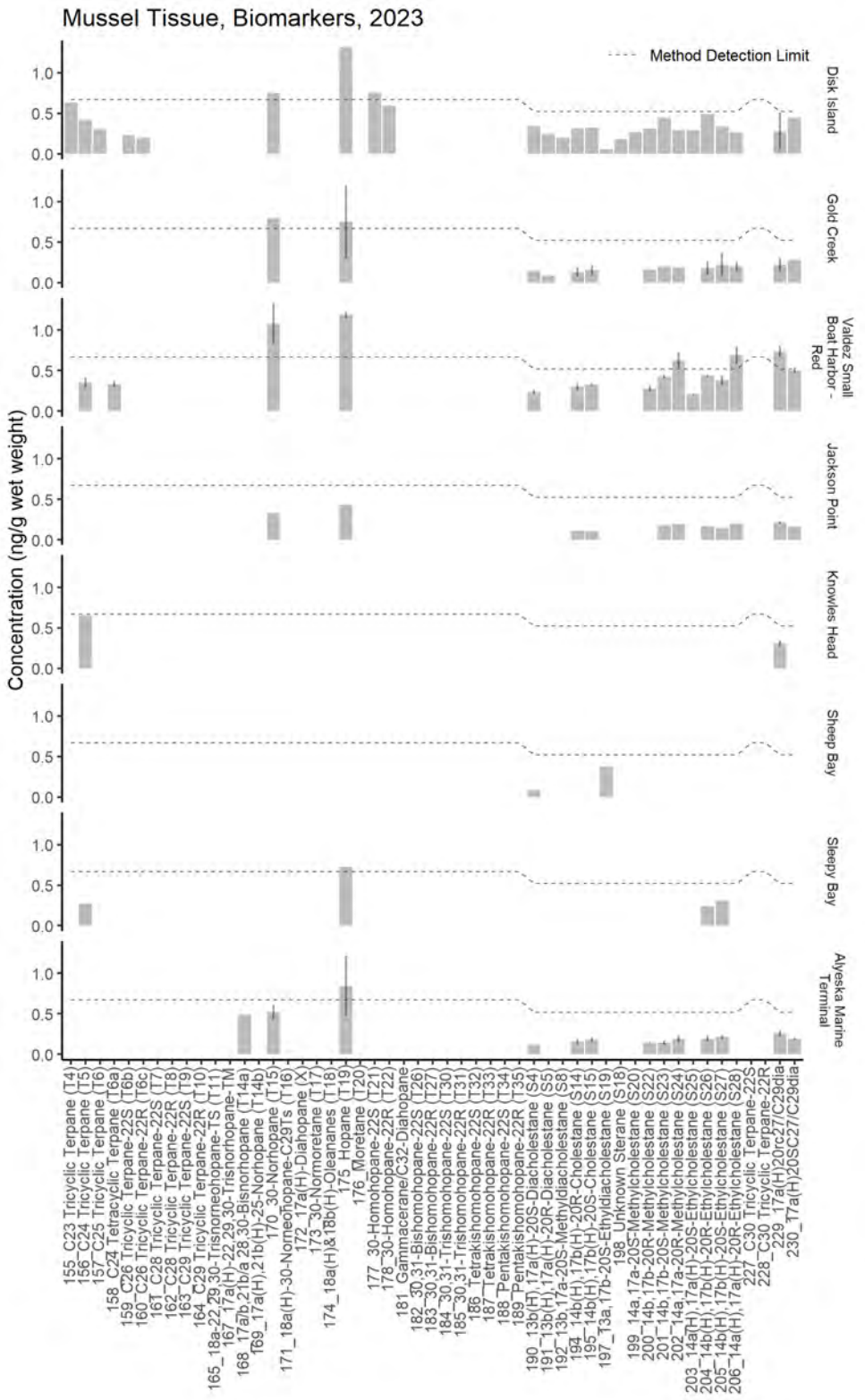


Figure 37. 2023 Petroleum chemical biomarker profiles from mussel tissue samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line.

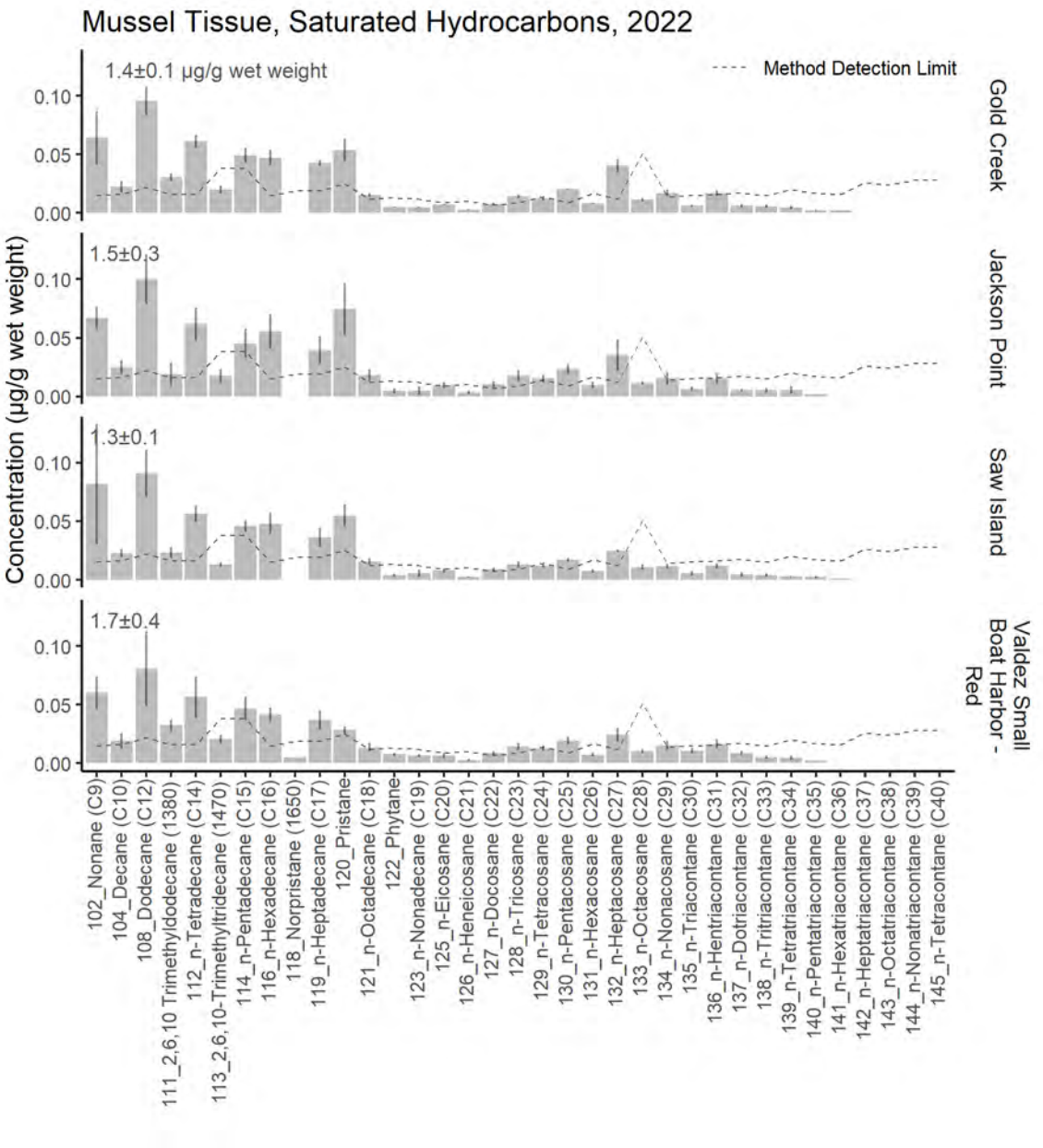


Figure 38. 2022 Saturated hydrocarbons (SHC) profiles from mussel tissue samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line. Sum SHC values (mean ± 1 standard deviation) are found in the upper left corner of each site profile.

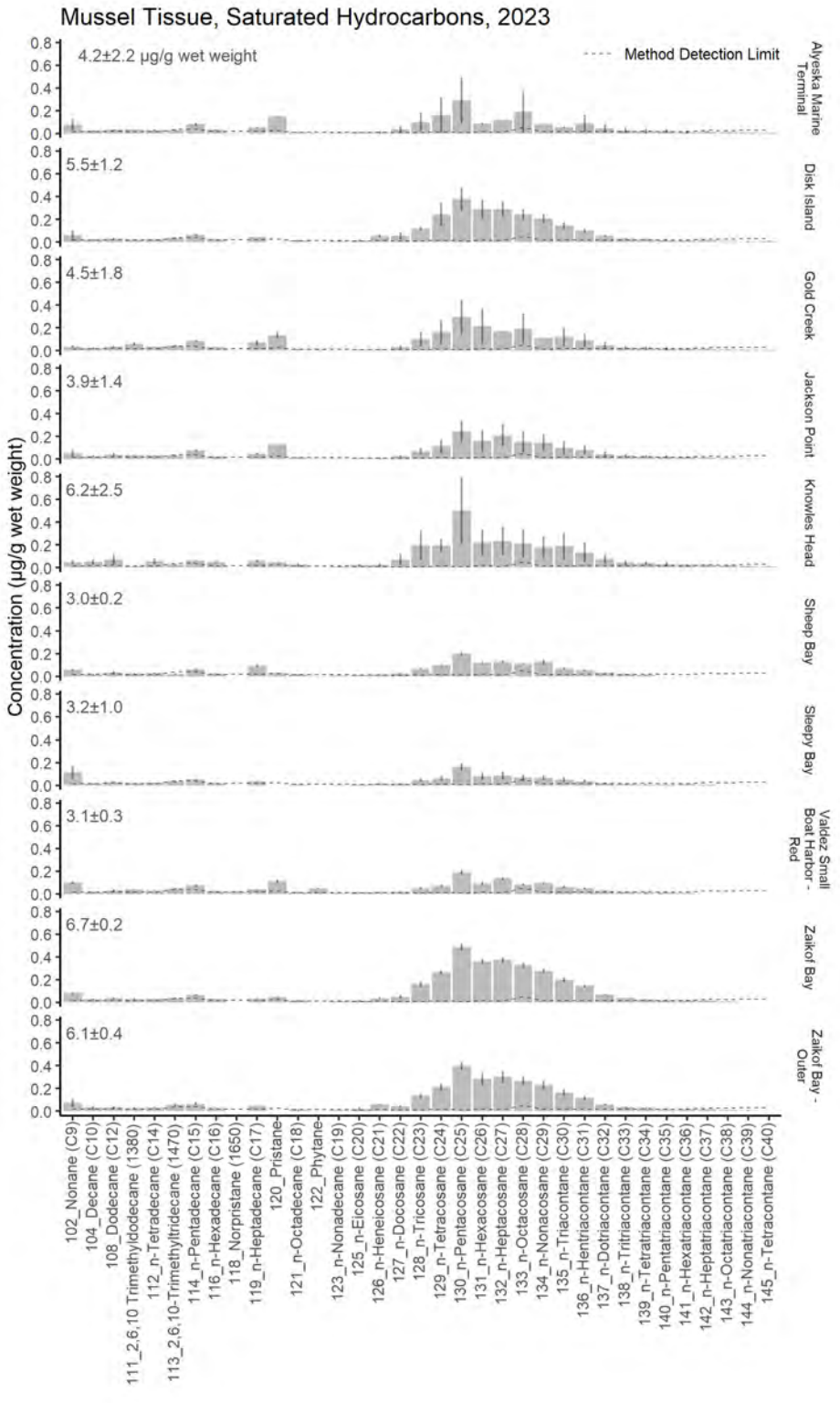


Figure 39. 2023 Saturated hydrocarbons (SHC) profiles from mussel tissue samples plotted by mean ± 1 standard deviation. The analyte specific method detection limit is superimposed as a dashed line. Sum SHC values (mean ± 1 standard deviation) are found in the upper left corner of each site profile.

Laboratory Data

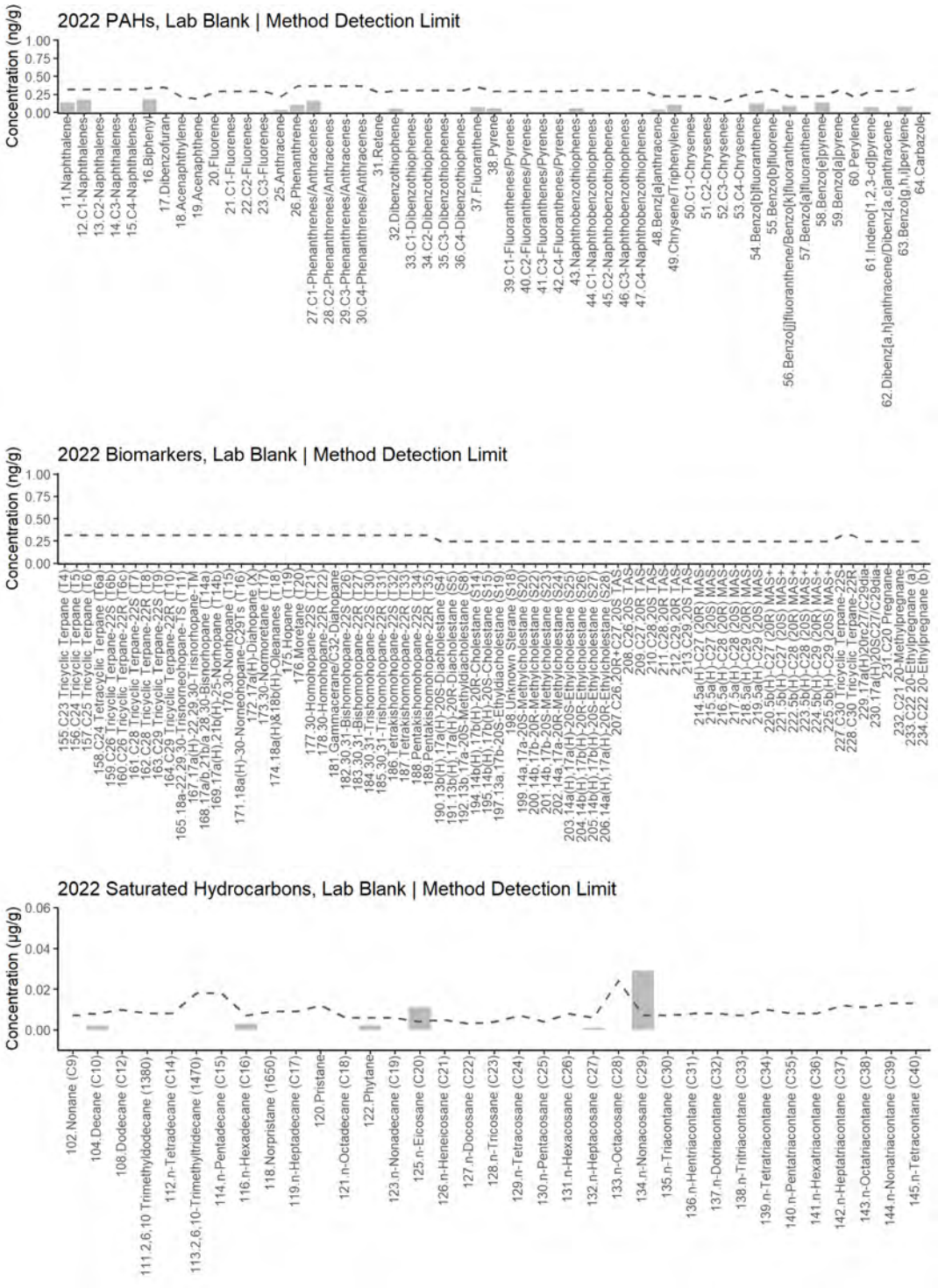


Figure 40. 2022 PAH, biomarker, and saturated hydrocarbon (SHC) profiles from the NewFields laboratory blanks with the analyte specific method detection limit superimposed as a dashed line.

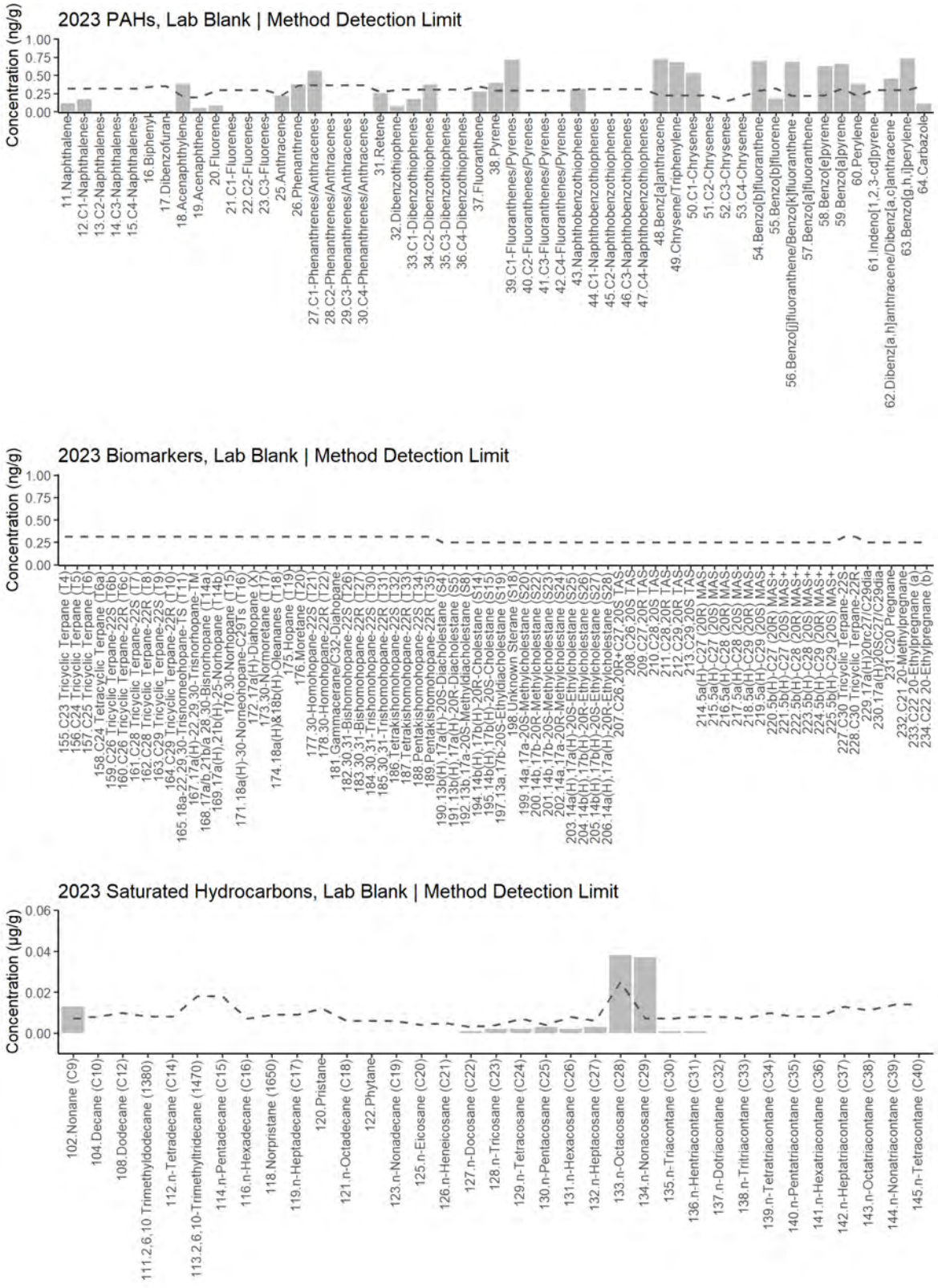


Figure 41. 2023 PAH, biomarker, and saturated hydrocarbon (SHC) profiles from the Alpha Analytical laboratory blanks with the analyte specific method detection limit superimposed as a dashed line.

Water via Passive Sampler Data

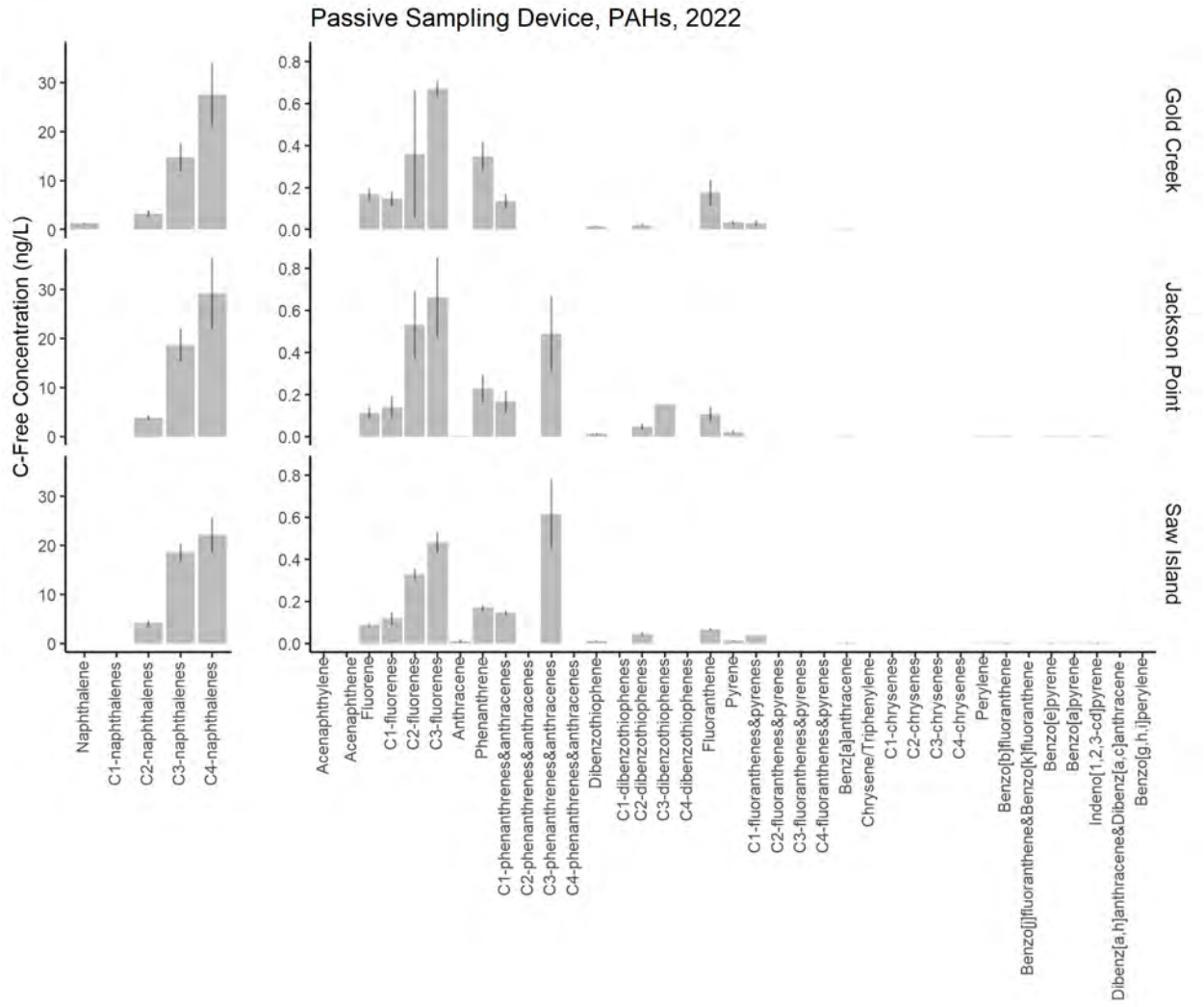


Figure 42. PAH profiles from water sampled via passive sampling devices deployed during LTEMP 2022 at Gold Creek, Jackson Point, and Saw Island plotted by mean value ± standard deviation.

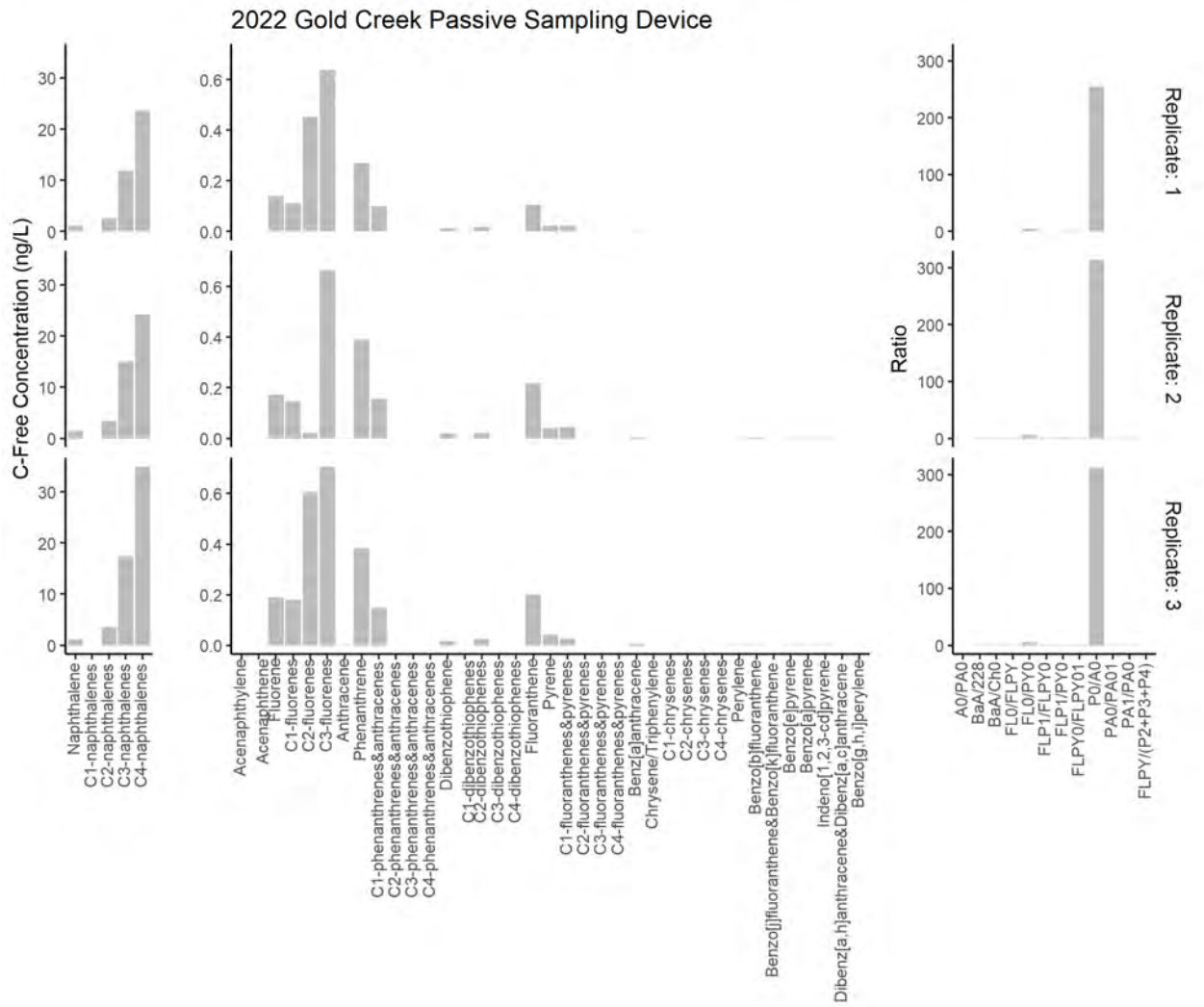


Figure 43. 2022 water PAH profiles and laboratory diagnostic ratios from individual passive sampling devices deployed at Gold Creek.

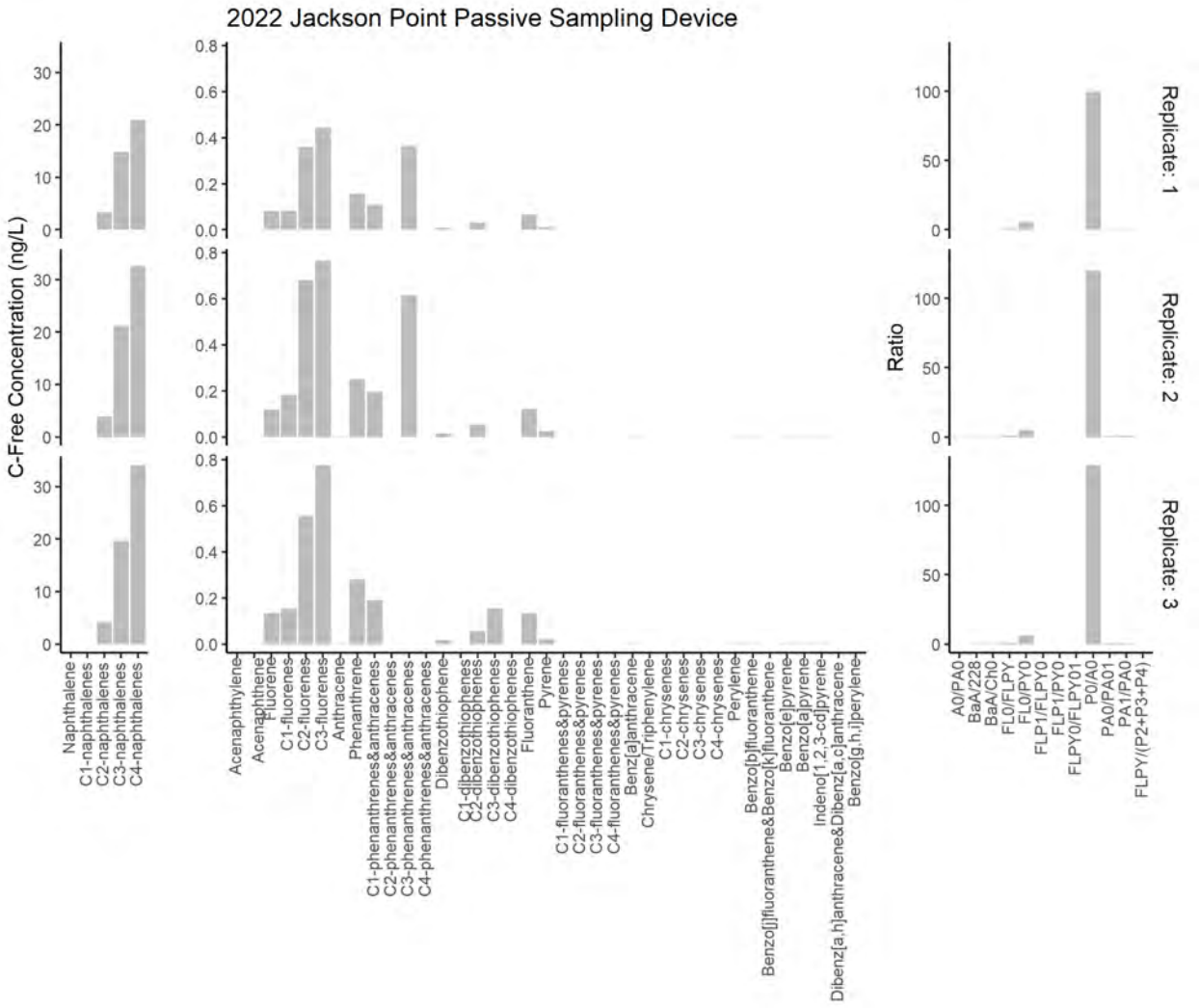


Figure 44. 2022 water PAH profiles and laboratory diagnostic ratios from individual passive sampling devices deployed at Jackson Point.

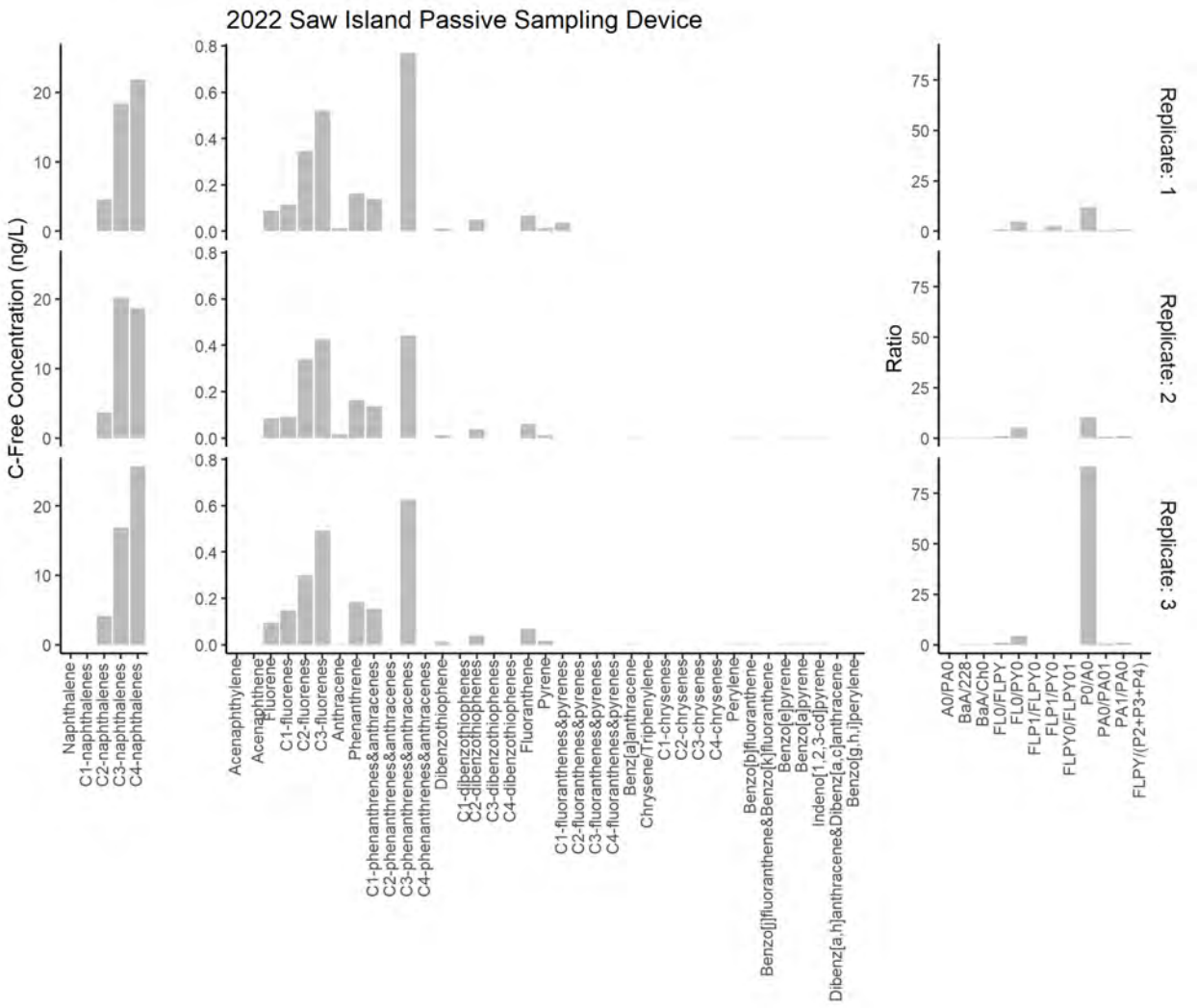


Figure 45. 2022 water PAH profiles and laboratory diagnostic ratios from individual passive sampling devices deployed at Saw Island.

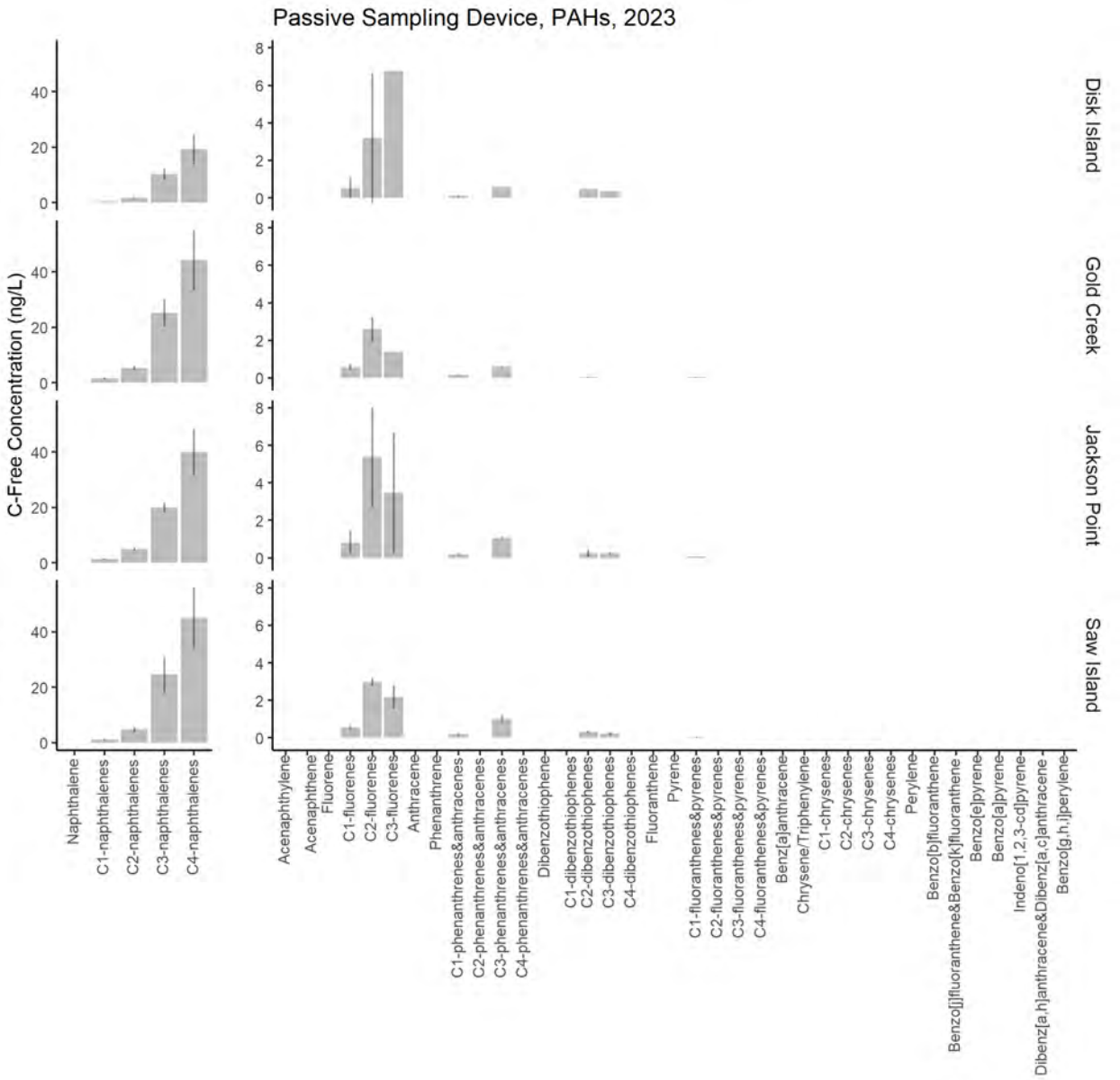


Figure 46. PAH profiles from water sampled via passive sampling devices deployed during LTEMP 2023 at Disk Island, Gold Creek, Jackson Point, and Saw Island plotted by mean value ± standard deviation.

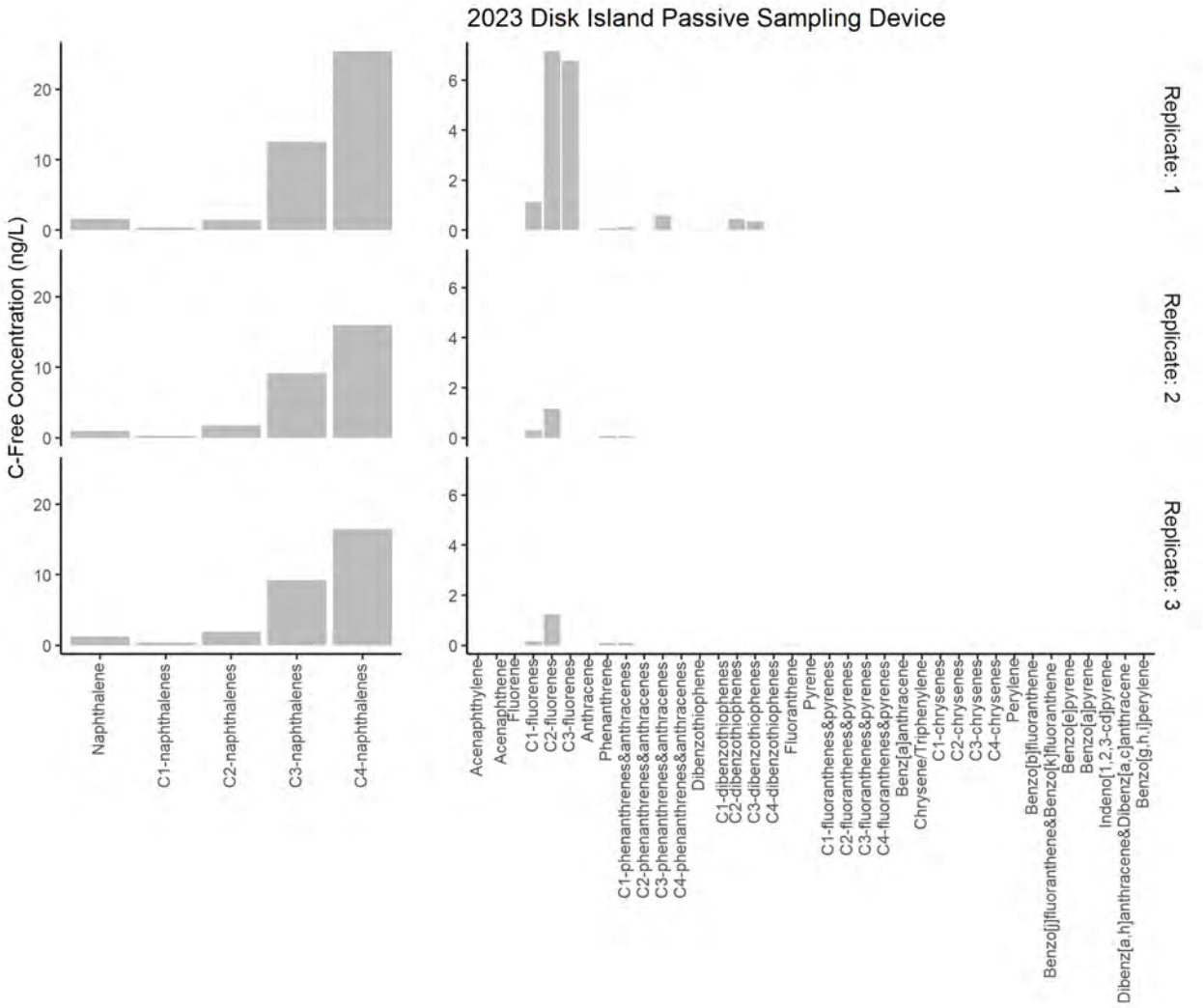


Figure 47. 2023 water PAH profiles from individual passive sampling devices deployed at Disk Island.

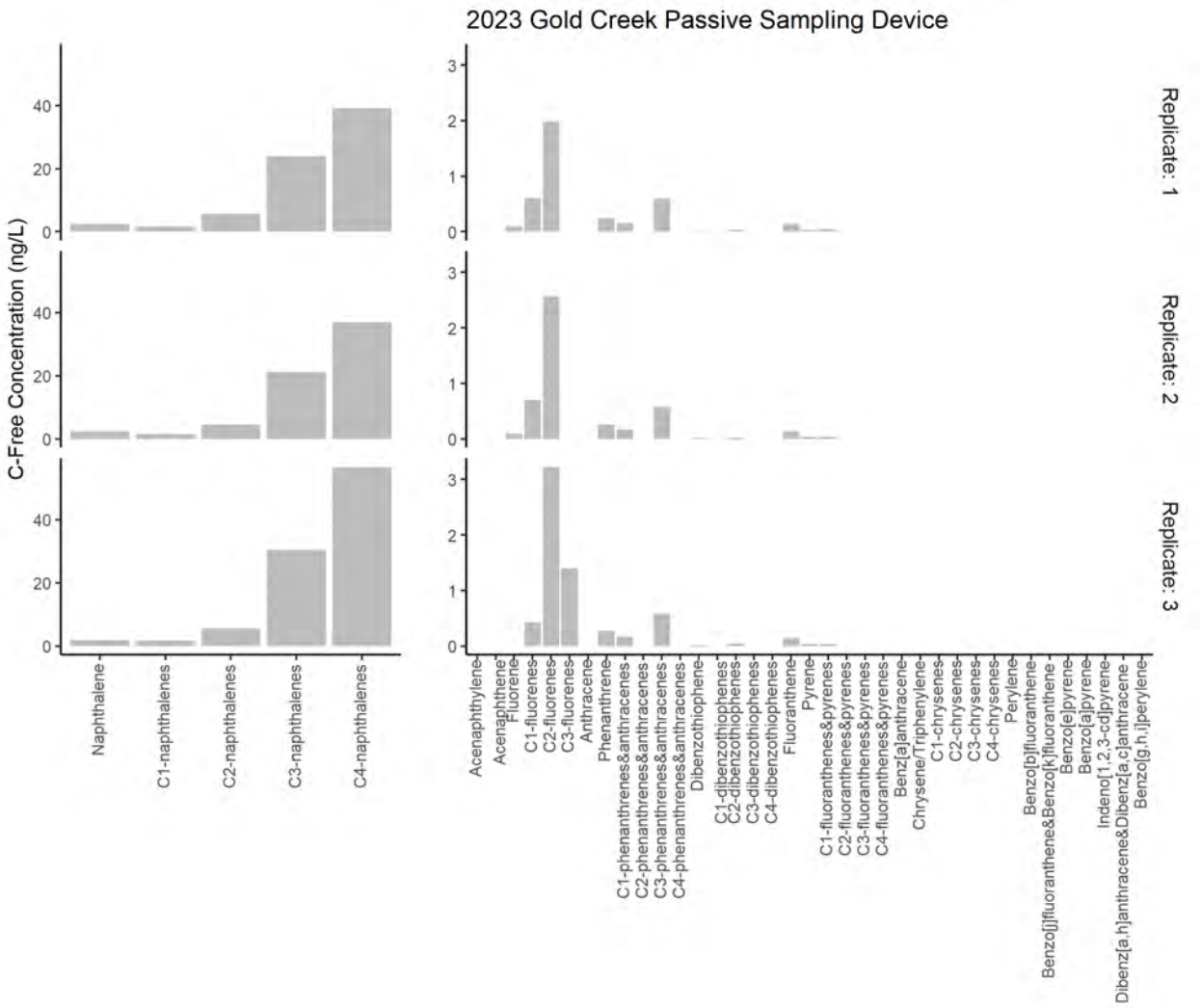


Figure 48. 2023 water PAH profiles from individual passive sampling devices deployed at Gold Creek.

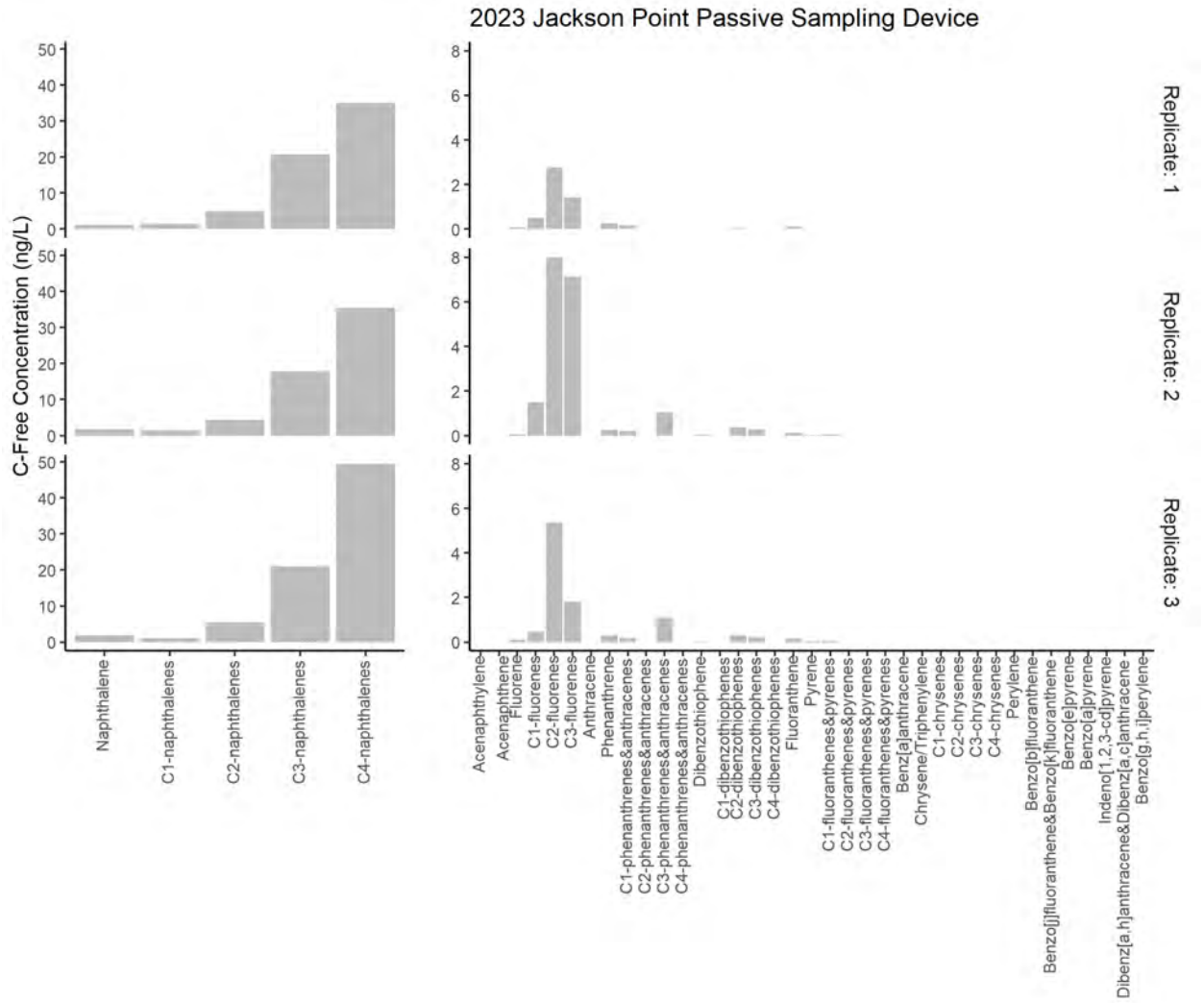


Figure 49. 2023 water PAH profiles from individual passive sampling devices deployed at Jackson Point.

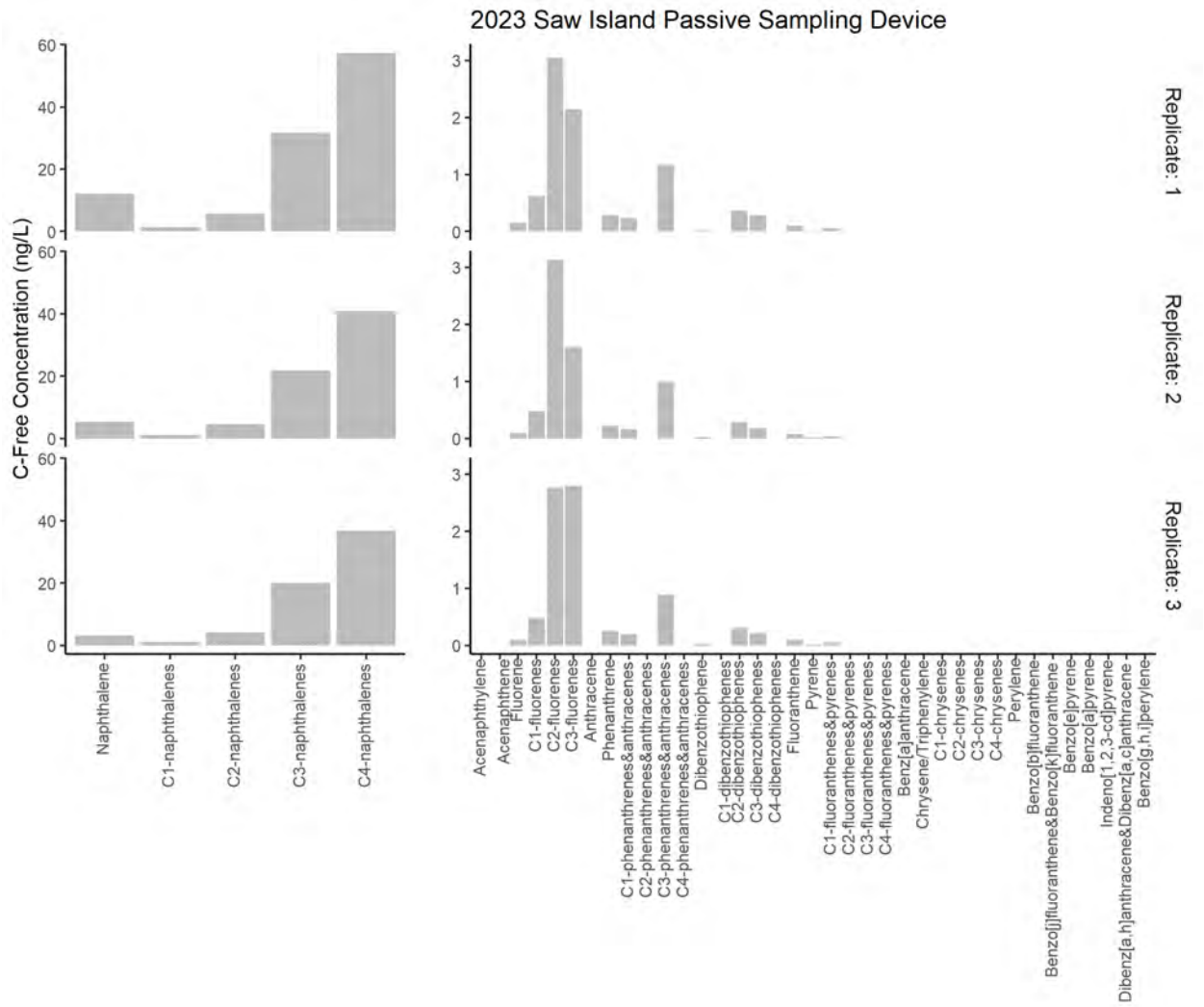


Figure 50. 2023 water PAH profiles from individual passive sampling devices deployed at Saw Island.

Back to Agenda

REVISED BRIEFING Approval of FY2024 Budget Modifications 4-2

Briefing for PWSRCAC Board of Directors – January 2024

ACTION ITEM

Sponsor: Ashlee Hamilton
Project number and name or topic: FY2024 Budget Modifications

1. **Description of agenda item:** The Board is asked to approve modifications to the FY2024 budget as outlined on the attached list. These modifications were identified by staff at a December 19, 2023 budget review meeting. The Finance Committee met on January 8 to review these modifications, and support their approval. If the changes proposed in this briefing sheet are approved, the FY2024 contingency will be $111,654.

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	5/4/23	Approved the FY2024 budget as presented during the budget workshop on April 29, 2023, and as described in the Draft Budget 2024 dated April 25, 2023. Total income is assumed to be $4,264,106, total expenses are $4,745,278, contingency of $75,000, capital budget of $15,000 for a total of $571,172 net assets used.
Board	11/21/23	Approved the FY2024 budget modifications as listed on the provided sheet, with a total revised contingency in the amount of $181,607.

4. **Committee Recommendation:** The Finance Committee met on January 8, 2024 to review the proposed FY2024 budget modifications and recommends Board approval.

5. **Action Requested of the Board of Directors:** Approve the FY2024 budget modifications as listed on the provided sheet, with a total revised contingency in the amount of $111,654.

6. **Alternatives:** None recommended.

7. **Attachments:** The list of proposed FY2024 budget modifications.

Back to Agenda

Proposed FY2024 Budget Modifications

Task	Name	Budget Modifications	From Contingency	To Contingency	Total Net Assets Needed	Notes
2150	Board Administration	Additional funds needed to finish Phase I of the Strategic Planning.	$ (2,000.00)			
2250	Committee Support	Meeting expenses for Holiday Party coming in under budget / travel also coming in under budget.		$ 11,514.76		
2500	Scientific Advisory Committee	Travel costs for in-person meeting under budget.		$ 3,500.00		
3300	Annual Report	Contract/printing expense lower than budgeted.		$ 2,037.60		
3562	Then & Now	Printing costs higher than anticipated.	$ (515.00)			
3600	Public Communications Program	Printing costs not included in original budget.	$ (1,382.50)			
4000	Programs & Projects	Additional funds needed for project legal advice.	$ (10,000.00)			Various projects require legal advice, especially if there are issues surrounding contracting. For this year, the legal budget is a bit higher than normal as we have been involving Joe Levesque in meetings surrounding resolution of the condition of approval for the secondary containment liner issue.
4010	Digital Collections Program	Anticipated support for FileMaker lower than budgeted.		$ 3,000.00		
4400	Federal Government Affairs	Additional funds for Blank Rome to supplement Federal Legislative Monitor work and support transition.	$ (22,500.00)			Amount is for the remainder of FY2024. The Blank Rome contract will be discussed further during an executive session at the January 2024 Board meeting. LAC supports this request.
5000	Terminal Operations Program	Additional funds needed for Taku Engineering to address questions and requests from Alyeska related to Taku's Crude Oil Storage Tank Vent Snow Damage Report" and for continued VMT operations and maintenance work.	$ (22,000.00)			TOEM supports this request.

Back to Agenda

Proposed FY2024 Budget Modifications

5570	Air Quality	Funds for contractor to assist with reviewing the VMT Title V air quality permit, fugitive emissions, and NESHAP-OLD rulemaking.	$ (50,000.00)			The $50,000 amount is based on proposals received from the RFP. TOEM supports this request. *Previously listed as an estimate, this amount was confirmed at the January 5, 2024 TOEM meeting.*
6510	State Contingency Planning	Additional funds needed to review and comment on Tanker and VMT C-	$ (10,000.00)			OSPR supports this request.
6512	Secondary Containment (Adjudicatory Hearing)	Additional funds needed for contractor to review and comment on Secondary Containment pilot test.	$ (38,000.00)			Funds requested to have Dr. Craig Benson come to Valdez to observe Alyeska's pilot test of the secondary containment liner in the West Tank Farm, and assist with providing recommendations and comments to Alyeska and ADEC (pending Alyeska approval to have an observer). TOEM supports this request.
6531	Port Valdez Weather Buoys	Additional funds needed for contract with PWSSC for emergency rescue if buoy(s) move off station.	$ (5,000.00)			
9000	Environmental Monitoring Program	Expenses for professional services for Science Night lower than budgeted.		$ 2,156.00		
9510	LTEMP	Storage unit rent and contract expenses no longer needed.		$ 16,258.10		
9512	Marine Invasive Species - Intern	Travel funds no longer needed.		$ 1,135.10		
		TOTAL	**$ (161,397.50)**	**$ 39,601.56**	**$ (121,795.94)**	

Current Contingency	$ 233,450.00
Expenses not budgeted	$ (121,795.94)
New Contingency	**$ 111,654.06**

Briefing for PWSRCAC Board of Directors – January 2024

ACTION ITEM

Sponsor: Linda Swiss
Project number and name or topic: 6510 Valdez Marine Terminal Contingency Plan Review

1. **Description of agenda item:** This information and action item is intended to brief the Board on the renewal of Alyeska Pipeline Service Company's (Alyeska) Valdez Marine Terminal Oil Discharge Prevention and Contingency Plan (VMT C-Plan) and request additional funding for contingency planning. The VMT C-Plan was approved in November 2019, for a period of five years, and is set to expire in November 2024.

Alyeska submitted the VMT C-Plan renewal to the Alaska Department of Environmental Conservation (ADEC) for a sufficiency review on October 20, 2023, followed by a 45-day public review. Comments were submitted to ADEC on December 15, 2023.

Highlights of PWSRCAC's comments and requests for additional information include:

- **Secondary Containment**: Based on documented damage to the catalytically blown asphalt (CBA)/secondary containment liner by Alyeska contractors, PWSRCAC questions whether Alyeska should receive a 60% prevention credit they currently receive for this prevention measure. Visual inspections of the liner conducted between 2014-2017 demonstrated significant existing damage, thus rendering the liner ineligible for the full 60% prevention credit. Additional testing of the liner needs to be conducted to verify its integrity and whether the liner meets the "sufficiently impermeable" regulatory requirement.
- The significance of the 60% prevention credit is that Alyeska is able to plan and commit resources (including personnel and equipment) for a significantly smaller spill than they would if the credit was not given. Having adequate resources is critical in the event of a spill.
- **Crude Oil Storage Tank Inspections:** Due to the questionable integrity of the secondary containment liner, the age of crude oil storage tanks, and sensitivity of the local environment, PWSRCAC advocates that ADEC use its discretion to impose a maximum of 10 years between internal inspections on tanks.
- **Prevention Training**: The VMT C-Plan lacks details to verify compliance with state regulations.
- **Documents Incorporated by Reference**: The VMT C-Plan incorporates more than 70 documents by reference. Information from these documents that may not be available to the public for review is used to satisfy state and federal requirements.

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

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

Meeting	Date	Action
Board	5/4/23	Board adopted the FY2024 budget as presented during the budget workshop on April 29, 2023, with the inclusion of project 6510 – State Contingency Plan Review.
Board	5/4/23	Authorized 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.

4. **Committee Recommendation:** The OSPR and TOEM Committees have been briefed on the status of the VMT C-Plan renewal. OSPR supports this contract increase and recommends Board approval (email poll dated 12/20/23).

5. **Relationship to LRP and Budget:** Project 651 / State Contingency Plan Reviews is in the approved FY2024 budget and annual work plan.

6510 – State Contingency Plan Review
As of December 19, 2023

Original Budget	$80,000
Revised Budget	80,000
Actual & Commitments	$72,205
Amount Remaining	$7,795

6. **Action Requested of the Board of Directors:** Delegate 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.

Note: This action is contingent on approval of the proposed budget modifications in agenda item 4-2 where $10,000 is requested be transferred to 6510 contract expense.

7. **Attachments:** The Council's December 15, 2023 comments on Alyeska VMT C-Plan can be viewed HERE.

Back to Agenda

REVISED BRIEFING

Consideration of Oil Spill Region Recreation Coalition as Class I Member 4-4

Briefing for PWSRCAC Board of Directors – January 2024

ACTION ITEM

Sponsor: Board Governance Committee (BGC), Donna Schantz, KJ Crawford, Brooke Taylor, and Joe Lally

Project number and name or topic: Class I Member Appointment / Recreation

1. **Description of agenda item:** The purpose of this agenda item is to amend the Council Bylaws to remove the Temporary Recreation Seat that was added in January 2023 and seat a permanent entity to provide representation for regional recreation interests on the PWSRCAC Board of Directors.

On November 14, 2023, BGC met to discuss the submission materials and the BGC moved to recommend seating the Oil Spill Region Recreational Coalition as a Class I member of the Board of Directors to represent recreation interests. There were no objections. On December 13, 2023, the Executive Committee approved a recommendation to the Board to seat the Oil Spill Region Recreational Coalition as a Class I member of the PWSRCAC Board of Directors to represent recreation interests. The motion passed with four Executive Committee members voting in favor, and one choosing to abstain. The issue is now presented to the full Board.

To accomplish this action, the Board is being asked to approve the proposed amendment to section 2.2.1 of the PWSRCAC Bylaws to remove the Temporary Recreation Seat and add the Oil Spill Region Recreational Coalition to the list of Class I Membership.

Based on a request by a BGC Project Team member, the BGC also moved to include the definition of recreation, as developed by the BGC, as footnote number 13 on page 2 of the bylaws. All proposed bylaw amendments can be seen in track changes on page 2 of the attached draft bylaws.

Changes to the bylaws, including adding a new Board member to the list of Class I members, require a 2/3 vote to be approved by the Board (14 affirmative votes).

2. **Why is this item important to PWSRCAC:** An issue arose during our 2023 recertification with the U.S. Coast Guard (USCG). Seating a recreation entity as a Class I member on the PWSRCAC Board of Directors resolves this issue, now and in the future.

While OPA 90 mandates RCACs for Prince William Sound and Cook Inlet, the Council's status as the alternative voluntary group filling that role is contingent upon annual recertification through the USCG. This is separate from our contract with Alyeska.

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

Meeting	Date	Action
Board	1/22/15	Accepted resignation of AWRTA and amended Section 2.2.1 of the PWSRCAC Bylaws to remove them as a Class I member of the Council.

REVISED BRIEFING

Consideration of Oil Spill Region Recreation Coalition as Class I Member 4-4

Board	1/22/15	Postponed further discussion and action on approving an amendment to Section 2.2.1 of the PWSRCAC Bylaws to add Alaska Travel Industry Association as a Class I member of the PWSRCAC.
Board	1/22/15	Invited Prince William Sound Economic Development District to apply for Class II membership in the PWSRCAC.
XCOM	2/9/15	Recommended the PWSRCAC Board of Directors seat Alaska Travel Industry Association at the May 2015 meeting as a member, representing tourism and recreation public.
Board	12/20/22	Direct staff to contact individual(s) within the EVOS region to temporarily fill the recreation seat, with the intent to temporarily waive Administrative Procedure 16-01 and seat the representative selected at the January 2023 Board meeting, after which a full RFP will be conducted.
Board	1/26/23	Approved the proposed amendment to Section 2.2.1 of the PWSRCAC Bylaws to add *Temporary Recreation Seat* to the list of Class I Membership.
Board	9/21/23	Supported efforts to form a coalition of recreation entities to potentially fill a Class I Recreation seat on the PWSRCAC Board of Directors, and delegation of authority to the Executive Director to engage PWSRCAC legal counsel to review the draft Memorandum of Agreement provided by the groups currently proposing the Recreational Coalition.
XCOM	12/13/23	Recommended the PWSRCAC Board of Directors seat the Oil Spill Region Recreational Coalition as a Class I member, representing recreation interests.

4. **Summary of policy, issues, support, or opposition:** The Council previously had a Board seat for recreation, last filled by the Alaska Wilderness Recreation and Tourism Association. Cathy Hart was the most recent representative for that entity on the PWSRCAC Board until they closed in 2014. At that time, the Council received two applications from groups expressing interest in filling seats on our Board: Alaska Travel Industry Association and the Prince William Sound Economic Development District. After consideration by the Board at three different meetings, neither was approved.

In the years since, the Council has provided justification to USCG during both heavy and light recertification cycles noting current Board members that represent recreation interests in addition to their designated member entity, as well as noting that the governmental interests on our Board have a recreation interest as well. During all recertifications since 2014, this was found to be sufficient, until recently.

As is noted in the Board meeting minutes from 2015, it has also been discussed in the past that while PWSRCAC strives to adhere to OPA 90 as closely as possible, it is PWSRCAC legal counsel's opinion that we are not held to all OPA 90 requirements as we fill the alternative voluntary group in lieu of Council provision under the Act. This point has been brought to USCG's attention, though currently, the USCG hasn't addressed this distinction. Staff has worked with our legal counsel to provide that opinion to USCG in the interest of clarity.

Given the USCG directive and after discussing the situation with legal counsel and the Board, at the January 2023 meeting, the Board amended the PWSRCAC Bylaws to add a Temporary Recreation Seat until the January 2024 Board meeting, or the completion of the RFQ process, whichever comes first, and approved Jim Herbert to fill the Temporary Recreation Seat. Following the January 2023 Board meeting, a full RFQ process solicitation was conducted through BGC to potentially fill a permanent recreation seat.

Back to Agenda

REVISED BRIEFING

Consideration of Oil Spill Region Recreation Coalition as Class I Member 4-4

Since the January 2023 Board meeting, Council volunteer Jim Herbert has held the Temporary Recreation seat on the PWSRCAC Boad. In April 2023, the Council posted a Request for Qualifications (RFQ) to identify potential recreational entities to fill a permanent seat. The RFQ resulted in three organizations submitting formal Statements of Qualifications, including: Friends of Kachemak Bay State Parks, the PWS Stewardship Foundation, and the Valdez Adventure Alliance. In July 2023, the Board Governance Committee (BGC) proposed a coalition of recreation entities to fill the permanent seat, and at the September 2023 Board meeting the full Board moved in support of the coalition approach.

Since the September 2023 Board meeting, Jim Herbert has worked closely with three recreation entities to successfully execute a Memorandum of Agreement resulting in the formation of the Oil Spill Region Recreational Coalition. PWSRCAC legal counsel, Joe Levesque, reviewed the MOA, and on October 31, 2023, the Recreational Coalition officially submitted their application for consideration. Per the Council's Administrative Procedure 16-01, consideration of an entity for the PWSRCAC Board of Directors must first be taken up by the Board Governance Committee, then forwarded to the Executive Committee to make a recommendation to the full Board at the next regularly scheduled Board meeting.

5. **Committee Recommendation:** The Board Governance Committee passed a motion at their meeting on November 14, 2023, to recommend seating the Oil Spill Region Recreational Coalition as a Class I member of the Board of Directors to represent recreation interests. On December 13, 2023, the Executive Committee passed a motion to recommend seating the Oil Spill Region Recreational Coalition as a Class I member of the PWSRCAC Board of Directors to represent recreation interests. The Board Governance Committee met again on January 5, 2024 to make a recommendation to the full Board on the proposed bylaw amendment needed to remove the Temporary Recreation seat and add the Oil Spill Region Recreational Coalition should the Board vote to seat the Coalition. The BGC also made a recommendation to include the definition of recreation, as developed by the BGC, as a footnote in the PWSRCAC Bylaws.

6. **Relationship to LRP and Budget:** None.

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

   A: Approve the proposed amendment to section 2.2.1 of the PWSRCAC Bylaws to remove the Temporary Recreation Seat and add the Oil Spill Region Recreational Coalition to the list of Class I members.

   B: Approve the proposed amendment to the Bylaws to include listing the definition of recreation as developed by BGC in the footnotes on page 2 of Attachment A.

8. **Alternatives:** None.

9. **Attachments:**

   A. Proposed amendments to sections 2.2.1of the PWSRCAC Bylaws
   B. Letter of request from the Oil Spill Region Recreational Coalition for a Class I membership.

BY LAWS
OF
PRINCE WILLIAM SOUND REGIONAL CITIZENS' ADVISORY COUNCIL, INC.

SECTION 1. OFFICES

The principal office of the corporation shall be located at its principal place of business or such other places as the Board of Directors ("Board") may designate. The corporation may have such other offices, either within or without the State of Alaska, as the Board may designate or as the business of the corporation may require from time to time.

SECTION 2. MEMBERSHIP

2.1 Class of Members. The corporation shall have two classes of members. Class I consists of members who are entitled to designate one or more individual representatives for election to the Board as voting Directors. Class II consists of members who are entitled to designate individual representatives ~~for election~~ to the board as non-voting directors. ~~Additional classes of members, the manner of election or appointment of each class of members, and the qualifications and rights of each class of members may be established by amendment to these Bylaws.~~[1]

2.2 Membership.

2.2.1 Class I Membership. The following entities shall be Class I members of the corporation:

Alaska State Chamber of Commerce
Cordova District Fishermen United
Chugach Alaska Corporation
City of Cordova
City of Homer
City of Kodiak
City of Seldovia
City of Seward
City of Valdez
City of Whittier
Kenai Peninsula Borough
Kodiak Village Mayors Association
Kodiak Island Borough
~~National Wildlife Federation~~[2]
Prince William Sound Aquaculture Corporation
Community of Chenega[3]
Community of Tatitlek[4]
~~Alaska Wilderness Recreation and Tourism Association~~[5,6]

[1] Approved removal at Council Meeting 2-3 December 2004.
[2] Approved removal at Council Meeting 24-25 Sept. 1993.
[3] Approved change at Council Teleconference 8 July 1992.
[4] Approved change at Council Teleconference 8 July 1992.
[5] Approved change at Council Teleconference 8 July 1992.
[6] Approved change at Council Meeting 22-23 Jan. 2015.

Oil Spill Region Environmental Coalition[7], ~~including Nunagpet[8] Chugachmiut Environmental Protection Consortium~~[9]
Port Graham Corporation[10]
~~Temporary Recreation Seat~~[11]
Oil Spill Region Recreational Coalition[12] [13]

2.2.2 Class II Membership. The following entities are entitled to be Class II members of the corporation:

The United States Environmental Protection Agency
The United States Coast Guard
The United States National Oceanic and Atmospheric Administration
The United States Forest Service
The United States Department of the Interior
The Alaska Department of Environmental Conservation
The Alaska Department of Fish and Game
The Alaska Department of Natural Resources
Alaska Division of Homeland Security & Emergency Management, Alaska Department of Military and Veterans Affairs[14] ~~The Division of Emergency Services, Alaska~~[15]
~~Department of Military and Veterans Affairs~~[16]
Oil Spill Recovery Institute [17]
The Bureau of Land Management[18]

The entities named above become a Class II member under this section by designating an individual representative ~~under Section 2.4.2~~. ~~Class II member may designate on individual as a non-voting representative of that member. A non-voting representative need not be a resident of the State of Alaska.~~ [19] Each Class II member may designate one individual as a non-voting representative of that member. A non-voting representative need not be a resident of the State of Alaska.[20]

2.3 Voting Rights. Unless required by law, or unless the Board elects to submit any matter to the members for approval or adoption, no member or class of member shall have voting rights. Voting rights of members may be established by amendment to these Bylaws.

---

[7] Approved change at Council Meeting 10-11 March 1994.
[8] Approved name changed at Council meeting 14-15 March 1996.
[9] Approved removal at Council Meeting 9-10 March 2000.
[10] Approved change at Council Meeting 21-22 January 2010.
[11] Approved change at Council meeting 26-27 January 2023.
[12] **date Board approved change will be noted here**
[13] Recreation shall be defined as an experience, activity, or the opportunity to enjoy the Exxon Valdez oil spill area's natural environment, cultural, and historic resources for the use, enjoyment, and welfare of citizens.
[14] Approved change at Council Meeting 16-17 September 2021.
[15] Amendment approved at Council Meeting 2-3 December 2004
[16] Approved change at Council Meeting 16-17 September 2021.
[17] Approved change at Council meeting December 1998.
[18] Approved change at Council meeting 18-19 September 2006.
[19] Approved change at Council Meeting 2-3 December 2004.
[20] Amendment approved at Council Meeting 2-3 December 2004 (Paragraph moved from old section 2.4.2.).

2.4 Designation of Director.

2.4.1 Class I Members. Each Class I member shall designate one individual representative for election to the Board as a voting Director except for the City of Valdez, which shall designate two representatives.[21] The representative of the Chamber of Commerce shall ~~be involved in the tourism industry in areas that might be directly affected by an oil spill in Prince William Sound~~ represent the locally based tourist industry.[22] Each representative shall be a resident of the State of Alaska ~~with the intent of remaining as a permanent resident~~. [23],[24] A resident is a person who is physically present in Alaska with the intent to remain indefinitely and make a home here and who has maintained a domicile in Alaska for the 12 consecutive months immediately preceding his or her appointment to the Board and is not claiming residency or obtaining benefits under a claim of residency in another state, territory or country.[25] ~~intends to make Alaska his or her home, does not claim residency in any other state, and meets two of the following criteria: a) Owns or rents a home in Alaska; b) Is a registered voter in Alaska and is not registered to vote in any other state; c) has a current Alaska driver's license and does not maintain a driver's license from any other state; d) earns primary income in Alaska and is not employed full-time in another state.~~ [26]

2.5 Resignation. A member entity may resign at any time by delivering written notice from the member's governing board to the President, the Secretary, the Board, or to the registered office of the corporation. Any such resignation shall take effect ~~at the time specified therein, or if the time is not specified upon delivery thereof, and unless otherwise specified therein.~~[27]:

- At the time, if an, specified in the notice, or,
- Upon deliver of the notice, if not time is specified therein.

Acceptance of such resignation by the Board of the corporation shall not be necessary to make it effective.

2.6 Removal. A member entity may be removed in any of the following ways:

(a) The Board may remove a Class I member that, after receiving notice of a vacancy in the seat of its designated Director and of its obligation to designate a successor Director in order to continue its membership[28], fails for a period of six months to designate a successor Director. Such a member may be removed by a majority of the remaining Directors. ~~even though less than a quorum~~.[29]

(b) The Board may remove a Class II member that, after receiving notice of a vacancy in the seat of its non-voting representative and of its obligation to designate a successor representative in order to continue its membership fails for a period of six months to designate a successor non-voting representative. Such a member may be removed by a majority vote of the Directors.

---

[21] Approved change at Council Teleconference 8 July 1992.

[22] Approved change at Council Meeting 19-21 March 1992 and 2-3 December 2004.

[23] Approve deletion at Council Meeting 19-21 March 1992.

[24] Approved change at Council Meeting 10-11 March 2005.

[25] Approved change at Council Meeting 10-11 March 2005.

[26] Approved change at Council Meeting 23-24 September 1999.

[27] Approved change at Council meeting 20-21 September 2012.

[28] Approve change at Council meeting 3-4 May 2012.

[29] Approve change at Council Meeting 10-11 March 2005.

(c) The Board may remove a member entity whose designated representative Director or designated non-voting representative misses three consecutive Board meetings without excuse and, after written notice of the unexcused absences to the member, misses two additional meetings of the Board without excuse[30]. The member entity subject to removal under this subparagraph shall be given written notice of the meeting of the Board at which its removal will be considered by certified mail, return receipt requested, not less than two weeks prior to the meeting. If due to resignation, removal or three consecutive unexcused absences, the number of remaining active Directors is reduced to less than a quorum, then an affirmative vote of not less than two-thirds of the remaining Board members[31] ~~majority of the remaining active Directors~~ may remove such a member. For purposes of this paragraph, an excused absence is one for which the Director or non-voting representative has obtained prior approval from the President for absence due to business, illness, death of close family member or close friends, or other equally compelling reasons. All other absences are unexcused.

(d) A Director may be removed by the affirmative vote of not less than two-thirds of the Board if the Director uses confidential PWSRCAC documents or information not available to the general public for any use other than PWSRCAC purposes or if the Director misrepresents PWSRCAC adopted positions or engages in behavior that the Board deems to be in conflict with PWSRCAC policies or Code of Conduct. "Confidential information" means information obtained in the course of serving as a Board of Director, which is not available to members of the public and which the Director is not Authorized to disclose except to designated individuals or bodies, including written and not-written information[32]. The member entity whose designated Director is being considered for removal shall be given written notice of the meeting of the Board at which ~~its~~ removal of its designated Director will be considered by certified mail, return receipt requested, not less than two weeks prior to the meeting.[33]

2.7 Addition. A Class I or Class II member, including a member removed as provided in 2.6 above, may be added by submitting a letter of request to the Board, followed by an affirmative vote of not less than two-thirds of the number of Directors fixed by these Bylaws. [34]

SECTION 3. BOARD OF DIRECTORS

3.1 General Powers. The affairs of the corporation shall be managed by a Board of Directors.

3.2 Number. The Board shall consist of the number of Directors equal to the number of Class I members of the corporation plus one. The number of Directors may be changed from time to time by amendment to these Bylaws, provided that no decrease in the number shall reduce the number of Directors to less than three or have the effect of shortening the term of any incumbent Director. The Board of Directors may appoint and entity or individual to serve as a Class I or Class II member on a temporary basis, on terms and conditions as may be determined by the Board, by action of the Board as provided in this section.[35]

---

[30] Approve change at Council meeting 3-4 May 2012.

[31] Approve change at Council Meeting 10-11 March 2005.

[32] Approve change at Council Meeting, 16-17 September 2010.

[33] Approve change at Council Meeting 12-13 May 2005.

[34] Approve change at Council meeting 3-4 May 2012.

[35] Approved change at Council meeting 26-27 January 2023.

3.3 Classification of Directors. The Directors of the corporation shall be divided into two groups: Group A and Group B.

3.3.1 Initial Classification. At the organizational meeting of the corporation, the Directors named in the Articles of Incorporation shall divide themselves by lot into two groups which will serve staggered terms of office as follows: one-half of the Directors shall serve for a term ending on the date of the 1991 annual meeting of the Board (Group A Directors) and one-half of the Directors shall serve for a term ending on the date of the 1992 annual meeting of the Board (Group B Directors), or until their respective successors in each case are elected. If the number of Directors is changed, any increase or decrease shall be apportioned among the groups so as to maintain the number of Directors in each group as nearly equal as possible, and any additional Director of any group elected to fill a vacancy resulting from an increase in such group shall hold office for a term that shall coincide with the remaining term of that group.

3.3.2 Election of Directors. After the initial classification, one-half of the number of Directors fixed by these Bylaws shall be ~~elected~~ confirmed by a majority vote of the Board[36] each year at the annual meeting of the Board to replace the group of Directors whose terms expire that year. The Board shall confirm as Directors the representatives who are selected by the members whose designated Directors' terms expire on the date of the annual meeting and who meet the Director qualifications established in these Bylaws[37].

3.3.3 Notice to Members. Not less than sixty days prior to the annual meeting of the Board[38], written notice delivered by mail shall be given to each of the member entities described in Section 2.2 whose representatives' terms will be expiring ~~not less than sixty days prior to the annual meeting of the Board~~[39]. Such notice shall state that the term of the member entity's representative will expire on the date of the annual meeting and shall direct such member entity to notify the Board in writing of the name and mailing address of the successor representative within 30 days prior to the annual meeting of the Board so that the Board may properly give notice to the new Director of the annual meeting.

3.4 Terms of Office. With the exception of the Directors classified at the organizational meeting of the Board, and unless a Director dies, resigns or is removed, each group of Directors shall be elected for terms expiring on the date of the annual meeting of the Board two years subsequent to their election ~~and~~ or[40] until their successors are elected.

3.5 Annual Meeting. ~~The annual meeting of the Board shall be held during the month of March in each year, as close to March 24th as possible.~~ [41] The exact time and place of the annual meeting will be set by the Board of Directors and notice of the meeting will be given to all members and directors at least 10 days in advance of the date set for the meeting. The purpose of the annual meeting is for electing directors and officers and transacting such business as may properly come before the meeting.

[36] Approved change at Council Meeting 2-3 December 2004.

[37] Approved change at Council Meeting 2-3 December 2004.

[38] Approved change at Council Meeting 2-3 December 2004.

[39] Approved change at Council Meeting 2-3 December 2004.

[40] Approved change at Council Meeting 2-3 May 2006.

[41] Approved deletion at Council Meeting 10-11 March 2005.

3.6 Regular Meetings. By resolution, the Board may specify the date, time and place for the holding of regular meetings without notice other than such resolution.

3.7 Special Meeting. Special meetings of the Board or any committee appointed by the Board may be called by or at the request of the President or, in the case of special Board meetings, one-third of the number of Directors fixed by these Bylaws, and in the case of a special meeting of any committee appointed by the Board, by the Chairman thereof. The person or persons authorized to call special meetings may fix any place either within or without the State of Alaska as the place for holding any special Board or committee meeting called by them.

3.8 Meeting by Telephone or Videoconference. The Board of Directors, Executive Committee, and any standing or designated committees established by the Board are authorized to meet by teleconference or through other electronic communications media, including video conferencing, so long as all members may simultaneously hear each other and participate in the meeting.

For in-person meetings, members of the Board or any committee designated by the Board may participate in a meeting of such Board or designated committee through use of a conference telephone call, video conferencing, or similar electronic communications media ~~equipment, by means of which all persons participating in the meeting can hear each other at the same time~~.[42] Participation by such means shall constitute presence in person at a meeting.

3.9 Place of Meeting. All meetings of the Board or committee shall be held at the principal office of the corporation or at such other place within or without the State of Alaska designated by the Board, by any persons entitled to call a meeting or by a waiver of notice signed by all Directors entitled to notice of the meeting.

3.10 Notice of Meetings. Notice of annual or special Board meetings and committee meetings stating the place, day and hour of the meeting, shall be given to each Director and each non-voting representative. Neither the business to be transacted at, nor the purpose of any meeting need be specified in the notice of such meeting. Notice may be given in writing or orally by any of the following means.

3.10.1 Personal Delivery. If notice is given by personal delivery, the notice shall be effective as delivered to a Director or non-voting representative at least two days before the meeting.

3.10.2 Delivery by Mail. If notice is delivered by mail, the notice shall be deemed effective if deposited in the official government mail properly addressed to a Director or non-voting representative at his or her address shown on the records of the corporation with postage prepaid at least ten days before the meeting.

3.10.3 Delivery by E-Mail. If notice is delivered by e-mail, the notice shall be deemed effective if the content thereof is transmitted to the last-known address for the Director or non-voting representative at his or her address shown on the records of the corporation at least three days before the meeting.

[42] Approved change at Council Meeting 17-18 September 2020.

3.10.4 Delivery by Facsimile Transmission. If notice is delivered by facsimile transmission, the notice shall be deemed effective if the contents thereof are transmitted to~~, and acknowledged by~~,[43] the office of a Director or non-voting representative, at his or her facsimile number shown on the record of the corporation, at least ~~five~~[44] three days before the meeting.

3.10.5 Oral Notice. If notice is delivered orally, by telephone or in person, the notice shall be deemed effective when personally given to the Director or non-voting representative at least two days before the meeting.

3.10.6 Effect of Failure to Give Notice to Non-Voting Representatives. Failure to give notice to a non-voting representative shall have no effect on the establishment of a quorum of the Board or on the ability of the Board to transact business.

3.11 Waiver of Notice.

3.11.1 In Writing. Whenever any notice is required to be given to any Director under the provisions of these Bylaws, the Articles of Incorporation or applicable Alaska law, a waiver thereof in writing, signed by the person or persons entitled to such notice, whether before or after the time stated therein, shall be deemed equivalent to the giving of such notice. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Board need be specified in the waiver of notice of such meeting.

3.11.2 By Attendance. The attendance of a Director at a Board or committee meeting shall constitute a waiver of notice of such meeting, except where a Director attends a meeting for the express purpose of objecting to the transaction of any business because the meeting is not lawfully called or convened.

3.12 Quorum. A majority of the number of Directors fixed by these Bylaws shall constitute a quorum for the transaction of business at any Board meeting. If a quorum is not present at a meeting, a majority of the Directors present may adjourn the meeting from time to time without further notice.

3.13 Manner of Acting. The act of the majority of the Directors present at a Board meeting at which there is a quorum shall be the act of the Board, unless the vote of a greater number is required by these Bylaws, the Articles of Incorporation or applicable Alaska law.

3.14 Action by Board Without a Meeting. Any action that could be taken at a regular meeting of the Board or Executive Committee may be taken without a meeting if the Executive Director determines that it is time sensitive and requires action before the body's next ~~regularly-scheduled Board~~ meeting. In that case, the meeting the members shall be polled either by facsimile or by e-mail. The action shall be approved or rejected if and only if:

a. All members respond by facsimile or by email, and,
b. The vote is unanimous, meaning that either all members vote for the action, or all members vote against it.

[43] Approved change at Council Meeting 2-3 December 2004.

[44] Approved change at Council Meeting 2-3 December, 2004.

If the conditions a. and b. are both met, the action shall be deemed decided and all facsimiles and emails related to the poll shall be retained in the minutes book as a permanent record of the poll, of the participation by all members, and of the unanimous outcome.

If conditions a. and b. are not both met, then the action shall be deemed undecided and the Executive Director arrange for it to be considered at a special meeting of the body, or at its next regular meeting[45]. ~~by polling the Directors either orally, by facsimile or by e-mail with responses to be made by any of the same means. The action shall be approved if an attempt is made to poll each Director and a majority of the number of Directors constituting a quorum respond in the affirmative. if a written consent setting forth the action so taken is signed by each of the Directors. Such written consents may be signed in two or more counterparts, each of which shall be deemed an original and all of which taken together, shall constitute one and the same document. Any such written consent. A copy of any such poll[46] shall be inserted in the minutes book as if it were the minutes of a Board meeting.~~

3.15 Resignation. Any Director may resign at any time by delivering written notice to the President, or to the registered office of the corporation, or by giving oral notice at any meeting of the Directors. Any such resignation shall take effect at the time specified therein, or if the time is not specified, upon delivery thereof, and, unless otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective.

3.16 Removal. A Director may be removed from office, with or without cause, by the member that designated such Director by giving written notice to the Board. The member may simultaneously designate the Director's successor. A Director shall be automatically removed upon resignation or removal of the member that designated the Director.

3.17 Vacancies. A vacancy in the position of Director shall be filled by the Board which shall ~~elect the designee of the member which designated~~ confirm by a majority vote of the Board such Director, who shall meet the Director qualifications established in these Bylaws[47]. When a Director resigns, notice shall immediately be given to the member entity stating that the Director has resigned and requesting that the member entity notify the Board in writing of the name and mailing address of its designee for successor Director. A Director who fills a vacancy shall serve for the unexpired term of his or her predecessor ~~in office~~[48]. In no case may a vacancy continue for longer than six months or until the next annual meeting of the Board, whichever occurs first.

3.18 Board Committees.

3.18.1 Creation of Committees. The Board, ~~by resolution adopted by a majority of the number of Directors fixed by these Bylaws~~,[49] 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

[45] Approved changes at Council Meeting 15-16 September 2011.

[46] Approved change at Council Meeting 10-11 March 2005.

[47] Approved change at Council Meeting 2-3 December 2004.

[48] Approved change at Council Meeting 2-3 May 2013.

[49] Approved change at Council Meeting 2-3 December 2004.

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.[50]

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[51] and a member at large and may include two additional members at large from the board of directors.[52] 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[53].

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

[50] Approved change at Council Meeting 10-11 March 2005.

[51] Approved change at Council Meeting 6-7 May 1999.

[52] Approved change at Council Meeting 6-7 May 1999.

[53] Approved change at Council Meeting, 16-17 September 2010.

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)[54]

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.[55]

3.18.2.5 ~~Other~~ Standing ~~or Temporary~~[56] Committees other than Board Member Only Committees[57]. ~~The corporation shall designate other standing or temporary committees including but not limited to the following standing committees:~~[58] The following are standing committees:

Terminal Operations and Environmental Monitoring Committee
Oil Spill Prevention and Response Committee
Port Operations and Vessel Traffic System Committee
Scientific Advisory Committee
~~Community~~ Information and Education Committee[59],[60],[61],[62]
~~Legislative Affairs Committee~~[63]
~~Finance Committee~~[64],[65]
~~Board Governance Committee~~[66],[67]

Each standing committee named in this section may adopt a charter or operating procedures which shall be approved by the Board, but at a minimum[68] shall adopt policies that:

DRAFT

[54] Approved change at Council Meeting, 19-20 September 2019.
[55] Approved change at Council Meeting, 19-20 September 2019.
[56] Approved changes at Council Meeting 28-29 September 2000.
[57] Approved change at Council Meeting 19-20 September 2019.
[58] Approved change at Council Meeting 17 September 1992.
[59] Approved change at Council Meeting 17 September 1992.
[60] Approved disbandment at Council Meeting 24-25 September 1993.
[61] Approved reinstatement at Council Meeting 1-2 May 2008.
[62] Approved change at Council Meeting, 19-20 September 2019.
[63] Approved change at Council Meeting, 19-20 September 2019.
[64] Approved addition at Council Meeting 15-16 September 2005
[65] Approved change at Council Meeting, 19-20 September 2019.
[66] Approved addition at Council Meeting, 17-18 September 2010.
[67] Approved change at Council Meeting, 19-20 September 2019.
[68] Approved change at Council Meeting, 19-20 September 2019.

A. For committees not consisting only of members of the board,[69] set the number of members required for a quorum, but in no event shall that number be less than three. For committees consisting only of members of the board, set the quorum as specified in Bylaw 3.18.3.[70]
B. Allow members to go on inactive status for a period of up to six months with advance notice to the committee and the affirmative vote of a majority of committee members voting at any regularly called meeting.
C. Remove members who have been absent for a minimum of three consecutive meetings without communicating the reasons for the absence and setting a time for their return.[71]

Committees ~~other than an Executive Committee~~ named in this section[72] shall have and may exercise such authority as may be given to them by the Board. One or more directors shall be assigned to each standing committee ~~specifically~~ named in this section, with the exception of the Legislative Affairs Committee, the Board Governance Committee[73] and the Finance Committee, which shall be composed entirely of members of the Board.[74]

3.18.3 Quorum and Manner of Acting. Three members[75] of the executive committee shall constitute a quorum for the transaction of business at any meeting of such committee. A majority of the number of Directors composing any committees established by ~~and fixed by resolution of~~[76] the Board and consisting only of Directors shall constitute a quorum for the transaction of business at any meeting of such committee[77]. If less than a quorum is present at a meeting, a majority of such Directors present may adjourn the meeting from time to time without further notice. The act of a majority of the members of a committee present at a meeting at which a quorum is present shall be the act of the committee.

3.18.4 Resignation. Any member of any committee may resign at any time by delivering written or oral[78] notice thereof to the President, the Secretary, the Board or the Chair of such committee, or by giving oral notice at any meeting of such committee. Any such resignation shall take effect at the time specified therein, or if the time is not therein specified[79], the acceptance of such resignation shall not be necessary to make it effective.

3.18.5 Removal. The Board may remove from office any member of any committee elected or appointed by it but only by the affirmative vote of not less than a majority of the number of Directors fixed by these Bylaws.

3.19 Compensation. The Directors may receive compensation for their service as Directors and may receive reimbursement for expenditures incurred on behalf of the corporation. ~~Members~~

[69] Approved addition at Council Meeting 2-3 May 2013.
[70] Approved addition at Council Meeting 2-3 May 2013.
[71] Approved changes/amendments at Council Meeting 28-29 September 2000.
[72] Approved changes/amendments at Council Meeting 28-29 September 2000.
[73] Approved addition at Council Meeting 2-3 May 2013.
[74] Approved change at Council Meeting 15-16 September 2005.
[75] Approved change at Special Council TC 18 May 1994.
[76] Approved change at Council Meeting, 19-20 September 2019.
[77] Approved changes/amendments at Council Meeting 28-29 September 2000.
[78] Approved change at Council Meeting 2-3 December 2004.
[79] Approved change at Council Meeting 2-3 December 2004.

~~may be reimbursed for expenses incurred in connection with the attendance by their designated Directors at meetings of the Board or committees of the Board of the corporation.~~[80]

3.20 Standards of Conduct: The PWSRCAC and its staff shall maintain high standards of ethical conduct.

A. No director or employee of the Council shall use his or her PWSRCAC membership, PWSRCAC property or PWSRCAC assets[81] in an official capacity to act in the name of the Council for the purpose of influencing the result of an election to or a nomination for any public elective office.

B. No director or employee shall pay, offer, promise, solicit or receive from any person, firm or corporation, either as a political contribution or a personal emolument, any money or anything of value in consideration of either support or the use of influence or the promise of support or influence in obtaining a Council decision or for any person, any appointive office, place or employment under the Council.

C. No employee of the Council, director or committee member shall have a financial interest that conflicts with the fair and impartial conduct of his or her duties. Council members with a financial interest shall ensure that it does not conflict with the fair and impartial conduct of his or her council duties.

D. Directors shall declare in writing on a form provided by PWSRCAC all personal and member financial ties to Alyeska Pipeline Service Company or members of the Alyeska consortium excluding normal commercial purchases of petroleum products. The declaration noted above shall be delivered as needed and at least once each year in writing to the President of PWSRCAC who will make copies available to all other PWSRCAC members.

E. A new director shall comply with the requirements of D above prior to being seated on the Board of Directors.

F. No director of the council may vote on any question in which the member has a direct financial interest. Financial interest shall be disclosed to the presiding officer prior to the vote on the question for a ruling on a request from the member with the financial interest to be excused from the vote. The decision of the presiding officer on a request by a member of the governing body to be excused from a vote may be overridden by the majority vote of the council members present. If ~~there is not at least a quorum in attendance who are qualified to vote~~, the remaining members present who qualify to vote do not constitute a quorum[82], the matter shall be tabled until the next regular or special meeting at which a quorum qualified to vote on the matter are in attendance. A council employee or director may not participate in an official action in which the employee or director has a financial interest.

G. No Director shall engage in contractual services or receive any financial compensation from PWSRCAC except for per diem, or stipend and travel/meeting expense reimbursement.[83] This paragraph does not prohibit the occasional purchase by PWSRCAC of goods

[80] Approved change at Council Meeting 2-3 December 2004.

[81] Approved addition at Council Meeting 15-16 September 2005.

[82] Approved change at Council Meeting 2-3 December 2004.

[83] Approved change at Council Meeting 9-10 March 1995.

or services from a business in which a director has a financial interest provided that PWSRCAC pays no more for the goods or services than the business would charge to the general public and provided that the Executive Committee has previously approved the purchase of goods or service.

H. No Director shall ~~engage in contractual services or receive any financial compensation from~~ be an employee of Alyeska Pipeline Service Company, Trans Alaska Pipeline System Owner Companies or shippers of Alaska North Slope crude oil ~~except for purposes of emergency response or training for oil spills~~. An employee is defined as a person who is hired by another person or business for a wage or fixed payment in exchange for personal services and who does not provide the services as part of an independent business[84].

SECTION 4. OFFICERS

4.1 Number and Qualifications. The officers of the corporation shall be a President, one or more Vice Presidents, a Secretary and a Treasurer, each of whom shall be elected by the Board. Other officers ~~and assistant officers~~[85] may be elected or appointed by the Board, such officers ~~and assistant officers~~ to hold office for such period and have such authority and perform such duties as are provided in these Bylaws or as may be provided by resolution of the Board. The Board may assign any officer any additional title that the Board deems appropriate. The Board may delegate to any officer or agent the power to appoint any such subordinate officers or agents and to prescribe their respective terms of office, authority and duties. The office of Chair of the Board and President shall be held by the same person. ~~Any two or more offices may be held by the same persons, except the offices of President and Secretary~~.[86] All officers, except the Executive Director, must be Directors of the corporation.[87]

4.2 Election and Term of Office. The officers of the corporation shall be elected each year by the Board at the annual meeting of the Board. If the election of officers is not held at such meeting, such election shall be held as soon thereafter as a Board meeting may conveniently be held. Unless an officer dies, resigns, or is removed from office, he or she shall hold office until the next annual meeting of the Board or until his or her successor is elected.

4.3 Resignation. Any officer may resign at any time by delivering written notice to the President, a Vice President, the Secretary or the Board, or by giving oral notice at any meeting of the Board. Any such resignation shall take effect at the time specified therein, or if the time is not specified, upon delivery thereof and unless, otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective.

4.4 Removal. Any Officer or ~~agent~~ member of the Executive Committee[88] elected or appointed by the Board may be removed by a majority vote of the Board whenever in its judgment the best interests of the corporation would be served thereby~~, but such removal shall be without prejudice to the contract rights, if any, of the person so removed~~.[89]

[84] Approved change at Council Meeting 15-16 September 2005.

[85] Approved change at Council Meeting 2-3 December 2004.

[86] Approved change at Council Meeting 2-3 December 2004.

[87] Approved change at Council Meeting 6-7 May 1999.

[88] Approved change at Council Meeting 2-3 December 2004.

[89] Approved change at Council Meeting 2-3 December 2004.

4.5 Vacancies. A vacancy in any office created by the death, resignation, removal, disqualification, creation of a new office or any other cause may be filled by a majority vote of the Board for the unexpired portion of the term or for a new term established by the Board.

4.6 President and Chair of the Board. The President shall preside over meetings of the Board unless another officer is appointed or designated by the Board as Chair of such meeting and shall perform such other duties as shall be assigned to her or him by the Board from time to time.[90]

4.7 Vice President. In the event of the death of the President or his or her inability to act, the Vice President ~~(or if there is more than one Vice President, the Vice President who was designated by the Board as the successor to the President, or if no Vice President is so designated, the Vice President whose name first appears in the Board resolution electing officers)~~[91] shall perform the duties of the President, except as may be limited by resolution of the Board~~, with all the powers of and subject to all the restrictions upon the President to sign deeds, mortgages, bonds, contracts or other instruments~~.[92] The Vice President shall perform such other duties as from time to time may be assigned to him or her by the Board.

4.8 Secretary. The Secretary shall: keep, or cause to be kept or confirm, (a) the minutes of the meetings of the Board and committees having authority of the Board in one or more books provided for that purpose; (b) ~~see~~ that all notices are duly given in accordance with the provisions of the Bylaws or as required by law; (c) ~~be custodian of~~ the corporate records of the corporation; (d) ~~keep~~ the registers of the post office address of each Director; and (e) ~~in general cause to be~~ perform all duties incident to the office of Secretary and such other duties as from time to time may be assigned to him or her by the Board. ~~In the absence of the Secretary, an Assistant Secretary may perform the duties of the Secretary.~~[93],[94]

4.9 Treasurer. The Treasurer shall ~~have charge and custody of and be responsible~~ cause oversight to be performed[95] for all funds and securities of the corporation; receive and give, or cause to be received and given, receipts for monies due and payable to the corporation from any source whatsoever; and deposit, or cause to be deposited, all such monies in the name of the corporation in banks, trust companies or other depositories selected in accordance with these Bylaws; and in general perform all of the duties incident to the office of Treasurer and such other duties as from time to time may be assigned to him or her by the Board. ~~In the absence of the Treasurer, an Assistant Treasurer may perform the duties of the Treasurer~~.[96]

4.10 Executive Director. The Executive Director is the chief executive officer of the corporation. He or she shall be appointed by, and serve at the pleasure of, the Board. The Executive Director shall administer all operations of the corporation, including the employment and supervision of all employees of the corporation. The Executive Director may sign deeds, mortgages, bonds, contracts, or other instruments, except when the signing and execution thereof have been expressly delegated by the Board or by these Bylaws to some other officer or agent of the

[90] Approved change at Council Meeting 6-7 May 1999.
[91] Approved change at Council Meeting 2-3 December 2004.
[92] Approved change at Council Meeting 2-3 December 2004.
[93] Approved change at Council Meeting 2-3 December 2004.
[94] Approved amendments at Council Meeting 2-3 May 2013.
[95] Approved change at Council Meeting 2-3 December 2004.
[96] Approved change at Council Meeting 2-3 December 2004.

corporation or are required by law to be otherwise signed or executed by some other officer or in some other manner. The Executive Director shall report to the Board annually, or more often if required to do so, setting forth the result of the operations under his or her charge, and perform such other duties as from time to time may be assigned to him or her by the Board.[97]

4.11 Salaries. The salaries of the corporation's officers and agents shall be as fixed from time to time by the Board or by any person or persons to whom the Board has delegated such authority. ~~No officer shall be prevented from receiving such salary by reason of the fact that he or she is also a Director of the corporation~~. [98]

SECTION 5. ADMINISTRATIVE AND FINANCIAL PROVISIONS

5.1 Contracts. The Board may authorize any officer or officers, or agent or agents, to enter into any contract or execute and deliver any instrument in the name of and on behalf of the corporation. Such authority may be general or confined to specific instances.

5.2 Loans. No loans shall be contracted on behalf of the corporation and no evidences of indebtedness shall be issued in its name unless authorized by a resolution of the Board. Such authority may be general or confined to specific instances.

5.3 Loans to Officers and Directors. No loans shall be made by the corporation to its officers or Directors.

5.4 Checks, Drafts, Etc. All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the corporation shall be signed by such officer or officers, or agent or agents, of the corporation and in such manner as is from time to time determined by resolution of the Board.

5.5 Deposits. All funds of the corporation not otherwise employed shall be deposited from time to time to the credit of the corporation in such banks, trust companies or other depositories as the Board may select.

5.6 Minutes of Meetings; Books and Records. The corporation shall keep correct and complete books and records of account, minutes of the proceedings of its Board and committees having authority of the Board, and such other records as may be necessary or advisable.

5.7 Corporate Seal. The corporation may adopt a corporate seal.

5.8 Accounting Year. The accounting year of the corporation shall begin on July 1, and end on June 30.[99]

5.9 Rules of Procedure. The rules of procedure at meetings of the Board and committees of the Board shall be rules contained in Roberts' Rules of Order on Parliamentary Procedure, newly revised, so far as applicable and when not inconsistent with these Bylaws, the Articles of Incorporation or any resolution of the Board.

---

[97] Approved change at Council Meeting 6-7 May 1999.

[98] Approved change at Council Meeting 2-3 May 2013.

[99] Approved change at Council Meeting 4-5 May 1995.

SECTION 6. INDEMNIFICATION

~~To the full extent permitted by the Alaska Nonprofit Corporation Act,~~[100] The corporation shall indemnify any person or entity who was or is a party or is threatened to be made a party to any civil, criminal, administrative or investigative action, suit or proceeding (whether brought by or in the right of the corporation or otherwise) by reason of the fact that he or she or it is or was a Director, officer, employee or member of the corporation, or is or was serving at the request of the corporation as a Director or officer of another corporation, whether for profit or not for profit, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding so long as those proceedings or litigation arise from the person's affiliation with the Corporation and are within the scope of the person's official duties or powers[101]; and the Board may, at any time, approve indemnification of any other person which the corporation has the power to indemnify under the Alaska Nonprofit Corporation Act. The indemnification provided by this Section shall not be deemed exclusive of any other rights to which a person may be entitled as a matter of law or by contract. The corporation may purchase and maintain indemnification insurance for any person to the extent provided by applicable law.

SECTION 7. AMENDMENTS

These Bylaws may be altered, amended or repealed and new bylaws may be adopted by the affirmative vote of two-thirds of the number of Directors fixed by these Bylaws.

The foregoing Bylaws, as amended, were adopted by the Board of Directors on January 26, 2023.

_____

Bob Shavelson
Secretary

DRAFT

[100] Approved change at Council Meeting 2-3 December 2004.

[101] Approved change at Council Meeting 2-3 December 2004.

OIL SPILL REGION RECREATIONAL COALITION

October 31, 2023

Donna Schantz, Executive Director
Prince William Sound Regional Citizens' Advisory Council
PO Box 3089
Valdez, AK 99686

The Oil Spill Region Recreational Coalition [Coalition] has been formed to promote the enhancement, preservation, and protection of the recreational resources of Prince William Sound and areas affected by the Exxon Valdez Oil Spill of 1989. The founding organizations are the Prince William Sound Stewardship Foundation, the Valdez Adventure Alliance, and the Friends of Kachemak Bay State Park.

The Prince William Sound Regional Citizens' Advisory Council [PWSRCAC] suggested a broad definition of recreation as "an experience, activity or the opportunity to enjoy the Exxon Valdez Oil Spill area's natural environment, cultural, and historic resources for the use, enjoyment, and welfare of citizens." The three founding members of the Coalition agree with that broad definition of recreation and will encourage others with a similar outlook to join us.

One of our goals is to assist the PWSRCAC in its mission to promote the environmentally safe operation of the Valdez Marine Terminal and associated tankers. Accordingly, we request consideration of our coalition to represent recreational interests on your Board of Directors. From near the beginning of PWSRCAC's existence, there was an active recreational seat on your Board, but it has been vacant for about 8 years. We believe we can be a voice for that interest group to carry on earlier work. We understand that your Board Governance Committee will be first to look over our request. If they make a positive recommendation, your Board of Directors will make the final determination. We will be happy to answer questions from both groups either in person or in writing.

You currently have an environmental seat on your Board of Directors occupied by the Oil Spill Region Environmental Coalition. This has been a successful way to bring a greater depth and breadth of knowledge to the table when representing that family of interests. We have taken guidance from that entity in our efforts.

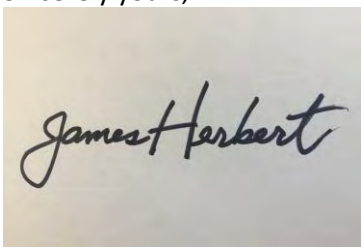
We have attached a copy of the Memorandum of Agreement [MOA] that the three founding organizations of the Coalition signed. You will see our goals, guiding principles, decision making and governance concepts laid out. There is also basic memorandum of agreement legal language recommended by your counsel.

Per the MOA, one party will be designated the Facilitating Organization. That organization is the Friends of Kachemak Bay State Park for at least the first two years. They have designated James Herbert as their representative to PWSRCAC. He is the person they propose as a director if the Board decides to confirm a permanent recreational seat and seat our designee. The representatives of the founding organizations feel his 10 years of experience with PWSRCAC gives him a historic perspective as well as familiarity with current issues. He is an Alaska citizen, resides in Homer, and is committed to the PWSRCAC mission. He seeks opportunities to build positive relationships between citizens, regulators, and industry. He is willing to mentor future representatives from his organization and other coalition organizations.

Each of the three founding members of the Recreational Coalition had earlier in 2023 submitted Statements of Qualification to PWSRCAC expressing interest in serving as the recreation representative on the Board of Directors. Though we believe each organization could represent the region's recreational interests, we agree that a coalition provides broader coverage of the region and will provide better information to your board. Information found in the original three submissions are on file and should be consulted for particular details by the Board Governance Committee and the full Board of Directors.

Please reach out to me if you or your Board and committee members have questions or concerns.

Sincerely yours,



James Herbert

Representative of the Oil Spill Region Recreational Coalition
Jherbert8000@gmail.com
1-907-362-0020

Back to Agenda

Director Appointment for Oil Spill Region Recreational Coalition 4-5

Briefing for PWSRCAC Board of Directors – January 2024

ACTION ITEM

Sponsor: Board of Directors
Project number and name or topic: Director Appointment for Oil Spill Region Recreational Coalition

1. **Description of agenda item:** This agenda item is drafted with the assumption that the Board has appointed the Oil Spill Region Recreational Coalition as a Class I member to the PWSRCAC Board of Directors in the preceding item on the January 2024 agenda.

The purpose of this agenda item is to fill the Oil Spill Region Recreational Coalition seat on the Board. During the formation of the Oil Spill Region Recreational Coalition, the Coalition identified and nominated Jim Herbert as their inaugural appointment.

Member Organizations	Current Term	Director Nominated
Oil Spill Region Recreational Coalition	Term set to expire May 2025	Jim Herbert

2. **Why is this item important to PWSRCAC:** Confirmations of individuals to the Board of Directors are mandated by the PWSRCAC Bylaws.

3. **Action Requested of the Board of Directors:** Confirm the appointment of Jim Herbert as representing the Oil Spill Region Recreational Coalition with a term set to expire at the May 2025 annual meeting.

4. **Attachments:** None.

Briefing for PWSRCAC Board of Directors – January 2024

ACTION ITEM

Sponsor: KJ Crawford and the LRP Committee
Project number and name or topic: 210 Long Range Planning

1. **Description of agenda item:** During the months of September through December 2023, the Long Range Planning Committee worked with PWSRCAC staff, committees, and the Board to update the Five-Year Long Range Plan for Fiscal Years 2025–2029. An updated draft FY2025-FY2029 Long Range Plan will be provided for Board consideration and approval. Board, committee, and staff members will be participating in a Long Range Planning workshop just prior to the January Board meeting, to discuss the draft plan and to develop a recommendation for Board approval.

2. **Why is this item important to PWSRCAC:** The Board adopted the current PWSRCAC Five-Year Long Range Plan and has committed to the use of the plan and the planning process to develop annual work plans and budgets as well as continually revising and improving the Long Range Plan itself. The Board has directed its members and staff to work together to follow the Long Range Planning process.

3. **Previous actions taken by the Board on this item:** Contact staff for a list of action items prior to 2019.

Meeting	Date	Action
Board	1/24/19	The Board approved the projected project list for the upcoming Long Range Planning Process as presented in Attachment A to the 4-9 briefing sheet.
Board	5/2/19	The Board appointed the following to the FY20 Long Range Planning Committee: Thane Miller, Rebecca Skinner, Cathy Hart, and the chairs of the five technical committees.
Board	9/19/19	The Board approved the projected project list for the upcoming Long Range Planning Process as presented in Attachment A to the 4-9 briefing sheet.
Board	1/24/20	The Board approved the Five-Year Long-Range Plan for Fiscal Years 2021–2025 as developed and finalized for consideration by the Board at the January 22, 2020, Long-Range Plan work session.
Board	9/17/20	The Board approved the protected project list for the upcoming LRP process as presented in Attachment A to the Item 4-7 briefing sheet. Each Director is asked to take individual action over the next several months by participating in the LRP process.
Board	1/28/21	Approval of the Five-Year Long Range Plan for Fiscal Years 2022-2026 as developed and finalized for consideration by the Board at the January 27, 2021 Long Range Plan work session.
Board	9/16/21	The Board approved the protected project list for the upcoming LRP process as presented in Attachment A to the Item 4-8 briefing sheet. Each Director is asked to take individual action over the next several months by participating in the LRP process.
Board	1/28/22	The Board approved the Five-Year Long Range Plan for Fiscal Years 2023-2027, as developed and finalized for consideration by the Board at the January 26, 2022 Long Range Plan work session.

Board	9/23/22	The Board approved the protected project list for the upcoming LRP process as presented in Attachment A to the Item 4-8 briefing sheet.
Board	1/26/23	The Board approved Five-Year Long Range Plan for Fiscal Years 2024–2028, as developed and finalized for consideration by the Board at the January 25, 2023 Long Range Plan work session.
Board	9/21/23	The Board approved the protected project list for the upcoming Long Range Planning process as presented in Attachment A to the briefing sheet under Item 4-7 in the meeting notebook.

4. **Action Requested of the Board of Directors:** Approval of the Five-Year Long Range Plan for Fiscal Years 2025–2029, as developed and finalized for consideration by the Board at the January 26, 2024 Long Range Plan work session.

5. **Attachments:** Draft PWSRCAC Five-Year Long Range Plan for Fiscal Years 2025–2029.

Prince William Sound Regional Citizens' Advisory Council

Five-Year Long Range Plan

DRAFT

July 2024 through June 2028
(Fiscal Years 2025-2029)

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

Adopted by the PWSRCAC Board of Directors on January 26, 2024

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

Back to Agenda

This page was intentionally left blank.

Table of Contents

1. Background and Acknowledgements....2

2. Introduction and Purpose....3

Introduction....3
Overall Vision....3
Mission: The Core Purpose, Our Reason for Existing....3
Driving Forces....4
Core Values....4
Commitment....4

3. Organization and Operational Philosophy....5

Organizational Culture....5
Resources....6
People, the PWSRCAC team:....6
Board of Directors:....6
Technical committees:....7
Staff:....7
Relationships....10
Funding....11
Overarching Goals and Objectives....11
Status Review....13
Where are we today?....13

4. Process and Products....14

Process....14
Products....16
Programs....17
Communications and Technical Programs....17
Projects....17

5. Five-Year Plan....17

The Model Five-Year Planning Cycle....17
Evaluation of Current and Proposed Projects....19
Project and Initiative Timeline....19
FY2025-FY2029 Projected Cost and Completion Forecast....20
FY2025-FY2029 Projected Cost and Completion Forecast....21
FY2025-FY2029 Projected Cost and Completion Forecast....22
FY2025-FY2029 Projected Cost and Completion Forecast....23
FY2025-FY2029 Projected Cost and Completion Forecast....24
FY2025-FY2029 Projected Cost and Completion Forecast....25
Committee Prioritization....26

6. Annual Evaluation and Update....29

The Planning Cycle....29
Planning Tools....29
Projects Outside of the Planning Cycle....29

Appendices

Appendix A: One-Page Strategic Plan
Appendix B: PWSRCAC's Internal Structure and Relationships
Appendix C: New Project/Initiative Briefing Template
Appendix D: FY25 Proposed Projects Ranking Template
Appendix E: Unsolicited Proposal Procedure
Appendix F: The Big Picture: FY25 Proposed Project Organizational Chart

1. Background and Acknowledgements

The Prince William Sound Regional Citizens' Advisory Council (PWSRCAC or the Council) is an independent nonprofit corporation whose mission is to promote the environmentally safe operation of the Valdez Marine Terminal and associated tankers. Our work is guided by the Oil Pollution Act of 1990 and our contract with Alyeska Pipeline Service Company. PWSRCAC's 18 member organizations represent communities affected by the 1989 Exxon Valdez oil spill, as well as commercial fishing, aquaculture, Alaska Native, recreation, tourism, and environmental groups.

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

In January 2010, the Board developed a draft one-page strategic planning document with the assistance of the Foraker Group. It was adopted by the Board in 2012, and has been further refined over the years including a major revision in 2016. In September 2023, the PWSRCAC Board of Directors, all committee chairs, and select staff were invited to participate in a facilitated full day strategic planning workshop. At the time of publication of this document, updates resulting from the workshop were pending. The most recently approved One-Page Strategic Plan is attached to the final version of this document as Appendix A. The one-page plan is reviewed and updated with this document.

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

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

This year, as in the past, the project prioritization process began with letters soliciting project ideas being broadly disseminated to stakeholder entities, including industry and regulatory agencies. All staff, Board, and technical committee members were invited to submit suggestions for potential new

projects as well. Staff developed most of the project descriptions and budgets with help from technical committee members and stakeholders.

Members of the current Long Range Planning Committee (LRPC) are Board members Amanda Bauer, Elijah Jackson, Robert Archibald, and Angela Totemoff; committee chairs Trent Dodson, Jim Herbert, Steve Lewis, and Davin Holen; and IEC member Cathy Hart (chair LRPC).

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

2. Introduction and Purpose

Introduction

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

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

If you have experience with the PWSRCAC Long Range Planning Process and would like to go directly to the information developed for the upcoming fiscal year, it can be found starting on page 20 (see Figure 5 - FY2025-FY2029 Projected Cost and Completion Forecast).

Overall Vision

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

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

Mission: The Core Purpose, Our Reason for Existing

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

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

Driving Forces

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

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

Core Values

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

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

Commitment

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

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

To accomplish this, PWSRCAC will:

- Listen closely to our constituents and member entities through their Board representatives, understand their needs, and clearly explain the needs, responsibilities, and mission of the Council and its programs.

- Work in partnership with the oil industry and the associated regulatory agencies as much as possible to further the Council's mission to minimize the risk of oil spills and other adverse impacts from oil industry activities in the region affected by the Exxon Valdez Oil Spill.

- Act promptly, fairly, professionally, and courteously in all our endeavors, and hold ourselves accountable for our individual and organizational actions.

In January 2012, the Board adopted the One-Page Strategic Plan (Appendix A) that includes additional guidance and organizational direction. The Strategic Plan is intended to supplement the overall vision, purpose, driving forces, and values contained in the Five-Year Long Range Plan. The One-Page Strategic Plan is reviewed annually and updated accordingly, along with this entire document. The most recent changes to the One-Page Strategic Plan were approved in January 2020.

3. Organization and Operational Philosophy

Organizational Culture

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

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

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

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

To ensure that PWSRCAC is successful in meeting its OPA 90 mandate, its mission, and its overarching goals, the organization must remain healthy and productive with a strong and secure structure. It is equally important to maintain the organization’s independence while building strong external relationships. PWSRCAC must balance sustainable operations with the need to effectively advise and, when necessary, provide constructive criticism to the oil industry and/or regulatory agencies. It is also important to track and assess overall organizational administrative costs to effectively review how efficiently PWSRCAC is meeting its responsibilities, accomplishing its mission, and carrying out

important projects and programs within its budgetary constraints. We seek to apply organizational excellence in everything that we do.

Resources

PWSRCAC's resources consist primarily of:

- The people in our organization and the constituents they represent,
- Longevity, institutional knowledge, and strong documentation,
- Healthy relationships with government, industry, and other non-governmental organizations,
- Secure source of funding.

Considering the importance of our mission and the complexity of our tasks, PWSRCAC must be diligent in how we use our limited resources. We are committed to using our resources wisely, and we are accountable for all usage of our resources.

People, the PWSRCAC team:

The backbone of the Council is its people. The PWSRCAC team is comprised of a volunteer Board of Directors, five technical committees (also composed of volunteers), and a professional staff. Our main strength is the diverse backgrounds, technical expertise, and passion for accomplishing PWSRCAC's mission brought by these individuals, especially when unified by our mission statement and core purpose.

Board of Directors:

PWSRCAC Board members are appointed by communities in the region affected by the 1989 Exxon Valdez oil spill as well as Alaska Native, commercial fishing, aquaculture, recreation, tourism, environmental groups, and the State Chamber of Commerce. Directors serve on a volunteer basis for two-year terms.

There are four established Board committees, on which members serve one-year terms:

- Executive Committee (XCOM)
  XCOM is a subset of the full Board of Directors, made up of the Council's elected officers. It has decision-making authority between regular Board meetings, held three times per year.
- Legislative Affairs Committee (LAC)
  LAC monitors developments in the Alaska State Legislature and in Washington, D.C., recommends action to be taken to the full Board, and, as directed by the Board, communicates PWSRCAC positions to lawmakers and officials in state and national government.
- Board Governance Committee (BGC)
  BGC focuses on the PWSRCAC Bylaws, policies, procedures, and practices as they pertain to operations of the Council Board.
- Finance Committee
  The Finance Committee assists the Board of Directors in overseeing the financial affairs of PWSRCAC and the annual independent audit of the Council's finances.

The Board has also established one ongoing ad hoc committee: the Long Range Planning Committee. This committee leads the annual review and update of the Council's Long Range Plan and planning process, as well as the annual Long Range Planning workshop.

Technical committees:
Each of the five PWSRCAC technical committees is focused on a specific portion of the overall PWSRCAC mission. Committee membership is open to applicants with certain experience or special skills, subject to acceptance by the committee and Board. Members of the committees often have professional backgrounds directly related to the committee purpose. Committee members serve on a volunteer basis for two-year terms.

There are five technical committees, each with a unique emphasis and mission. They are:

- Scientific Advisory Committee (SAC)
  Mission statement: "Scientists and citizens promoting the environmentally safe operations of the terminal and tankers through independent scientific research, environmental monitoring, and review of scientific work."
- Oil Spill Prevention and Response Committee (OSPR)
  Mission statement: "The Oil Spill Prevention and Response (OSPR) Committee works to minimize the risk and impacts associated with oil transportation through research, advice, and recommendations for strong and effective spill prevention and response measures, contingency planning, and regulations."
- Terminal Operations and Environmental Monitoring Committee (TOEM)
  Mission statement: "The Terminal Operations and Environmental Monitoring (TOEM) Committee identifies actual and potential sources of episodic and chronic pollution at the Valdez Marine Terminal."
- Port Operations and Vessel Traffic Systems Committee (POVTS)
  Mission statement: "The Port Operations and Vessel Traffic Systems (POVTS) Committee monitors port and tanker operations in Prince William Sound."
- Information and Education Committee (IEC)
  Mission statement: "The Information and Education Committee (IEC) supports the Council's mission by fostering public awareness, responsibility, and participation through information and education."

Staff:
The Council currently has a budget for a professional staff of 17 full-time equivalent positions. The management team is comprised of the Executive Director, Director of Administration, Director of Finance, Director of Communications, and Director of Programs. The administrative staff consists of the Executive Assistant and an Office Coordinator. Program staff consists of the Outreach Coordinator, seven Project Managers, and two Project Manager Assistants.

Together these three groups (Board, technical committees, and staff) make up the Council's core structure. Figure 1 presents a tabular review of the PWSRCAC team structure and the roles and responsibilities of each group. Appendix B, Internal Structure and Relationships, presents a more detailed review of the PWSRCAC internal structure and operational relationships.

Figure 1: The PWSRCAC Team

Board of Directors	
Membership	**Responsibilities**

20 volunteer members, appointed by and representing 18 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 (two Board seats)
City of Whittier
Corporation Community of Chenega
Corporation Community of Tatitlek
Cordova District Fishermen United
Kenai Peninsula Borough
Kodiak Island Borough
Kodiak Village Mayors Association
Oil Spill Region Environmental Coalition
Port Graham Corporation
Prince William Sound Aquaculture Corporation
Recreation (temporary seat)
	• Bylaws, policies, and priorities
	• Strategic governance and oversight
	• Budget and contract approvals
	• Approval of reports and recommendations
	• Plan and develop objectives
	• Evaluation of Executive Director
	• Individual service on:
	  • Board committees
	  • Technical committees
	  • Working groups
	  • Project teams

Technical and Board Committees	
Membership	**Responsibilities**

• Five technical committees, comprised of a total of 32-40 volunteer members recruited and appointed by the Board, and at least one Board member per committee:
  • Information and Education
  • Oil Spill Prevention and Response
  • Port Operations & Vessel Traffic Systems
  • Scientific Advisory
  • Terminal Ops & Environmental Monitoring
• Legislative Affairs Committee: 6-10 Board members
• Executive Committee (XCOM): Board officers and elected at-large members
• Board Governance Committee: 3-6 Board members
• Finance Committee: minimum 4 Board members (Board Treasurer as chair)
• Long Range Planning Committee: minimum 3 Board members, plus chairs of each technical committee
	• Scoping of issues and development of proposed projects
	• Research and literature reviews
	• Review reports, policies, bylaws, financials, and position statements and make recommendations to the Board
	• Individual service on working groups and project teams
	• XCOM serves to address time sensitive issues that cannot wait for a regularly scheduled Board meeting except when an issue is deemed to be important enough to warrant a special meeting or Board teleconference
	• Finance Committee: Main contact between Board and outside independent auditor and periodic detailed review of financial statements and internal controls

Staff	
Membership	**Responsibilities**
Currently approved 17 full-time equivalents: (1) Executive Director (1) Director of Administration (1) Director of Programs (1) Director of Communications (1) Director of Finance (2) Administrative Staff (Executive Assistant and Office Coordinator) (8) Project Managers, (five major programs, one public communications/website, and one Outreach Coordinator) (2) Project Manager Assistants (committee support)	• Administration of organization and support for Board and committees • Provide information about PWSRCAC and issues to Board, committees, member entities, government agencies, industry, and the public • Develop and maintain relationships with government agencies and oil shipping industry • Develop objectives, schedule, and budgets for PWSRCAC programs and projects • Manage and administer contracts for technical services • Report program and project status to management, Board, and committees • Coordinate review and acceptance of reports and recommendations • Lead staff-driven work, such as drill monitoring, contingency plan reviews, data collection, etc.

Relationships

One of the objectives of OPA 90 was to foster partnerships among the oil industry, government agencies, and local citizens. We have learned during the past three decades that partnerships among stakeholders can lead to good policies, safer transportation of oil, better spill prevention and response capabilities, and improved environmental protection. Ex officio members, industry representatives, and other organizations routinely participate in technical committee meetings, contributing expertise and other assistance with PWSRCAC projects. Many of PWSRCAC's major successes have been jointly achieved through technical and regulatory working groups, and funding partnerships among government, industry, and citizen representatives. Some notable examples include:

Project	Partners
Port Valdez Weather Buoys (2019-present)	Alyeska Pipeline Service Company (APSC), City of Valdez, Prince William Sound Science Center (PWSSC), Fairweather Science, Alaska Ocean Observing System (AOOS), JOA Surveys, National Oceanic and Atmospheric Administration (NOAA) Physical Oceanographic Real-Time System (PORTS)
Fishing Vessel Program Outreach Tour (2016-present)	APSC/SERVS, Kenai Fjords Tours, Seward Chamber of Commerce, Stan Stephens Cruises, Copper River Watershed Project, Chugach School District, Whittier City Council
Marine Transition Participant Team (2016-2019)	APSC/SERVS, Conoco Phillips/Polar Tankers, Alaska Department of Environmental Conservation (ADEC), Crowley, United States Coast Guard (USCG), Edison Chouest Offshore (ECO)
Potential Places of Refuge (2015-2017)	Alaska's Institute of Technology (AVTEC), Southwest Alaska Pilots Association (SWAPA), Safeguard Marine
Project Jukebox (2013-present)	University of Alaska Fairbanks
Youth Involvement (2010-present)	Alaska Geographic, Valdez City Schools, PWSSC, Chugach School District, Copper River Watershed Project, Alaska SeaLife Center, Kachemak Bay Research Reserve, Center for Alaskan Coastal Studies (CACS), Kodiak Island Borough School District, Friends of Alaska National Wildlife Refuges, SPACE (Valdez), Children of the Spills (Katie Gavenus), Alaska Tsunami Bowl, Kenai Peninsula Borough School District, Baranof Museum, Chugach Children's Forest, Chugach National Forest, Wrangell Institute of Science & the Environment (WISE), Alutiiq Tribe of Old Harbor, Cordova City Schools, Alaska Science and Engineering Fair, Kenai Fjords National Park, Arctic Youth Ambassadors, Homer Flex High School, Valdez City Schools, Alaska Marine Conservation Council, Seed Media, Valdez Museum
Marine Invasive Species (1996-present) Alaska Invasive Species Partnership (2010-present)	Alaska Department of Fish & Game (ADFG), Alaska Department of Transportation & Public Facilities, Kachemak Bay National Estuarine Research Reserve, U.S. Fish and Wildlife Service (USFWS), U.S. Geological Survey (USGS), The Nature Conservancy, National Park Service (NPS), NOAA, SeaGrant Alaska, Smithsonian Environmental Research Center (SERC), Alaska Department of Natural Resources (ADNR), Department of Interior (DOI), ADEC, U.S. Forest Service (USFS), Prince William Soundkeeper, BLM, Alaska Soil & Water Conservation Districts
Valdez Marine Terminal Contingency Plan Coordination Working Group (1997-present)	ADEC, Environmental Protection Agency (EPA), Bureau of Land Management (BLM), USCG, APSC

Funding

Partnerships with industry, government, and non-governmental agencies have provided funding sources in the past for specific projects, including cash and in-kind donations. However, PWSRCAC's contract with Alyeska Pipeline Service Company is the primary means and most secure source of funding. Originally signed in 1990, the contract and funding agreement continues as long as oil flows through the trans-Alaska pipeline to the loading terminal at Port Valdez. The funding level is reviewed every three years, with the most recent period running from July 1, 2023 to June 30, 2026. Funding is typically adjusted to the Anchorage Consumer Price Index (CPI). Any adjustments are agreed upon by signing a triennial contract addendum. The current level of funding is $4,214,494.

Overarching Goals and Objectives

This long range plan encompasses four overarching goals, each of which is supported by several specific, measurable objectives. The Board of Directors endorsed the goals in 1998, to correlate with the established vision, mission, and core values of the organization. These overarching goals are:

- Total compliance with OPA 90 and Alyeska contractual requirements
- Continue to improve environmental safety of oil transportation in our region
- Develop and maintain excellent external and internal communication
- Achieve organizational excellence

Each overarching goal is supported by objectives which, when accomplished, serve and support it.

1. **Goal: Total compliance with OPA 90 and Alyeska contractual requirements.**

   Objectives:
   - Annual recertification
   - Review funding
   - Monitor OPA 90 for changes in PWSRCAC status
   - Maintain regional balance
   - Link projects and programs to OPA 90 and Alyeska contract

Figure 2 presents OPA 90 and Alyeska Contract requirements for PWSRCAC activities.

Figure 2: OPA 90 and Alyeska Contractual Requirements

OPA 90 Contractual Requirements

(1) Regional Balance, broadly representative of communities and interests in the region.
(2) Provide advice to regulators on the federal and state levels.
(3) Provide advice and recommendations on policies, permits, and site-specific regulations relating to the operation and maintenance of terminal facilities and crude oil tankers.
(4) Monitor the environment impacts of the operation of terminal facilities and crude oil tankers, as well as operations and maintenance that affect or may affect the environment in the vicinity of the terminal facilities.
(5) Review the adequacy of oil spill prevention and contingency plans for the terminal facilities and crude oil tankers operating in Prince William Sound and review the plans in light of new technological developments and changed circumstances.
(6) Provide advice and recommendations on port operations, policies, and practices.

(7) Conduct scientific research and review scientific work undertaken by or on behalf of the terminal or oil tanker operators or government entities.
(8) Devise and manage a comprehensive program of monitoring the environmental impacts of the operations of the terminal facility and crude oil tankers.
(9) Monitor periodic drills and testing of oil spill contingency plans.
(10) Study wind and water currents and other environmental factors in the vicinity of the terminal that may affect the ability to prevent, respond to, contain, and clean up an oil spill.
(11) Identify highly sensitive areas that may require specific protective measures.
(12) Monitor developments in oil spill prevention, containment, response, and cleanup technology.
(13) Periodically review port organizations, operations, incidents, and the adequacy and maintenance of vessel traffic service systems designed to ensure safe transit of crude oil tankers pertinent to terminal operations.
(14) Periodically review the standards for tankers bound for, loading at, exiting from, or otherwise using the terminal facilities.
(15) Foster partnerships among industry, government, and local citizens.

Alyeska Contractual Requirements

(1) Provide local and regional input, review and monitoring of Alyeska's oil spill response and prevention plans and capabilities, environmental protections capabilities, and the actual and potential environmental impacts of the terminal and tanker operations.
(2) Increase public awareness of subjects listed above.
(3) Provide input into monitoring and assessing the environmental, social, and economic consequences of oil related accidents and actual or potential impacts in or near Prince William Sound.
(4) Provide local and regional input into the design of appropriated mitigation measures for potential consequences likely to occur as a result of oil or environmental related accidents or impacts of terminal and tanker operations.
(5) Provide recommendations and participate in the continuing development of the spill prevention and response plan, annual plan review, and periodic review of operations under the plan including training and exercises.
(6) Other concerns: comment on and participate in selection of research and development projects.
(7) Review other important issues related to marine oil spill prevention and response concerns that were not obvious with the contract was signed.
(8) Review other concerns agreed upon by the Council regarding actual or potential impacts of terminal or tanker operations.

2. Goal: Continue to improve environmental safety of oil transportation in our region.

Objectives:

- Monitor and review development of, and compliance with, environmental laws and regulations
- Pursue risk-reduction measures
- Investigate best available technologies
- Monitor operations and promote a safe and clean marine terminal
- Monitor and review the condition of the tanker fleet/maritime operations
- Monitor and promote the safe operation of all Alyeska/SERVS-related on-water assets
- Monitor and review environmental indicators

- Monitor and review development of and compliance with laws and regulations

3. **Goal: Develop and maintain excellent external and internal communication.**

   Objectives:
   - Advocate for government and industry measures to improve the environmental safety of oil transportation
   - Maintain and improve relationships and work with government officials, partnerships with industry, and relationships with communities
   - Support other citizens' advisory groups
   - Ensure availability of PWSRCAC information
   - Improve availability of information to PWSRCAC from industry sources

4. **Goal: Achieve organizational excellence.**

   Objectives:
   - Effective short- and long-term planning
   - Fiscally responsible, efficient, and easily understood financial planning, tracking, and reporting procedures
   - Remain committed to continuous improvement
   - Recognize people as the most important asset of the organization
   - Have all the necessary resources
   - Recruit and develop knowledgeable and committed Board members, volunteers and staff
   - Provide strong volunteer structure and support for volunteers
   - Maintain clear policies and procedures

Status Review

Where are we today?

Throughout its history, PWSRCAC has built an effective organization and contributed significantly to major improvements in the operations and oil transportation safety systems at the Valdez Marine Terminal, and in Prince William Sound and the Gulf of Alaska. We are now challenged to build on the successes of the past to meet the changing needs of our constituents, aging infrastructure and changing dynamics of oil transportation issues. The Long Range Planning Committee summarized our Strengths, Weaknesses, Opportunities, and Threats as follows.

- Strengths: history, passionate participants, worthy cause, good staff, respectability, political credibility
- Weaknesses: highly opinionated individuals, internal conflict, difficulty in recruiting dedicated younger volunteers
- Opportunities: (political and educational) to influence regulators and the oil industry to create the safest operation possible, with zero potential for spills and other environmental and/or human health impacts
- Threats: reactive vs. proactive organizational culture, regulatory and political priorities, outside interests supporting personal agendas, thinking small, internal competition for resources, conflicting priorities

4. Process and Products

Process

PWSRCAC promotes the environmentally safe operation of the Valdez Marine Terminal and the associated crude oil tankers on behalf of the citizens of our region. The Oil Pollution Act of 1990 and our contract with Alyeska Pipeline Service Company outline what is expected from our organization. In essence, we observe, verify, inform, and advise. Over time, our internal structure has evolved in order to meet these objectives. This structure is described in the preceding section.

Communication and coordination are key to our success – internally with our Board, staff, committees, and our constituents and externally with the oil industry and government officials. Figure 3 shows how our work is carried out internally, from the planning stage through completion by the technical committees, staff, project teams, and the Board of Directors.

Figure 3. Planning and Implementation Process for Program Activities and Projects

Phase	Committees *Plan, monitor, recommend*	Staff *Coordinate and complete*	Project Teams *Assist, review, advise*	Board *Review and approve*
Long Range (Five-Year) Plan	• identify future issues relating to each program • recommend specific program components and projects to Board	• support committees with information and options for study • consolidate committee recommendations • prepare comprehensive plan for presentation to Board		• affirm and/or amend mission, vision, core values, and goals • provide guidance and direction to committees • annually adopt five-year plan
Budgeting Process	• identify specific projects and program components for the coming year • develop objectives and define final product	• support committees with information and planning tools • develop implementation plan for projects and programs • finalize consolidated budget and work plan		• review committee proposals and provide input • approve budget
Implementation	• monitor progress • provide input / guidance to project team and project manager • Develop requested Board actions	• lead project teams • administer contracts • status reports to committees, Board, and public information staff	• review documents and input from committees • advise staff and assist with development of recommendations for advice to industry and agencies	• approve contracts • monitor progress and provide input to project team • approve interim recommendations and advice
Closure	• determine that final product meets objectives • recommend acceptance by Board	• close contracts • finalize proposed recommendations and advice • presentation to committee • prepare briefings and presentations for Board	• assist staff with presentation to Board • recommendations to committees for future related work	• accept and approve work products, recommendations, and advice • take action or adopt policy based on findings of project

NOTE: The shading indicates where the primary responsibility is for each phase of a program or project, beginning with the technical committees, working through with staff and project teams, and finally Board approval of the product and final recommendations. Technical committees generally meet every 1-2 months; project teams meet as needed to abide by project schedules; and the Board meets three times a year to approve work plans and budgets, and accept final products.

Products

We may not think of our work as being "products" but as an entity we are what we produce. The following are the goods and services that are created by the PWSRCAC which, when provided, generate continued support for our work:

- A voice and forum for the interests and concerns of citizens and communities.
- Comments on, and recommendations for, oil industry and regulatory agency proposals and action.
- Committee oversight and scientific review of the impacts of terminal and tanker operations on communities and the environment.
- Information and education about the environmental implications of oil transportation and terminal operations.
- Recommendations and information on legislation and regulations.
- Advice to the public, industry, and regulators on ways to reduce the environmental risks associated with terminal and tanker operations.

The ultimate success of our work is measured by the outcome; a clearly visible and demonstrated improvement in the system that results from our recommendations and advice. A few of our milestones and significant accomplishments include:

- Extensive partnerships with industry and regulators on key projects.
- Installation of two metocean weather buoys in Port Valdez (one at the Valdez Marine Terminal and the other at the Valdez Duck Flats) that provide real-time weather observations to improve navigation safety and oil spill response in Port Valdez.
- Cleaner air in Port Valdez after installation of the tanker vapor control system at the Valdez Marine Terminal.
- Enhanced tractor tugs designed and built to escort oil tankers in Prince William Sound.
- Development of Geographic Response Strategies (GRS) to protect environmentally sensitive areas in response to an oil spill.
- Involvement of younger generations in PWSRCAC programs and projects and fostering of environmental stewardship, through the Youth Involvement and Alaska Oil Spill Lesson Bank projects.
- Upgraded fire suppression systems on the crude oil storage tanks and at the East Metering facilities at the Valdez Marine Terminal.
- Significantly reduced emissions of hazardous air pollutants from ballast water treatment processes with installation of vapor control on the 90s tanks at the Valdez Marine Terminal.
- Removal of a nationwide exemption for emissions from crude oil transportation under a federal rule-making, and resulting modifications to the ballast water treatment plant, further reducing hazardous air pollutants from the Valdez Marine Terminal.
- Federal legislation securing two escort tugs for all laden tankers in Prince William Sound.
- Increased community awareness of the state-of-the-art fishing vessel training program.
- Improved crude oil piping inspections, through piping system modifications allowing for comprehensive, internal inspections at the Valdez Marine Terminal.
- A citizen-based monitoring system for early detection of invasive species.
- Installation of a steel "drip ring" around the perimeter of VMT ballast water storage Tank 94 by Alyeska, on Council recommendation.

Equally important, but less tangible, is our responsibility to monitor compliance with state and federal regulations and review contingency plans and permit applications. We provide comments, suggestions, and recommendations that strengthen environmental protection measures and ensure that plans are adequate to respond effectively if prevention measures fail. To develop these products, a multi-tiered work structure has evolved, to include programs and projects.

Programs

The operations of PWSRCAC are organized by program, each closely related to specific OPA 90 and contractual requirements and aligned with the technical committees.

A program includes all ongoing activities, including projects and initiatives, related to PWSRCAC-specific areas of interest. The ongoing tasks are generally planned and carried out by staff and volunteers with limited reliance on outside contracts. PWSRCAC's operation includes the following major programs:

Communications and Technical Programs

- Public Information, Communication, and Community Outreach
- Digital Collections
- Terminal Operations & Environmental Monitoring
- Maritime Operations
- Oil Spill Response Planning and Preparedness
- Scientific Research & Assessment

Projects

Projects are developed annually by the committees and staff. They are designed to meet specific objectives related to issues associated with the Council's mission as driven by concerns raised by citizens, committees, Council members, and the technical programs. Projects normally have starting and ending dates, as well as clearly defined products and outcomes, and often require outside expertise and/or services.

However, some projects—such as the Observer and the Annual Report—do not have clear starting and ending dates, but instead are presumed to be permanent, ongoing parts of the Council's operations. Any such projects determined to be permanent and ongoing, or mandatory obligations based on OPA 90 or our contract with Alyeska, are to be classified as protected projects. The Board will annually review and approve any recommendations for protected projects. Protected projects are not subject to the project ranking process as outlined later in this plan.

5. Five-Year Plan

The Model Five-Year Planning Cycle

The annual planning cycle needed to develop the Budget and associated documents must include an evaluation of current projects and a projection of future efforts. This process cannot be achieved without cohesive efforts carried throughout the entire year.

Figure 4, Annual Process for Five-Year Planning and Budgeting, is a presentation of the annual planning cycle as applied to the PWSRCAC operation. The tasks involved in the planning cycle, the individuals and groups responsible for each task, and the timeline for their completion are delineated.

Figure 4
ANNUAL PROCESS FOR LONG RANGE PLANNING AND BUDGETING

TASK	PERSONNEL	TIMELINE
Appoint members to the Long Range Planning Committee (LRPC)	Board, Committees, and Staff	May
Incorporate Board guidance via review of Long Range Plan, starting with next fiscal year	Management team and LRPC	May - August
Conduct and participate in discussions to evaluate current projects and develop ideas for new work. Prepare draft budget sheets for new and ongoing projects	LRPC, Board, Committees, and Staff	September - November
Volunteer workshop, where technical committees present proposed projects for the upcoming fiscal year; Board and staff rank proposed projects	LRPC, Board, Committees, and Staff	Early December
Prepare draft five-year plan from survey data and review of existing plan	LRPC	December
Workshop to review and amend draft five-year plan	Board, Committees, and Staff	Prior to January meeting
Five-year plan adopted	Board	January meeting
Draft budget and project preparation for upcoming fiscal year	Committees, working groups, and staff	February - March
Draft budget sheets revised, as needed	Project Staff	March - April
Draft budget sheets reviewed by executive staff to compile balanced budget; Finance Committee then reviews draft budget and recommends to full Board	Executive Director, Director of Finance, finance committee	April
Budget Workshop	Board, Committees, and Staff	Prior to May meeting
Adopt final budget	Board	May meeting

Evaluation of Current and Proposed Projects

A review of the fiscal status of all current projects (FY2024) was conducted, and projected FY2025-FY2029 project costs were developed along with anticipated completion dates if known. This data is presented in Figure 5, FY2025-FY2029 Projected Cost and Completion Forecast. The Board adopted a net asset stabilization policy wherein net assets are targeted to be no less than $350,000 and would be used only in extraordinary circumstances. The Board-approved amount is currently $400,000. These funds are separate from the current and future operating budgets.

Project and Initiative Timeline

The LRPC and PWSRCAC management staff have prepared the projected new project and initiatives timelines based on the assumptions of fund availability as discussed earlier, and management projections of staff availability. Some efforts are projected as continuing each year, some recur at intervals, and some are one-year projects. These timelines are presented in Figure 5: FY2025-FY2029 Projected Cost and Completion Forecast.

New Projects and Initiatives

Each year since 2004, PWSRCAC staff and volunteers are given a chance to suggest new projects and initiatives. In addition, solicitation letters are sent to ex officio members and various stakeholders inviting suggestions for new projects that support the mission of the organization. Some of the proposed new projects are merged into existing programs. Some of the proposed projects may be identified as outside the Council's mission, or unrealistic based on current resources. Proposed projects that appear viable are moved forward in the annual planning process; staff and committee members then prepare briefing sheets and cost projections for the proposed projects. The project proposals are discussed and evaluated by the LRPC and the various technical committees.

Figure 5
FY2025-FY2029 Projected Cost and Completion Forecast

Programs and Projects	Current Approved Budget FY2024	Proposed FY2025	Proposed FY2026	Proposed FY2027	Proposed FY2028	Proposed FY2029
INFORMATION & EDUCATION						
3110--Oral History (reprint of The Spill book)	$10,000					
3200--Observer Newsletter	$7,500	$7,500	$7,800	$8,100	$8,400	$8,700
3300--Annual Report	$8,000	$8,000	$8,400	$8,800	$9,200	$9,600
3410--Fishing Vessel Program Community Outreach	$19,000	$19,000	$19,570	$20,157	$20,762	$21,385
3530--Youth Involvement	$75,937	$50,750	$50,750	$50,750	$50,750	$50,750
3562--Then & Now	$6,710				$5,000	$4,000
3610--Website Presence BAT	$5,440	$7,140	$8,000	$8,500	$9,000	$9,500
3810--Illustrated Prevention & Response System Outreach	$22,000	$6,800				
3903--Internship		$4,000	$4,000	$4,000	$4,000	$4,000
3XXX--Public Engagement Toolbox		$10,000				
3XXX--EVOS 40th Anniversary Commemoration Planning					$15,000	
Subtotal	$154,587	$113,190	$98,520	$100,307	$122,112	$107,935
TERMINAL OPERATIONS & ENVIRONMENTAL MONITORING						
5051--Review of Water Quality Data & Toxicity Testing of Effluent from the VMT	$30,000					
5057--Finalization of draft report "VMT Air Quality Chronology (1974-2017)"		$10,000				
5081--Storage Tank Maintenance Review	$52,892	$30,000				
5591--Crude Oil Piping Maintenance Review	$51,744	$51,744				

Figure 5 (continued)
FY2025-FY2029 Projected Cost and Completion Forecast

Programs and Projects	Current Approved Budget FY2024	Proposed FY2025	Proposed FY2026	Proposed FY2027	Proposed FY2028	Proposed FY2029
6512--Maintaining the Secondary Containment Systems at the VMT	$38,000	$38,000				
508X--Timeline of VMT Tank Repairs and Inspection Intervals	$25,000	$15,000				
5XXX--Title V Air Quality Permit Review		$25,000				$30,000
5XXX--Review of VMT's Oracle System for Reliability-Centered Maintenance		$50,000				
5XXX--Review of VMT Cathodic Protection System Testing Protocols		$34,000				
5XXX--Review of JPO Regulatory Oversight of the VMT			$50,000			
5XXX--PFAS Mitigation			$35,000			
5XXX--Shore Power for Tankers at the VMT				$40,000		
Subtotal	$197,636	$253,744	$85,000	$40,000	$0	$30,000
OIL SPILL PREVENTION & RESPONSE						
5640--ANS Crude Oil Properties		$30,500				
6510--State Contingency Plan Reviews	$80,000	$80,000	$87,000	$94,700	$97,541	$100,467
6511--History of Contingency Planning		$10,000	$50,000			
6530--Weather Data/Sea Currents	$16,400	$18,500	$18,500	$18,500	$18,500	$18,500
6531--Port Valdez Weather Buoys	$51,200	$46,500	$46,500	$46,500	$46,500	$46,500
6536--Analysis of Weather Buoy Data	$21,858	$17,000	$17,510	$18,035	$18,576	$19,134
653X--Comparison of Windy App & Seal Rocks Buoy		$35,000				

Figure 5 (continued)
FY2025-FY2029 Projected Cost and Completion Forecast

Programs and Projects	Current Approved Budget FY2024	Proposed FY2025	Proposed FY2026	Proposed FY2027	Proposed FY2028	Proposed FY2029
6540--Copper River Delta/Flats GRS Workgroup		$25,000				
7035--Virtual Meeting with Contracted Fishing Vessel Reps	$1,000					
7060--Vessel Decon Best Practices		$20,000				
706X--Review of Decanting Technology			$25,000			
7XXX--Tethered Drones/UAVs			$15,000			
7XXX--Review Decanting Tech			$20,000			
7XXX--ESI App			$20,000			
Subtotal	$170,458	$282,500	$299,510	$177,735	$181,117	$184,601
PORT OPERATIONS & VESSEL TRAFFIC SYSTEMS						
8300--Sustainable Shipping			$35,000		$35,000	
8520--Miscommunication in Maritime Contexts	$55,000	$50,000	$55,000			
8025--Vessel Operator Tsunami Hazards Guidance Workshop	$30,000					
8018--State of the Industry Advances in Escort Tug Technology	$45,000					
80XX--MASS Technology Review		$40,000				
8XXX--Assessing Non-Indigenous Species Biofouling on Vessel Arrivals		$5,750				
8XXX--PWS Tanker Reference Guide			$30,500			
8XXX--Alternative Fuels/Hybrid Tugs				$85,000		
Subtotal	$130,000	$95,750	$120,500	$85,000	$35,000	$0

Figure 5 (continued)
FY2025-FY2029 Projected Cost and Completion Forecast

Programs and Projects	Current Approved Budget FY2024	Proposed FY2025	Proposed FY2026	Proposed FY2027	Proposed FY2028	Proposed FY2029
SCIENTIFIC ADVISORY						
6560--Peer Listener Training	$12,440	$35,000				
9110--PWS Marine Bird & Mammal Winter Survey	$71,738	$78,928	$80,060	$81,224	$100,535	
9510--Long Term Environmental Monitoring Program	$197,215	$145,860	$150,236	$154,743	$159,385	$164,167
9512--Determining Concentration & Composition of Oxygenated Hydrocarbons at the VMT	$17,000					
9520--Marine Invasive Species	$216,883					
9521--Marine Invasive Species Internships	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500
9550--Dispersants		$10,000	$10,000	$10,000	$10,000	$10,000
9XXX--Transcriptomics Monitoring Plan		$109,703	$65,000			
9XXX--Social Science Workshop		$30,000				
9XXX--Continuous In-Line Measurements of HOPs at the VMT BWTF			$37,736			
9XXX--Toxicity of HOPs to Early Life-Stage Fish			$90,160			
Subtotal	$521,776	$415,991	$439,692	$252,467	$276,420	$180,667
Committee Subtotals	$1,174,457	$1,161,175	$1,043,222	$655,509	$614,649	$503,202
PROGRAMS						
3100--Public Information	$7,390	$7,397	$7,619	$7,847	$8,083	$8,325
3500--Community Outreach	$65,635	$67,604	$69,632	$71,721	$73,873	$76,089
3600--Public Communications Program	$4,149	$4,273	$4,402	$4,534	$4,670	$4,810
4000--Program and Project Support	$1,800,070	$1,854,072	$1,909,694	$1,966,985	$2,025,995	$2,086,774

Figure 5 (continued)
FY2025-FY2029 Projected Cost and Completion Forecast

Programs and Projects	Current Approved Budget FY2024	Proposed FY2025	Proposed FY2026	Proposed FY2027	Proposed FY2028	Proposed FY2029
4010--Digital Collections Program	$5,000	$5,150	$5,305	$5,464	$5,628	$5,796
5000--Terminal Operations Program	$25,000	$30,000	$30,900	$30,001	$30,901	$30,002
6000--Spill Response Program	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000
7000--Oil Spill Response Operations Program	$4,250	$4,700	$4,900	$5,150	$5,305	$5,464
7520--Preparedness Monitoring	$28,500	$44,400	$48,400	$50,400	$51,912	$53,469
8000--Maritime Operations Program	$11,160	$22,000	$22,000	$22,000	$22,000	$22,000
9000--Environmental Monitoring Program	$17,000	$17,600	$18,100	$18,100	$18,100	$18,100
Subtotal	$1,972,154	$2,061,197	$2,124,952	$2,186,202	$2,250,465	$2,314,830
LEGISLATIVE AFFAIRS						
4400--Federal Government Affairs	$64,100	$66,023	$68,004	$70,044	$72,145	$74,309
4410--State Government Affairs	$35,800	$36,874	$37,980	$39,120	$40,293	$41,502
Subtotal	$99,900	$102,897	$105,984	$109,163	$112,438	$115,811
BOARD OF DIRECTORS						
1350--Information Technology	$0	$500	$515	$530	$546	$563
2100--Board Administration	$201,500	$207,545	$213,771	$220,184	$226,790	$233,594
2150--Board Meetings	$141,038	$145,269	$149,627	$154,116	$158,740	$163,502
2200--Executive Committee	$3,000	$3,090	$3,183	$3,278	$3,377	$3,478
2220--Governance Committee	$0	$0	$0	$0	$0	$0
2222--Finance Committee	$3,000	$3,090	$3,183	$3,278	$3,377	$3,478
2700--Legislative Affairs Committee	$18,675	$19,235	$19,812	$20,407	$21,019	$21,649
Subtotal	$367,213	$378,729	$390,091	$401,794	$413,848	$426,263

Figure 5 (continued)
FY2025-FY2029 Projected Cost and Completion Forecast

Programs and Projects	Current Approved Budget FY2024	Proposed FY2025	Proposed FY2026	Proposed FY2027	Proposed FY2028	Proposed FY2029
COMMITTEES & COMMITTEE SUPPORT						
2250--Committee Support	$211,067	$217,399	$223,921	$230,639	$237,558	$244,685
2300--Oil Spill Prevention & Response	$11,000	$11,000	$11,330	$11,670	$12,020	$12,381
2400--Port Operations & Vessel Traffic System	$4,000	$7,000	$7,500	$8,000	$8,500	$9,000
2500--Scientific Advisory Committee	$12,000	$12,360	$12,731	$13,113	$13,506	$13,911
2600--Terminal Operations & Environmental Monitoring	$4,000	$11,000	$7,500	$8,000	$8,500	$9,000
2800--Information and Education Committee	$10,000	$10,300	$10,609	$10,927	$11,255	$11,593
Subtotal	$252,067	$269,059	$273,591	$282,349	$291,339	$300,569
GENERAL & ADMINISTRATIVE						
1000--General and Administrative	$518,310	$533,859	$549,875	$566,371	$583,362	$600,863
1050--General and Administrative--Anchorage	$169,356	$174,437	$179,670	$185,060	$190,612	$196,330
1100--General and Administrative--Valdez	$177,236	$182,553	$188,030	$193,671	$199,481	$205,465
1300--Information Technology	$109,588	$112,876	$116,262	$119,750	$123,342	$127,043
Subtotal	$974,490	$1,003,725	$1,033,836	$1,064,852	$1,096,797	$1,129,701
Subtotals	$4,840,281	$4,976,782	$4,971,676	$4,699,869	$4,779,537	$4,790,377
Contingency (Current Year Budget)	$75,000	$50,000	$50,000	$50,000	$50,000	$50,000
Total Expenses	$4,915,281	$5,026,782	$5,021,676	$4,749,869	$4,829,537	$4,840,377

Project Scoring

All proposed projects and initiatives are evaluated for relevance to the PWSRCAC mission, value to PWSRCAC and benefit to our member entities, probability of success, and cost effectiveness.

The five technical committees are asked to prioritize the proposed projects that fall within their purview (Figure 6).

Figure 6
Committee Prioritization

Each Committee was asked to prioritize their proposed projects and initiatives for the Long Range Planning Process. Following is each committee's prioritization with the highest priority project listed as number one.

Port Operations & Vessel Traffic Systems (POVTS) Committee – FY2025 Budget and Prioritization

POVTS Prioritization	Project #	Project Name	Budget
1	8520	Miscommunication in Maritime Contexts (Phase 3)	$50,000
2	8XXX	Assessing Non-Indigenous Species Biofouling on Vessel Arrivals	$5,750
3	80XX	Maritime Autonomous Surface Ships (MASS) Technology Review	$40,000

Oil Spill Prevention & Response (OSPR) Committee – FY2025 Budget and Prioritization

OSPR Prioritization	Project #	Project Name	Budget
Protected	6510	State Contingency Plan Reviews	$80,000
Protected	6530	Weather Data & Sea Currents	$18,500
Protected	6531	Port Valdez Wx Buoys	$46,500
1	6536	Analysis of Port Valdez Weather Buoy Data 2024	$17,000
2	6540	Copper River Delta & Flats GRS Workgroup	$25,000
3	5640	ANS Crude Oil Properties Analysis	$30,500
4	65XX	Comparison of Windy App & Seal Rocks Wx Buoy Wind/Wave Data	$35,000
5	6511	History of VMT C-Planning	$10,000
6	7060	Vessel Decon Best Practices	$20,000

Terminal Operations & Environmental Monitoring (TOEM) Committee – FY2025 Budget and Prioritization

TOEM Prioritization	Project #	Project Name	Budget
1	6512	Maintaining the Secondary Containment Systems at VMT	$38,000
2	5XXX	Title V Air Quality Permit Review	$25,000

3	5XXX	Finalization of Full PWSRCAC Air Quality History Report	$10,000
4	5XXX	Evaluation of CP Systems at the VMT	$34,000
5	5XXX	Timeline of Tank Repairs from 1976 to Present	$15,000
6	5081	Storage Tank Maintenance Review	$30,000
7	5591	Crude Oil Piping Maintenance Review	$51,744
8	5XXX	Review of VMT's Mechanical Integrity Pgm - Phase 1	$50,000

Information & Education Committee (IEC) – FY2025 Budget and Prioritization

IEC Prioritization	Project #	Project Name	Budget
Protected	3200	Observer Newsletter	$7,200
Protected	3300	Annual Report	$8,000
Protected	3610	Web BAT	$7,140
1	3530	Youth Involvement	$50,750
2	3XXX	Public Engagement Toolbox	$10,000
3	3810	Illustrated Prevention & Response Outreach	$6,800
4	3410	Fishing Vessel Pgm Community Outreach	$19,000
5	3903	Internship	$4,000

Scientific Advisory Committee (SAC) – FY2025 Budget and Prioritization

SAC Prioritization	Project #	Project Name	Budget
Protected	9510	LTEMP	$145,860
1	6560	Peer Listening Manual Distribution	$35,000
2	952X	Marine Invasive Species - Internships	$6,500
3	9110	PWS Marine Bird & Mammal Winter Survey	$88,928
4	9XXX	Transcriptomics Monitoring Plan	$109,703
5	9XXX	Social Science Workshop	$30,000
6	9550	Dispersants	$10,000

All projects to be ranked are presented at the Volunteer Workshop in early December, and forwarded to staff and all Board members, along with the committee prioritization information. For FY2025, sixteen of seventeen staff members, and sixteen of twenty Board members, responded with their project scores using the approved project ranking sheet. The rated project scorings are presented in Figure 7, Project Scoring Matrix.

Figure 7 - Project Scoring Matrix

Sort Index	Staff	Lead Comm	Lead Cte Rank		FY2025 Projects	Projected FY2025 Budget	Assigned by Staff	Assigned by Board	Assigned By All
							Points	Points	Points
1	SB	TOEM	1	6512	Maintaining the Secondary Containment Systems at VMT	$38,000	69	69	138
2	SB	TOEM	2	5XXX	Title V Air Quality Permit Review	$25,000	69	50	119
3	MDR	IEC	1	3530	Youth Involvement	$50,750	63	55	118
4	BT	IEC	3	3810	Illustrated Prevention & Response Outreach	$6,800	60	56	116
5	SB	TOEM	3	5XXX	Finalization of Full PWSRCAC Air Quality History Report	$10,000	55	59	114
6	RR	OSPR	1	6536	Analysis of Port Valdez Wx Buoy Data 2024	$17,000	60	51	111
7	AS	POVTS	1	8520	Miscommunication in Maritime Contexts (Phase 3)	$50,000	57	53	110
8	DV	SAC	1	6560	Peer Listening Manual Distribution	$35,000	59	47	106
9	MDR	IEC	4	3410	Fishing Vessel Pgm Community Outreach	$19,000	58	46	104
10	RR	OSPR	3	5640	ANS Crude Oil Properties Analysis	$30,500	57	44	101
11	DV	SAC	2	952X	Marine Invasive Species - Internships	$6,500	58	39	97
12	SB	TOEM	4	5XXX	Review of VMT CP System Protocols	$34,000	45	47	92
13	JR	OSPR	2	6540	Copper River Delta & Flats GRS Workgroup	$25,000	46	44	90
14	LS	OSPR	5	6511	History of VMT C-Planning	$10,000	48	40	88
15	AS	OSPR	4	65XX	Comparison of Windy App & Seal Rocks Wx Buoy Wind/Wave Data	$35,000	37	49	86
16	DV	SAC	3	9110	PWS Marine Bird & Mammal Winter Survey	$78,928	45	35	80
17	AS	POVTS	2	8XXX	Assessing Non-Indigenous Species Biofouling on Vessel Arrivals	$5,750	41	36	77
18	SB	TOEM	5	5XXX	Timeline of Tank Repairs from 1976 to Present	$15,000	29	46	75
19	SB	TOEM	6	5081	Storage Tank Maintenance Review	$30,000	34	35	69
20	SB	TOEM	7	5591	Crude Oil Piping Maintenance Review	$51,744	26	41	67
21	DV	SAC	6	9550	Dispersants	$10,000	23	39	62
22	DV	SAC	5	9XXX	Social Science Workshop	$30,000	41	20	61
23	MDR	IEC	5	3903	Internship	$4,000	21	40	61
24	DV	SAC	4	9XXX	Transcriptomics Monitoring Plan	$109,703	22	38	60
25	AS	POVTS	3	80XX	Maritime Autonomous Surface Ships (MASS) Technology Review	$40,000	23	30	53
26	JR	OSPR	6	7060	Vessel Decon Best Practices	$20,000	22	27	49
27	MDR	IEC	2	3XXX	Public Engagement Toolbox	$10,000	19	30	49
28	SB	TOEM	8	5XXX	Review of VMT's Oracle System for Reliability-Centered Maintenance	$50,000	13	34	47

Protected Projects – Not Ranked

Staff	Lead Cte	Lead Cte Rank		FY25 Projects	Budget
AJ	IEC	Protected	3200	Observer Newsletter	$7,500
BT	IEC	Protected	3300	Annual Report	$8,000
AJ	IEC	Protected	3610	Web BAT	$7,140
LS	OSPR	Protected	6510	State Contingency Plan Reviews	$80,000
AS	OSPR	Protected	6530	Weather Data & Sea Currents	$18,500
AS	OSPR	Protected	6531	Port Valdez Weather Buoys	$46,500
AL	SAC	Protected	9510	LTEMP	$145,860

6. Annual Evaluation and Update

The Planning Cycle

The LRPC was originally created with two objectives: to produce an annual five-year planning process and, within that framework, develop the first annual iteration of the PWSRCAC five-year plan. The planning process detailed in Figure 4, Annual Process for Long Range Planning and Budgeting, is the LRPC's current recommendation for annual planning. The evaluation of current programs, new projects and initiatives, and the timeline described in the previous section of this plan are the first three phases of the FY2025 five-year plan. The actual budget development and operational implementation by Board and staff will complete the first-year planning cycle. Annual continuation of the planning process is essential.

Planning Tools

This plan was developed through several steps involving the gathering, sorting, rating, and displaying of input data. Appendices C and D contain samples of the tools used in the preparation of this plan. It is recommended that they be utilized in the annual update cycle.

Projects Outside of the Planning Cycle

The Council evaluates unsolicited project proposals and requests for project support under the same standards as any other proposal to expend Council funds. Whenever possible, projects and concepts should be submitted as part of this process. However, unsolicited project proposals may be suggested or brought to the Council outside of the normal Long Range Planning process and timeline as identified in Figure 4. These proposals will be evaluated through the Unsolicited Proposal Procedure found in Appendix E.

The long-range planning process is cyclical and intended to repeat on an annual basis. The LRP Committee thanks all Board members, volunteers, and staff for their participation in this important process.

APPENDICES

- Appendix A: One-Page Strategic Plan
- Appendix B: Internal Structures & Relationships
- Appendix C: New Project/Initiative Briefing Template
- Appendix D: FY2025 Proposed Projects Ranking Template
- Appendix E: Unsolicited Proposal Procedure
- Appendix F: The Big Picture FY2025 Proposed Project Org Chart

APPENDIX A.

Prince William Sound Regional Citizens' Advisory Council
One-Page Strategic Plan

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

Link to full FY2023-FY2027 Long Range Plan

Core Purpose: Citizen oversight to prevent oil spills, minimize environmental impacts, and promote response readiness

Core Values

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

Overarching Goals and Objectives (see pages 13-15 for a more complete list of objectives)

- Compliance with OPA90 and Alyeska contractual requirements.
  ☐ (1) Annual re-certification and funding
  ☐ (2) Maintain regional balance
  ☐ (3) Link projects and programs to OPA90 and Alyeska contract

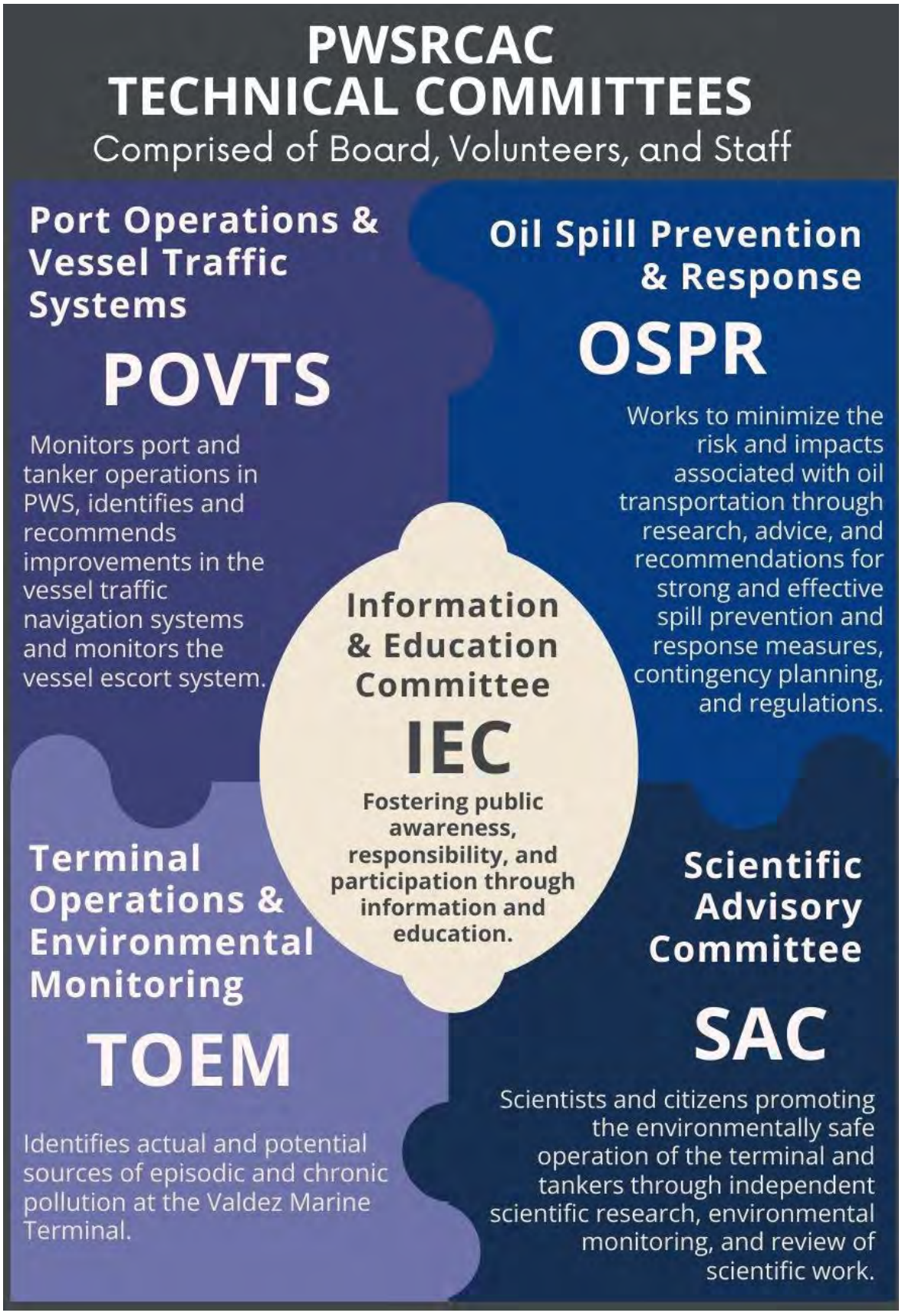
- Continue to improve environmental safety of oil transportation in our region.
  ☐ (4) Monitor and review development of, and compliance with, laws and regulations
  ☐ (5) Pursue risk-reduction measures and promote best available technologies and best practices
  ☐ (6) Monitor operations and promote a safe and clean marine terminal
  ☐ (7) Monitor and review the condition of the tanker fleet/maritime operations
  ☐ (8) Monitor and promote the safe operation of all Alyeska/SERVS-related on-water assets
  ☐ (9) Monitor and review environmental indicators
  ☐ (10) Promote and facilitate effective research for scientific, operational and technical excellence

- Develop and maintain excellent external and internal communication.
  ☐ (11) Advocate for government and industry measures to improve the environmental safety of oil transportation
  ☐ (12) Maintain and improve relationships with government, industry and communities
  ☐ (13) Be the model for citizen oversight and provide support for other citizens' advisory groups
  ☐ (14) Ensure availability of PWSRCAC information
  ☐ (15) Work to improve availability of information to PWSRCAC from industry sources

- Achieve organizational excellence.
  ☐ (16) Effective short and long term planning, with clear and measurable goals for projects
  ☐ (17) Fiscally responsible, efficient, and easily understood financial procedures and reporting
  ☐ (18) Committed to continuous improvement
  ☐ (19) Recognize people as the most important asset of the organization
  ☐ (20) Recruit and develop knowledgeable and committed Board members, volunteers, and staff
  ☐ (21) Strong volunteer structure and support for volunteers

Appendix B

Internal Structure and Relationships



Back to Agenda

PWSRCAC Long Range Planning
PROJECT
BRIEFING TEMPLATE

Submitted by: _____

1. What is the name of the new project?

2. Give a brief description of the new project.

3. Why is this new project important to our organization, mission and/or our constituents?

4. What would be accomplished as a result of successfully completing the new project?

5. What is the probability of successfully completing the project?

6. What is the estimated cost to complete this new project?

Back to Agenda

Appendix D
FY2025 Proposed Projects Ranking Sheet

Name:

- You have a total of **75 points**. You must use all 75 points.
- **No more than 5 points** should be given to an individual project.
- Ranking is confined to projects proposed for FY25.

Please consider the following criteria when ranking projects:
1) relevance to PWSRCAC's mission
2) value to PWSRCAC
3) benefit to member organizations
4) probability of success
5) cost effectiveness

Staff	Lead Comm	Lead Comm		FY2025 Projects	Projected FY2025	Assigned Points
AS	POVTS	1	8520	Miscommunication in Maritime Contexts (Phase 3)	$50,000	
AS	POVTS	2	8XXX	Assessing Non-Indigenous Species Biofouling on Vessel Arrivals	$5,750	
AS	POVTS	3	80XX	Maritime Autonomous Surface Ships (MASS) Technology Review	$40,000	
DV	SAC	1	6560	Peer Listening Manual Distribution	$35,000	
DV	SAC	2	952X	Marine Invasive Species - Internships	$6,500	
DV	SAC	3	9110	PWS Marine Bird & Mammal Winter	$78,928	
DV	SAC	4	9XXX	Transcriptomics Monitoring Plan	$109,703	
DV	SAC	5	9XXX	Social Science Workshop	$30,000	
DV	SAC	6	9550	Dispersants	$10,000	
SB	TOEM	1	6512	Maintaining the Secondary Containment Systems at VMT	$38,000	
SB	TOEM	2	5XXX	Title V Air Quality Permit Review	$25,000	
SB	TOEM	3	5XXX	Finalization of Full PWSRCAC Air Quality History Report	$10,000	
SB	TOEM	4	5XXX	Review of the VMT CP System Testing Protocols	$34,000	
SB	TOEM	5	5XXX	Timeline of Tank Repairs from 1976 to Present	$15,000	
SB	TOEM	6	5081	Storage Tank Maintenance Review	$30,000	
SB	TOEM	7	5591	Crude Oil Piping Maintenance Review	$51,744	
SB	TOEM	8	5XXX	Review of VMT's Oracle System for Reliability-Centered Maintenance	$50,000	
RR	OSPR	1	6536	Analysis of Port Valdez Wx Buoy Data 2024	$17,000	
JR	OSPR	2	6540	Copper River Delta & Flats GRS Workgroup	$25,000	
RR	OSPR	3	5640	ANS Crude Oil Properties Analysis	$30,500	
AS	OSPR	4	65XX	Comparison of Windy App & Seal Rocks Wx Buoy Wind/Wave Data	$35,000	
LS	OSPR	5	6511	History of VMT C-Planning	$10,000	
JR	OSPR	6	7060	Vessel Decon Best Practices	$20,000	
MDR	IEC	1	3530	Youth Involvement	$50,750	
MDR	IEC	2	3XXX	Public Engagement Toolbox	$10,000	
BT	IEC	3	3810	Illustrated Prevention & Response Outreach	$6,800	
MDR	IEC	4	3410	Fishing Vessel Pgm Community Outreach	$19,000	
MDR	IEC	5	3903	Internship	$4,000	
					$857,675	0

Back to Agenda

Protected Projects

Staff	Lead Cte	Lead Cte Rank		FY25 Projects	Budget
AJ	IEC	Protected	3200	Observer Newsletter	$7,500
BT	IEC	Protected	3300	Annual Report	$8,000
AJ	IEC	Protected	3610	Web BAT	$7,140
LS	OSPR	Protected	6510	State Contingency Plan Reviews	$80,000
AS	OSPR	Protected	6530	Weather Data & Sea Currents	$18,500
AS	OSPR	Protected	6531	Port Valdez Weather Buoys	$46,500
AL	SAC	Protected	9510	LTEMP	$145,860

Appendix E

Prince William Sound Regional Citizens' Advisory Council
Administrative Procedure

Unsolicited Project Proposals and Requests for Project Support

Adopted by the PWSRCAC Board on January 17, 2013

The Prince William Sound Regional Citizens' Advisory Council has a well-developed annual proposal and project evaluation and development process. Submissions into this long-range planning and work plan development process usually occur in September. Whenever possible, projects and concepts should be submitted as part of this process.

Handling of unsolicited project proposals and requests for project support

The Council evaluates unsolicited project proposals and requests for project support under the same standards as any other proposal to expend council funds.

Chief among those standards are whether the project furthers the council mission consistent with the requirements of the Oil Pollution Act of 1990 and the Council's funding contract with Alyeska Pipeline Service Co.; whether it merits a higher priority ranking than projects on the deferred list in the Council's Long-Range Plan; and whether a suitable entity can be found to bring the project to a successful conclusion.

In order to assure fair and equal evaluation of project proposals, all proposals must include the following parts:

- Title of the project.
- Name, affiliation, and contact information of Principal and Associate Investigators/Contractors.
- A clear statement of how the proposed project relates to the Council's mission under its legislative and contractual mandates.
- A clear statement of why the proposed project is time critical and must be considered before the next formal planning process.

Like all of the Council's projects, the body of the proposal must answer the following questions:

- What will the project accomplish, including its relationship to the Council's mission and other on-going projects?
- How will the project be accomplished?
- Where will the work be done; including facility use agreements where necessary?
- By whom?
- How will the Council's share of the project costs be spent? Include a budget.

Note that, if the Council does adopt a project idea submitted as part of an unsolicited project proposal or as part of a request for project support, the Council may,

- in the case of a request for project support, elect to undertake the project on its own rather than providing financial support to another organization desiring to do so, or,
- in the case of an unsolicited project proposal, undertake the project, but put it out for competitive procurement rather than awarding it on a sole-source basis to the entity submitting the proposal.

Appendix E

This Administrative Procedure is intended to guide the council staff and volunteers in evaluating and developing unsolicited project proposals and requests for project support received by the Council in light of the standards stated above.

Routing of unsolicited project proposals and requests for project support
An unsolicited project proposal or request for financial support reaching the Council should be referred to the appropriate technical committee through the project manager, who will manage the proposal or request's evaluation and development through the committee process in the same way any other project idea would be managed at the Council.

Evaluating and developing unsolicited project proposals and requests for project support

A. Committee Process
A committee reviewing an unsolicited project proposal or request for support must take the following steps:

Step 1
Determine whether the proposed project furthers the council mission consistent with the requirements of the Oil Pollution Act of 1990 and the Council's funding contract with Alyeska. If not, it should not receive further consideration by the committee.

If the committee determines the proposed project does further the council mission, a finding to that effect should be recorded in the committee minutes and the committee should proceed to Step 2.

Step 2
Determine whether the proposed project can be deferred for consideration in the normal ranking process during the next round of the Council's long-range planning process. If so, it should be handled through that process and not receive further consideration under this Administrative Procedure.

If the committee determines the proposed project requires immediate consideration, a finding to that effect should be recorded in the committee minutes and the committee should proceed to Step 3.

Step 3
Determine whether, in the committee's opinion, the proposed project merits a higher ranking than all projects appearing on the council budget's deferred projects list because of insufficient funds. If not, the proposed project should not receive further consideration under this Administrative Procedure. (Projects appearing on the deferred project list for timing or technical reasons are not required to be factored into this determination.)

If the proposed project is deemed by the committee to outrank all projects on the deferred projects list, a finding to that effect should be recorded in the committee minutes and the committee should proceed to Step 4.

Appendix E

Step 4
Determine whether the Council, to best further its mission, should handle the matter as proposed or requested by the submitter, or should instead,

- in the case of a request for project support, undertake the project on its own rather than provide financial support to the submitter, or,
- in the case of an unsolicited project proposal, undertake the project, but put it out for competitive procurement rather than award it on a sole-source basis to the submitter.

The committee's findings and recommendations on this point should be recorded in the committee minutes and be included in the project proposal forwarded for approval and funding.

Step 5
The project manager who works with the committee recommending the project shall prepare the necessary documentation, including a proposed budget modification if needed, after which the project proposal should be presented to the executive director, executive committee, or board for consideration as would happen with any other proposed new project or expenditure falling outside the normal long-range planning process.

B. Final Fiscal Review and Action
The executive director will, following consultation with the director of programs, the director of administration, and the financial manager, determine whether the project can go forward following the committee's recommendation without jeopardizing higher-priority projects on the deferred projects list, or other scheduled PWSRCAC obligations. If he or she determines that it can, the executive director shall handle the project proposal from this point forward in accordance with standard council bylaws, policies, and practices regarding project approval, budgeting, and funding.

XXX

Appendix F - Big Picture Org Chart

Proposed Projects FY 2025

Oil Spill Prevention & Response Committee (OSPR)

- 6510 State Contingency Plan Review — P T
- 6530 Weather Data & Sea Currents — P
- 6531 Port Valdez Weather Buoys — P
- 6536 Analysis of Port Valdez Weather Buoy Data — P
- 6540 CRDF GRS Workgroup
- 5640 ANS Crude Oil Properties Analysis — T S
- 65XX Comparison of Windy App & Seal Rocks Buoy Data
- 6511 History of VMT C-Planning — T
- 7060 Vessel Decon Best Practices

Terminal Operations & Environmental Monitoring Committee (TOEM)

- 6512 Maintaining VMT Secondary Containment Systems
- 5XXX Title V Air Quality Permit Review
- 5XXX Finalization of Full PWSRCAC Air Quality History Report
- 5XXX Review of the VMT CP System Protocols
- 5XXX Timeline of Tank Repairs from 1976 to Present
- 5081 Storage Tank Maintenance Review
- 5591 Crude Oil Piping Maintenance Review
- 5XXX Review of VMT's Oracle System for Reliability-Centered Maintenance

Port Operations & Vessel Traffic Systems Committee (POVTS)

- 8520 Miscommunication in Maritime Contexts (Phase 3) — O
- 8XXX Assessing Non-Indigenous Species Biofouling on Vessel Arrivals — S
- 80XX Maritime Autonomous Surface Ships (MASS) Tech Review

Scientific Advisory Committee (SAC)

- 9510 LTEMP — T
- 6560 Peer Listening Manual Distribution — I
- 9521 Marine Invasive Species Internships
- 9110 Marine Bird and Mammal Winter Surveys
- 9XXX Transcriptomics Monitoring Plan
- 9XXX Social Science Workshop
- 9550 Dispersants

Information & Education Committee (IEC)

- 3200 Observer Newsletter — O T S P
- 3300 Annual Report — O T S P
- 3610 Web BAT — O T S P
- 3530 Youth Involvement
- 3XXX Public Engagement Toolbox
- 3XXX Illustrated Prevention & Response System Outreach — O P
- 3410 Fishing Vessel Program Community Outreach — O
- 3903 Internship — O T S P

Colored tags indicate cross-committee interest

T TOEM I IEC S SAC P POVTS O OSPR

Darker shaded boxes indicate that a project is protected or the funds are already committed.

PRINCE WILLIAM SOUND
REGIONAL CITIZENS' ADVISORY COUNCIL

January 2024
Status Report
As of December 8, 2023

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. The article archive is available here: 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 2022-2023 report was completed by staff and the contracted graphic designer. An electronic version was posted to the website and printed copies mailed to the distribution list. Extra printed copies are available for booth events and other needs throughout the year.

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: Staff will work on determining the community and date for the Spring 2024 tour based on SERVS training dates once they are set.

3500 – Community Outreach Program

Objectives: Increase awareness of PWSRCAC and increase communications with member organizations and communities in the Exxon Valdez oil spill region.

Accomplishments since last report:

- **September 21** Homer Community Reception, Homer, AK
  - Homer area community members and partners were invited to join the Council Board and staff at the Pratt Museum for hors d'oeuvres, the opportunity to explore the galleries, and to listen to a talk by Mike O'Meara and Nancy Lord about EVOS. ~85 attended.
- **October 5** PWSRCAC Overview, Prince William Sound College, Valdez, AK
  - Outreach Coordinator Maia Draper-Reich gave a 30-minute PWSRCAC overview talk for students and staff in the Outdoor Leadership program. 7 people attended.
- **October 11, 23** PWSRCAC office visits for PWS College students, Valdez, AK
  - Outdoor Leadership students in the Recreation and Leisure in Modern Society class stopped by the PWSRCAC Valdez office as part of visiting nonprofits in town that help the Valdez community. They visited and spoke with Donna Schantz, Joe Lally, and Sadie Blancaflor to deepen their knowledge about the Council and our work. Following the success of this visit, faculty Benjamin Rush planned a second visit to learn about Donna and Joe's career pathways, as well as other PWSRCAC project managers.
- **November 8-10** Pacific Marine Expo, Seattle, WA
  - POVTS member Max Mitchell, OSPR member Matt Melton, and Maia Draper-Reich hosted the PWSRCAC booth to disseminate information about the Council and its mission and hand out PWSRCAC giveaway items. ~260 people stopped by the booth.
- **November 9** Alaska Invasive Species Workshop, Sitka, AK
  - Noah Schrof, Invasive Species intern based in Kodiak, presented online to a hybrid audience of ~100 at the workshop to share about his internship, updates on the monitoring work he's done, and what he learned.
  - Danielle Verna helped organize and facilitate this event.
- **November 30** Science Night, Anchorage, AK
  - ~95 Board members, volunteers, staff, partners, and other invitees attended the hybrid event to hear four presentations by scientists whose work relates to the mission and work of the Council.

3530 – Youth Involvement

Objectives: Select proposals for youth activities, in collaboration with partner agencies and organizations throughout the Exxon Valdez oil spill region. Coordinate activities to facilitate hands-on learning about topics related to the Council's mission. Where appropriate and feasible, participate in mission-relevant youth activities.

Accomplishments since last report: The Information and Education Committee received and reviewed nine project proposals on the RFP released during October-November, 2023. Final award announcements will be made by January 31, 2024.
Four contractors completed their summer project's final reporting requirements this fall (by September 30, 2023):

- Alaska Geographic – *Marine Stewardship Youth Expedition Prince William Sound*
- Copper River Watershed Project – *Bligh Reef Expedition*

- Center for Alaskan Coastal Studies – *Engaging Youth as Environmental Stewards: High School Internships & Camp Opportunities*
- Prince William Sound Science Center – *Copper River Stewardship Program*

Four contracts are currently underway for projects happening during the 2023/2024 school year:

- Alaska Marine Conservation Council/Kodiak Ocean Science Discovery Program – two contracts:
  - *Chemistry Introduction: Oil, Climate Change, and Ocean Acidification*
  - *Science & Engineering Club*
- Center for Alaskan Coastal Studies - *Afterschool Action to Lifelong Learners*
- UAA/PWS College - *Environmental Undergraduate Research Experience*

3600 – Public Communications Program

Objectives: This program disseminates information and increases awareness through the Observer newsletter and the Council's online presence. This program 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.

The booklet "Stories of a Citizens' Council" was redesigned and reprinted in November.

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.

Current projects: The Council's website recently moved to a new hosting service, WP Engine, which specializes in WordPress websites (the technology that powers the Council's sites). The new service is much more user-friendly for site managers and WP Engine maintains top-notch technology on their servers. During this migration, the sites underwent some major technical upgrades, including an upgrade to the technology that manages the extensive library of PDF documents. This has helped improve searching for documents and has some promising features that can be implemented in future projects.

Website data: Website usage for www.pwsrcac.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. Contact project manager Amanda Johnson for access to data reports.

3810 – Illustrated Prevention & Response System Outreach

Objectives: Work with artist and author Tom Crestodina to develop artwork for a book and other materials showcasing the oil spill prevention and response system in Prince William Sound.

1. Educate stakeholders and the general public about the importance of spill prevention and response, why the PWS prevention/response system is one of the best in the world, and how it can be kept that way.

2. Create new work partnerships with industry and regulators, similar to how groups collaborate during the fishing vessel training community outreach tours.

Accomplishments since last report: Staff are working to finalize the contract with Crestodina. Alyeska/SERVS, Crowley Alaska Tankers, and SWAPA have confirmed their interest in participating. Once the contract is signed, coordination will begin with industry groups on dates for Crestodina to visit Valdez to see vessels and equipment, and learn more about the oil spill prevention and response system in our region. Staff will also be working to form a project team with members of staff and the interested committees (POVTS, OSPR, and IEC). The project team will focus on providing Crestodina input on the book's content at different stages of development.

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:

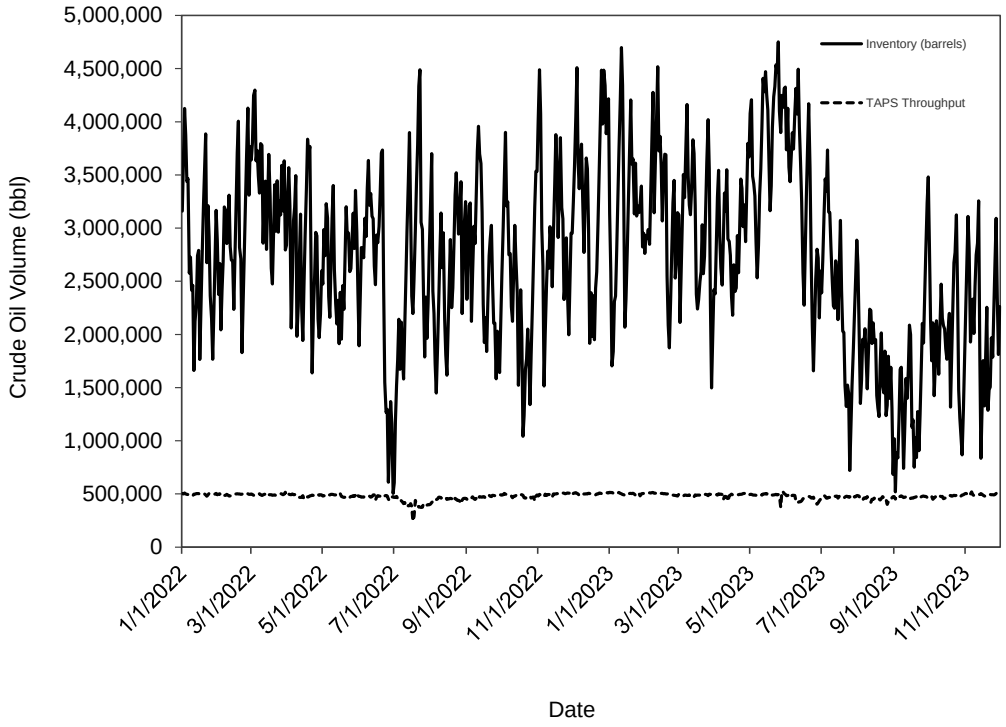
- **Tank Vent Damage:** At the September 2023 Executive Committee Meeting, Taku Engineering LLC's report titled "Crude Oil Storage Tank Vent Snow Damage" was accepted as final and distributed to regulators and the public. The Council received a request from Alyeska for additional information regarding Taku Engineering's calculations of the tank headspace conditions. In response, the Council transmitted a letter on November 3, 2023, offering a meeting with Taku to present their calculations and reiterating the Council's ongoing requests for additional information to compare Taku's results with those of Alyeska's engineers and further refine the model.

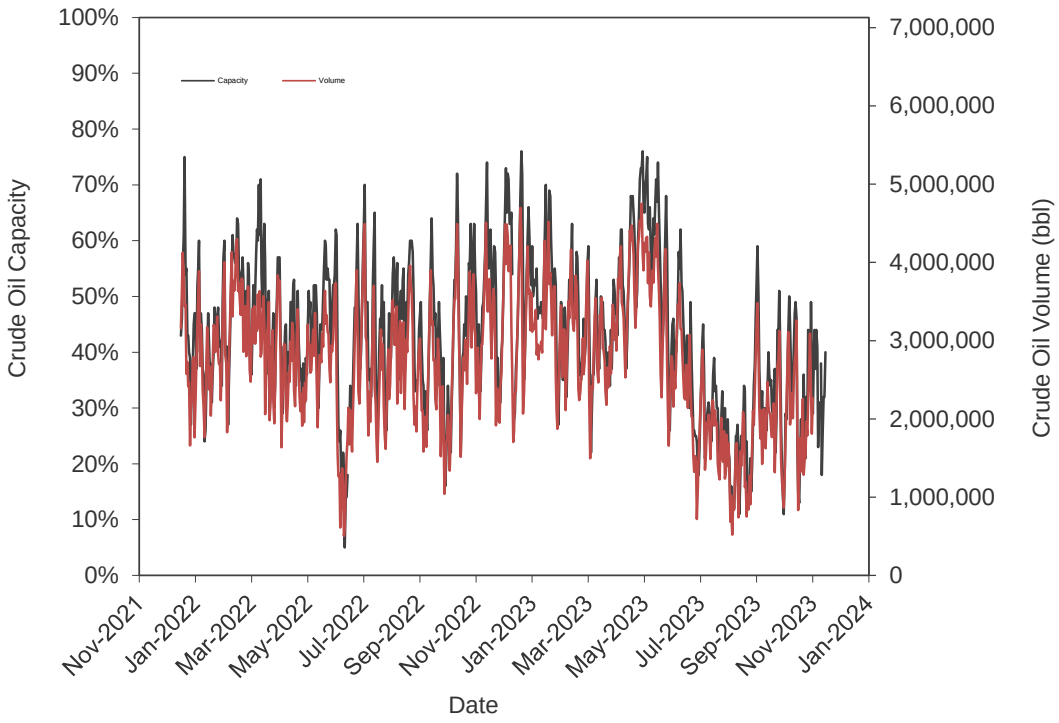
- **VMT Projects and Maintenance Monitoring**: The initial VMT Title V Air Quality permit was set to release on June 16, 2023, but has since been delayed. Currently, Alyeska is operating under a permit shield which allows Alyeska to utilize standards set forth in their 2012 Title V Air Quality Permit that expired in 2017. The TOEM Committee is currently reviewing these proposals in preparation for when the permit is published and opened for public comment.

- **Outstanding Alyeska responses to Council Recommendations and Information Requests:** At the September 2023 Board meeting, Andrés Morales committed to providing a timeline schedule for when the Council can expect responses to our outstanding requests for information/recommendations. On November 2, 2023, Alyeska transmitted this timeline schedule. Of note, the Council can expect to receive all outstanding tank information (for Tanks 93, 94 and 8) by the end of 2023/early 2024. The Council received all requested information from Alyeska regarding Tank 7 and Tank 2 in November 2023, which has been transmitted to our contractor for review.

Attachments: Graphs depicting a variety of data related to the operation and environmental impacts of the Valdez Marine Terminal.

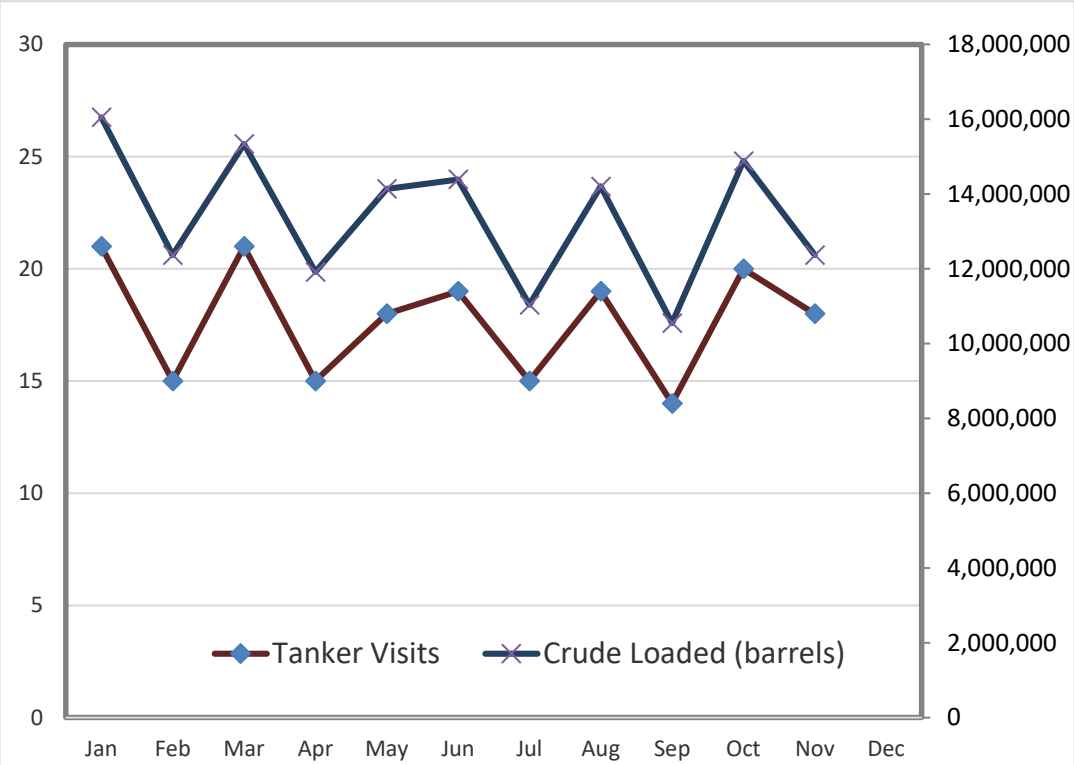
Daily Oil Inventory at the Valdez Marine Terminal and Trans-Alaska Pipeline Throughput
(Source: Alaska Department of Revenue - Tax Division, http://tax.alaska.gov/programs/oil/production.aspx)





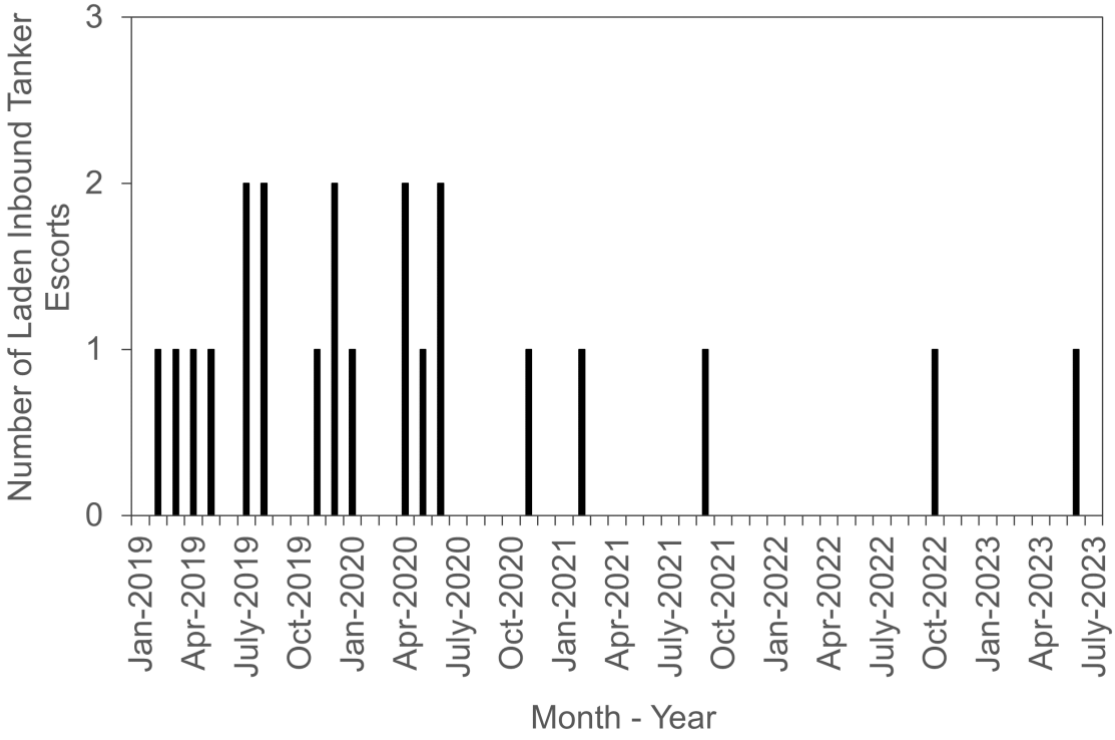
Monthly number of tanker visits and crude oil volume loaded onto ships from VMT - 2023

(Source: Alyeska Pipeline Service Company. Partitioned by VMT vessel arrival date.)



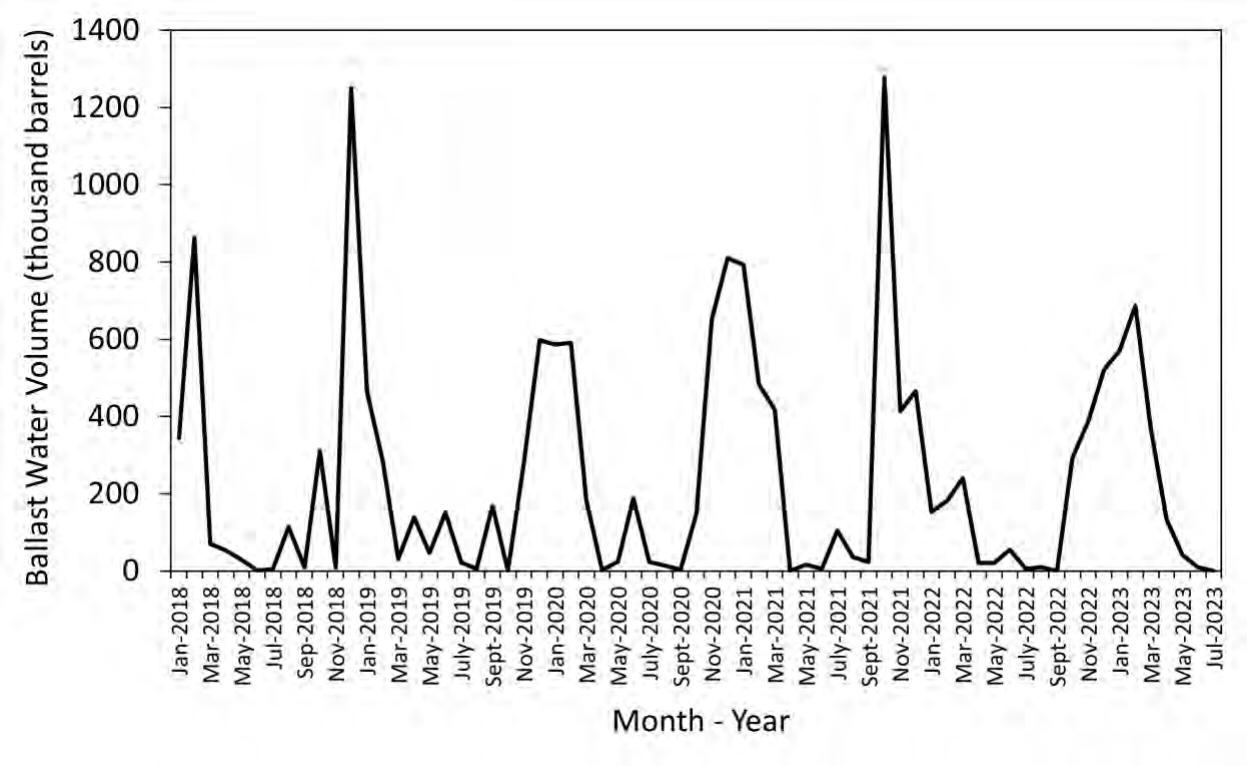
Inbound laden tanker escorts to VMT

(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.)



5081 – Crude Oil Tank 7 and Ballast Water Tank 94 Maintenance Review

Objectives: This project would entail performing a technical review of the maintenance of crude oil storage Tank 7 and ballast water storage Tank 94 at the Valdez Marine Terminal. Both Tank 7 and Tank 94 underwent comprehensive internal inspections in 2021. The last time Tank 7 underwent a similar internal inspection was in 2008, and Tank 94's last internal inspection occurred in 2012. The 2021 internal inspections of both tanks will result in a large amount of new information pertaining to the past, current, and future maintenance of each storage tank. Additionally, since their last internal inspections were completed back in 2008 and 2012, Alyeska has gathered and maintained other information, such as cathodic protection system testing records and external inspection results pertinent to the maintenance of Tanks 7 and 94. The new information generated from the 2021 internal inspections and the other, older information must all be considered to continue to safely maintain each of these tanks. This project is necessary to ensure that Alyeska is using industry best practices and considering all the pertinent information in the decisions they make to safely maintain both tanks, now and in the future.

Accomplishments since last report: The API 653 reports for Tanks 7 and 94 were received from DEC in August 2023; Alyeska provided all requested information for Tank 7 and partially provided request information on Tank 94 on August 31, 2023. A draft report has been completed by Taku Engineering and is undergoing internal review by Council staff and the TOEM Committee.

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 funding has been returned to contingency as Alyeska noted that the requested information for the completion of this project would be unavailable until FY25.

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 in September 2023 in Anchorage and discussed the following:

- Formation of a Tribal Engagement Task Force
- Activation drill in the Bering Straits in the summer of 2023
- EPA issuance of a final rule on Subpart J on dispersants post Deepwater Horizon:
    - New listing criteria, revising the efficacy and toxicity testing protocols, and clarifying evaluation criteria for removal products from the National Contingency Plan Product Schedule
    - Amending requirements for authorities, notifications, and data reporting when using chemical or biological agents in response to oil discharges
- Alternative Planning Criteria
- Pipeline and Hazardous Materials Safety Administration jurisdiction and authority
- Work continues on the Regional Stakeholder Committee (RSC) Task Force job aids for the RSC Liaison Officer and RSC members

Prince William Sound Area Contingency Plan (PWS ACP): The PWS Area Committee met in October and discussed the following:

- Maritime cyber security
- Replacement of the Mineral Creek lightering barge with the OSRB-5 barge
- Earthquakes in Prince William Sound
- Updates from the Geographic Response Strategies (GRS) subcommittee

Of interest:

The National Oceanic and Atmospheric Administration (NOAA) published a Federal Register notice on July 7, 2023 titled **Final National Oceanic and Atmospheric Administration Tribal Consultation Policy and Procedures** available HERE

On January 26, 2021, the White House issued a Presidential Memorandum on Tribal Consultation and Strengthening Nation-to-Nation Relationships that reaffirmed the Executive Order on Consultation and Coordination with Indian Tribal Governments (2000). In response, NOAA sought review and comment on its Tribal consultation policy and procedures in November 2021. NOAA revised its Consultation Handbook describing procedures for government-to-government consultation with federally recognized Indian tribes and updated an associated NOAA Administrative Order (NAO 218–8) and the Indigenous Knowledge (IK) guidance. The effective date of this policy is June 28, 2023.

ADEC Notice of Proposed Changes in Above Ground Storage Tanks Regulations for Class 2 Facilities in Oil and Other Hazardous Substances Pollution Control: On June 22, 2023, ADEC issued a public notice on repealing regulations for Class 2 facilities in Alaska that can be viewed HERE. These facilities store non-crude oil in above ground storage tanks with capacities between 1,000 gallons and 420,000 gallons. Recent articles on this can be viewed on Alaska Beacon HERE. Note this does not impact the Valdez Marine Terminal.

Article 2 of 18 AAC 75 – Financial Responsibility Dollar Amount Update: On July 5, 2023, PWSRCAC submitted comments on ADEC's Article 2 Oil Spill Financial Responsibility Dollar Amount Amendments available on ADEC's website HERE. Comments submitted by PWSRCAC and Cook Inlet RCAC are available HERE.

PWSRCAC advocated to retain the requirement that financial responsibility applications should be made under oath or affirmation, and that certification of oil production facility's maximum daily production of oil that determines the required amount of financial responsibility be notarized. PWSRCAC supports the increase in the Consumer Price Index (CPI) and further advocates that the adequacy of the updated base amounts be assessed to ensure that an operator has the financial ability to respond to damages caused by a spill.

Outstanding Questions or Issues:
BP-Hilcorp Transaction: On December 14, 2020, the Regulatory Commission of Alaska (RCA) issued an Order Granting Applications Subject to Conditions regarding the transfer of TAPS assets (including the Valdez Marine Terminal) from BP Pipelines to Harvest Alaska. PWSRCAC had planned to submit an amicus curiae brief in support of the City of Valdez appeal to the RCA's March and December 2020 Orders allowing Hilcorp/Harvest Alaska to keep financial information confidential and granting the transfer of BP's assets to Hilcorp. On June 27, 2023, the City of Valdez argued in front of the Alaska Supreme Court in the City of Valdez vs. the Regulatory Commission of Alaska. A decision by the Supreme Court will be issued at a future time.

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 last report:
PWS Tanker C-Plan:
The Prince William Sound shippers submitted a major amendment to the PWS Tanker C-Plan and associated vessel response plans in September 2023. The amendment is proposing to update the plan to conform to the contingency planning regulatory changes in 18 AAC 75 in early 2023 as follows:

- Replacement of Mineral Creek lightering barge with OSRB-5 and associated reduced volume for

storage
- Changes to the plan to align with new regulations
- Administrative edits
- Whether the required information is provided to establish that an operator has "primary operational control" of vessels in the plan

VMT C-Plan:

The public review for the 5-year renewal of the VMT C-Plan began in November with comments due mid-December 2023. There will be a presentation at the January 2024 PWSRCAC Board meeting on that review.

As part of that renewal and to address conditions of approval on secondary containment from the 2019 VMT C-Plan renewal, Alyeska is required to identify a method to evaluate the integrity of the catalytically blown asphalt (CBA) liner/secondary containment in the East Tank Farm by October 2023. Alyeska plans to use **Geoelectric Leak Location (GELL)** as a method to evaluate portions of CBA liner in the East Tank Farm. GELL can be used to characterize the liner by locating and identifying any defects or perforations that may be present in a survey area only on the CBA liner. Alyeska proposes to do a pilot study in the West Tank Farm (out of service) to calibrate the GELL method prior to implementation in East Tank Farm. There are four out-of-service crude oil storage tanks in the West Tank Farm and 14 in-service crude oil storage tanks in the East Tank Farm.

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: Alyeska submitted their preliminary selection for testing methods on the secondary containment to ADEC on September 25, 2023.

Council staff worked with Dr. Craig Benson to review Alyeska's proposal and draft comments on the language of the secondary containment liner testing selection method as part of the VMT C-plan renewal public comment period. These comments reference a letter containing PWSRCAC's comments with Dr. Benson's recommendations on the September 25, 2023, 2A preliminary inspection method engineering report. This letter was transmitted to both ADEC and Alyeska on December 15, 2023, along with the VMT C-Plan comments.

6530 – Weather Data / Sea Currents Project

Objectives: This project studies wind, water current, and other environmental factors near the Valdez Marine Terminal, in Prince William Sound, and in the Gulf of Alaska. Weather conditions affect the safe navigation of vessels and aids the ability to prevent, respond to, contain, and clean up an oil spill. Accurate weather data for the region supports research and decision making in areas like oil spill response, traffic management, vessel performance specification, and contingency planning.

Accomplishments since last report: The weather station at Cape St Elias is showing its age. Replacement components have been ordered and are on-site in Cordova. A purchase order has been issued for the Prince William Sound Science Center (PWSSC) to assemble the weather station.

The conductivity, temperature, and depth (CTD) sensor set up at the Valdez tide gauge station is working well. Our two weather stations at Cape St Elias and Nuchek are operating normally and the camera at Nuchek is working correctly.

The weather station at Kokinhenik Bar on the Copper River Delta has been installed. There will be a site visit to the station sometime in December to tighten anchor bolts, readjust guy wires, and troubleshoot the power system.

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. The Council's Board passed a resolution expressly requesting a weather station be employed at the terminal on January 22, 2016.

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 Fall service visit was completed, and buoys were placed back on station. Hulls were cleaned, zincs replaced, one wind meter replaced, and new charging cables installed. The next service call will be towards the beginning of May 2024. Contracts for JOA Surveys and PWSSC are in place for FY24.

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 are expected to collect weather data for at least five years. This series of projects will take the data collected in each of the five years and perform an analysis to determine any weather trends throughout the year and seasonally. The analysis includes current and wind direction and speed information, wave direction and heights, and other pertinent information that can be obtained from the weather data.

Accomplishments since last report: Dr. Rob Campbell of the Prince William Sound Science Center (PWSSC) presented the 2019-2022 Port Valdez Weather Buoy Data Analysis report at the PWSRCAC's

September 2023 Board of Directors meeting, and the Board accepted that report. The project team for this project agreed that a sole source contract with PWSSC to continue doing the Port Valdez Weather Buoy Data Analysis for the year 2023 is the best approach to build on the previous reports. Staff anticipates contracting with the PWSSC again to incorporate the weather data for 2023 next spring, after this year is completed.

6560 – Peer Listener Training

Objectives: Update the Council's Peer Listener program, which was created and implemented shortly after the Exxon Valdez oil spill to promote community resiliency through a peer-to-peer support network. The update will include assessing the current program, reviewing similar programs nationwide, and revising the Peer Listener Training manual and delivery methods according to contemporary best practices.

Accomplishments since last report: The Council's Peer Listener Manual was updated and revised by contractors and presented to the Board for acceptance at the September meeting.

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. Additionally, the program includes the planning and implementation of PWSRCAC's Incident Response Plan.

Accomplishments since last report: Staff continues to engage with the ARRT initiated **RSC Task Force**. The task force has met several times since the September Board meeting. Focus has turned to developing the RSC member job aid and PWSRCAC submitted much of material currently residing on our "RSC web resources" website for the participant guide. The group has yet to review this material. It's anticipated that the RSC task force developed job aids will be incorporated and referenced in the Inland Area plan first. It's anticipated this plan should be up for public review in early 2024.

Staff continues to track the effort to convert **GRS to a GIS based system** and is updating the OSPR Committee accordingly. At this point, all of the original PDF GRS information has been ported over to the GIS system. The graphics are different and don't look the same, as GIS systems work best with point data, meaning it's easy to show boom anchor points for example, but not the actual string of boom between these anchor points. The group continues discussion surrounding how best to verify the accuracy and make updates to this information in light of modern satellite imagery and changing coastlines.

Robida attended a University of Alaska Fairbanks (UAF) sponsored Drone Career Expo on September 28 at the Valdez Elementary School. Robida was contacted about the project approximately two years prior and added input regarding how UAV's could be used for spill response. UAF developed a curriculum that included input from other local Valdez entities such as the Valdez Native Tribe and Valdez Fisheries, and project videos and lessons were being pilot tested in one of the 4th grade classrooms at Hermon Hutchens Elementary School in Valdez to show children that careers exist in this field.

7035 – Virtual Meeting with Contracted Response Vessel Representatives

Objectives: This project funds a virtual meeting with fleet representatives from each of the ports where vessels are on contract with Alyeska/SERVS for oil spill response. PWSRCAC has conducted similar group meetings face-to-face in the past and they have proved to be a productive way to interact with program participants, assess the overall health of the contracted response vessel program, and inform Alyeska/SERVS of any concerns or potential recommended improvements from the perspective of program participants. Considering both the VMT and PWS Shipper plans rely on these contracted vessels to execute respective contingency plans, it's important that the program remains healthy, that training and exercise activity is engaging and effective, and there are enough vessels under contract to satisfy contingency plan requirements.

Accomplishments since last report: Work has not started on this FY2024 project yet. This meeting has historically been held in the spring timeframe; mid-March, prior to annual SERVS fishing vessel training. Staff is amenable to other dates, but is anticipating a similar spring timeframe.

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

VMT On-Land Tactics Exercise – October 27, 2023: Alyeska conducted an equipment deployment of some of the tactics they could use in the event of an oil spill to land at the VMT. This was a good training deployment for some of the newer TCC contracted responders.

Kodiak Oiled Wildlife Training – October 9-11, 2023: Alyeska conducted its annual oiled wildlife training for the Kodiak contracted vessels in their program October 9-11, 2023. This is excellent training that is good for three years and rotates annually between Kodiak, Homer/Seward, and Valdez/Cordova.

VMT Annual IMT Exercise –October 4, 2023: Alyeska conducted its annual VMT Incident Management Team (IMT) exercise on October 4, 2023. This exercise was a response to 1,200-barrel spill that was contained in one of the settlement ponds at the VMT. This exercise also included an equipment deployment at the terminal on the same day.

Valdez Star Exercise – August 2, 2023: The Valdez Star conducted a skimming deployment exercise in Port Valdez on August 2, 2023. This deployment included three vessels from the Alyeska

fishing vessel program to tow boom and focused on operation of the skimmer and coordinating with the other vessels while making turns.

OSRB-2 Deployment Training – July 13, 2023: This training involved SERVS training the TCC crews on the deployment process on the Barge OSRB-2. While it is unlikely the TCC crews would be used on the OSRB barges to recover oil during a spill, the cross-over training is a good opportunity to help the TCC crews understand to processes on board the barges.

Tanker Washington and Tug Commander Emergency Towing Exercise – July 2, 2023: The tank vessel Washington conducted an emergency towing exercise with the Tug Commander on July 2, 2023.

Solomon Gulch Hatchery Boom Deployment – June 28, 2023: This exercise involved a full deployment of the Solomon Gulch Hatchery. SERVS work vessels and TCC employees conducted the deployment on a day with poor visibility because of fog.

Solomon Gulch Hatchery Deployment Training – June 24, 2023: Alyeska deployed the sensitive area protection at the Solomon Gulch Hatchery on June 24. This deployment was focused on training the TCC crew on how to deploy this protection strategy and was an untimed training event.

Tug Commander Vessel Dispersant Exercise – June 15, 2023: The Tug Commander's crew demonstrated the dispersant spray system in Port Valdez on June 15, 2023. This is annual training that the tugs Commander and Champion are required perform each year.

Upcoming Drills and Exercises

Marathon Annual Shipper's Exercise – October 2023

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: Alan Sorum has been researching and following IMO regulatory efforts to reduce greenhouse gases with the Chair of the POVTS Committee.

Sorum has joined a discussion group of scientists, community members, emergency managers, and others interested in mitigating the hazards presented by landslides, especially those that generate tsunamis.

Sorum has been working with the City of Valdez to convey the importance of Port Valdez to the Alaska Delegation members and the need to provide a replacement Coast Guard Cutter in Valdez.

Working with AOOS, we were able to apply extra funds from the CTD sensor grant to help fund the weather station on the Copper River Delta.

8018 – State of the Industry: Advances in Escort Tugboat Technology and Regulatory Framework

Objectives: This project proposes to review current global advances being used in the design of capable escort tugboats and regulations requiring the use of these vessels.

Accomplishments since last report: This project was deferred due to a lack of responses from the RFP.

8025 – Vessel Operator Tsunami Hazards Guidance Workshop

Objectives: The goal of this project is to convene a 2-day workshop, with participants representing a diversity of vessel operators, emergency management, and the scientific study of tsunami impacts. Work products generated by the event will include preliminary guidance for vessel operators facing the threat of a tsunami and a list of research topics that could improve future guidance. The proposed guidance will be designed to be applicable in Prince William Sound and similar areas that have complex steep shorelines, and which face the potential of landslide-generated tsunamis.

Accomplishments since last report: A facilitation contract with Nuka Research and Planning Group has been completed. Dates have been set for June 3-4, 2024.The workshop is being held in concert with the AlaskaEX24 Statewide Tsunami Exercise to be held in Valdez on May 29-30, 2024. A save the date email has been sent out to potential attendees.

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: A comprehensive search of NTSB accident and incident reports has been completed. Reports were considered relevant to this review if communication or language was explicitly or indirectly identified as a contributing or causative factor in the accident or incident. Forty-one reports were identified as relevant and are currently undergoing thematic analysis.

A comprehensive literature search for empirical and synthetic articles in applied linguistics and maritime communication, as part of Phase 1, is scheduled to be delivered in December 2023.

9000 – Environmental Monitoring Program

Objectives: Coordinate projects developed and overseen by the Scientific Advisory Committee and obtain scientific knowledge and technical information about issues related to the actual and potential environmental impacts of the Valdez Marine Terminal and associated crude oil tankers. The notable tasks to be accomplished under this program are as follows:

- Project manager to attend at least one technical scientific conference
- Plan and complete budgeted environmental monitoring and scientific research projects
- Conduct PWSRCAC Science Night

Accomplishments since last report: Projects managed under this program continue to be planned and executed successfully. Science Night 2023 successfully took place on November 30 in Anchorage,

with 95 attendees hearing talks from four speakers presenting on diverse topics related to the EVOS region.

9110 – Monitoring Spatial Variability of Marine Birds During Winter in PWS Tanker Escort Zone

Objectives: Provide up to date information on winter marine bird density and distribution throughout the Prince William Sound tanker transit zone, including under-surveyed areas such as the open waters and adjacent bays in and around Port Valdez, Valdez Arm, Tatitlek Narrows, Port Fidalgo, and Port Etches. The notable tasks to be accomplished under this project are as follows:

- Perform winter bird surveys in Prince William Sound for three consecutive years
- Analyze data obtained during winter bird surveys and report the results of the analysis
- Make winter bird survey maps readily available for use by spill response managers

Accomplishments since last report: The final report from the March 2023 surveys was presented to the Board for acceptance at the September meeting. All data from the survey was uploaded to AOOS and NOAA's ERMA platform for use by the public and spill responders.

9510 – Long-Term Environmental Monitoring Project

Objectives: Comprehensively monitor the actual and potential environmental impacts related to the Valdez Marine Terminal and associated crude oil tankers and provide the Council with information about the presence and effects of hydrocarbons generated by the terminal facility and associated tankers. Here are the notable tasks to be accomplished under this project:

- Obtain environmental samples in Port Valdez: marine sediments, mussels, and passive sampling devices
- Analyze environmental samples
- Interpret and report results of sample analysis
- Present analytical findings to the PWSRCAC Board of Directors
- Maintain Environmental Monitoring Project plan

Accomplishments since last report: 2023 was an "expanded" LTEMP sampling year, where environmental samples were collected from Port Valdez as well as additional monitoring stations in Prince William Sound. Analytical results from samples shipped to various laboratories for analysis were received this fall. Staff from Owl Ridge Natural Resource Consultants interpreted the data and drafted a summary report and technical supplement for SAC's review and comment. The final report and technical supplement will be presented to the Board at the January meeting. LTEMP celebrated 30 years in 2023, and a history of the program was presented at Science Night.

9512 – Determining Concentration and Composition of Oxygenated Hydrocarbons from the VMT

Objectives: Determine the types and amount of oxygenated hydrocarbons that are released from the Ballast Water Treatment Facility at the Valdez Marine Terminal. The notable tasks to be accomplished under this project are as follows:

- Collect water samples from the VMT Ballast Water Treatment Facility following discharge of oily ballast water by tankers
- Analyze the samples to determine the chemical composition and concentration of oxygenated hydrocarbons
- Interpret and report findings of the analysis and prepare the report for publication in a peer-reviewed journal

- Produce recommendations on future research to understand the fate, transport, and toxicity of oxygenated hydrocarbons in the marine environment

Accomplishments since last report: The final report and executive summary were presented to the Board at the September meeting. SAC intends to further discuss the results with the contractor this winter.

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: Settlement plates were successfully retrieved by the contractor via vessel and floatplane charters in late September throughout Prince William Sound. Preliminary analysis took place in Cordova at the Prince William Sound Science Center. A complete analysis and draft report are expected early summer 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: High school students in Valdez and Kodiak monitored for invasive species throughout the summer. Fortunately, none were found. Intern Noah Schrof from Kodiak presented his project virtually at the Alaska Invasive Species Partnership Workshop to an audience of approximately 100 people.