COOK INLET REGIONAL CITIZENS ADVISORY COUNCIL

"The mission of the Council is to represent the citizens of Cook Inlet in promoting environmentally safe marine transportation and oil facility operations in Cook Inlet."

Board of Directors Meeting

Friday, December 4, 2020 – 9:00 a.m.

WEBEX VIRTUAL CONFERENCE

COOK INLET REGIONAL CITIZENS ADVISORY COUNCIL

BOARD of DIRECTORS MEETING

****AGENDA****

Friday, December 4, 2020

WEBEX VIRTUAL CONFERENCE

		Page
9:00 am (All times below estimated)	**Cook Inlet RCAC Board Meeting** **Call to Order/Roll Call** **Approval of Agenda** *(Action Item)* **Approval of Minutes –** August 28, 2020 Board of Directors Meeting *(Action Item)*	
	Welcome & Introductions	
	Agency Ex Officio Directors Remarks	
	CIRCAC Member or Public Comment – *(3 minute limit per speaker)*	
9:15 am	**Presentations on Related Activities** • Captain Leanne Lusk, Commander Sector Anchorage, United States Coast Guard • Jason Brune, Commissioner, AK Dept. of Environmental Conservation – Status of Regulatory Reviews	

10:15 am **Executive Committee Report** *(Information Items)*

- 2020 Statement of Financial Position & Budget – through 10/31/20
- 2021 CIRCAC Board Meeting Schedule **1**

10:30 am **Executive Director's Report**

- Draft 2021 Administration and Program Budgets *(Action Item)*
- 2019 Financial Audit/Tax *(Information Item)*

11:00 am **Staff Reports - Status of Programs & Projects** *(Information Items)*

- Public Outreach **2**
- Environmental Monitoring **3**
- Prevention, Response, Operations and Safety **19**
- Protocol Control **24**
- Administration **25**

11:20 am **Strategic Plan**

2:00 pm **Calendars & Miscellaneous** *(Information Items - all virtual)* **27**

- AK Marine Science Symposium – Jan. 26-28, 2021
- PWSRCAC Board – Jan. 28-29, 2021
- AK Forum on the Environment – Feb. 8-11, 2021

Closing Comments

2:15 pm **Adjourn**

Board of Directors
December 4, 2020

Information Agenda

AGENDA ITEM:
2021 Board Meeting and Annual Meeting Dates

DESCRIPTION OF AGENDA ITEM:

Council Policies detail the annual process and timetable for filling positions on the Board of Directors and for Public Member committee seats, as these terms expire on a three year rotating basis. The process for the elections and/or appointments of each seat involved in 2021 is undertaken by staff, working backwards on a 120 day timeline from the Annual Meeting. In addition, when in-person board meetings are held, Council staff requires the maximum amount of time to facilitate the meeting, and the logistics of location, travel, lodging and meals.

Staff has reviewed the 2021 calendar for federal holidays, religious-affiliated holidays and scheduled events for regional organizations' calendars in an attempt to avoid conflicts.

RECOMMENDED ACTION:

MARK YOUR CALENDARS!! Though at this writing all CIRCAC meetings are being held remotely via tele- and videoconferencing, this recommendation presumes the possibility of a return to normal rotational meetings. The Executive Committee has approved the following meeting schedule dates and locations (times TBA):

Friday, April 9	Kenai	Board of Directors and Annual Meeting
Friday, Sept. 10	Seldovia	Board of Directors
Thurs/Fri Dec. 2 & 3	Anchorage	Board of Directors

Public Outreach Report – Dec. 2020

Incident Response

The grounding of CISPRI Barge 141 was a focus throughout the month of October and beyond. After receiving notification of the incident on September 30th, an outreach effort began, working with Vinnie, to keep Council members apprised of the situation on a day-to-day basis.

Response to this incident went well, with good cooperation with our partners at CISPRI, ADEC and Marathon. Global health circumstances have prevented the usual slate of live drills from being conducted this year, however, our lines of communication with industry and regulators remain open and highly functional as we found during this event.

Advertising

Our outreach campaign continued through the summer and fall with an emphasis on radio advertising. We received some good feedback about the radio spots, and have ordered those continued through the end of the year, at which point we will reevaluate that campaign and look at potential adjustments in messaging and reach. Ads in both radio and print have been placed in outlets from Kodiak to Anchorage.

Newsletters

September – CIRCAC granted recertification by U.S. Coast Guard; Update about Alaska Department of Environmental Conservation regulatory Review; August council meeting summary; Review of operations during COVID-19

October – No Newsletter

November – Summary of activities in response to grounding of Barge 141; Personnel transitions in Administration (congratulations, Maddie!); Project partnerships

Scholarships

Applications will soon be open for our scholarship program, available to graduating seniors in the Cook Inlet area including a scholarship offered in partnership with Marathon Petroleum through the Alaska Vocational Technical Center (AVTEC). Moving forward, the scholarship program will be administered as a part of Public Outreach.

EMC activities – Since August 2020 EMC Meeting

Staff Report: Susan Saupe

Activities conducted since the August 28th Board Meeting are shown in Blue following Background information for each project or subject. I had to take off and on leave during six weeks of September/October to take care of my mom and move her from Kodiak to my brother's home in Bellingham and have since been frantically trying to catch up. I hope to begin moving more projects forward over the next several months, especially in preparation for what we hope is a full field season in 2021.

Chemical and Biological Monitoring Program

Subtidal/Water Quality Monitoring and GIS/Database

1. Radium isotopes as tracers in Cook Inlet

Background: In January 2020, I met with Drs. Steve Okkonen and William Burt of UAF to discuss a proposal to conduct baseline surveys of radium isotopes in Cook Inlet to assess the utility of radium to trace the flow of water and its dissolved constituents into, through, and out of Cook Inlet. An isotope ratio analysis will yield estimates of water residence time, a vital piece of information that remains unquantified in current oil spill risk analyses and environmental impact statements for Cook Inlet. Surface radium transects will be used to estimate rates of cross-shelf mixing, informing about how rapidly dissolved materials, and potentially oil, might disperse. Finally, radium isotopes are naturally enriched in produced waters, thus the study will assess the potential for using radium as a tracer of produced water discharges from BOEM lease areas based on measurements near current discharge areas in the upper Inlet.

Dr. Burt submitted the final proposal to the Coastal Marine Institute (CMI), which is a cooperative agreement between UAF and BOEM to study coastal topics associated with the development of natural resources in Alaska's outer continental shelf. Collaborators on the study include CIRCAC, the University of Hawaii, Kachemak Bay Research Reserve, and the Ocean Acidification Research Center at UAF. We were notified in June that the proposal was funded.

1. Objective 1: Construct radium, carbon and nutrient budgets for Kachemak Bay using data from a comprehensive field survey, and assess the relative importance of different land-based sources (rivers, groundwater, seafloor) as well as the marine input (from outside the bay) to regional carbon and nutrient cycles.
2. Objective 2: Estimate water residence times in Kachemak Bay using radium isotope ratios, and compare and contrast results to those from the ongoing drifter-based study.
3. Objective 3: Conduct exploratory surveys in Cook Inlet to examine the potential utility of radium-based approaches, with the primary goal of generating interest among scientists, stakeholders, and funding agencies to fully characterize this large and complex system in future studies.

CIRCAC's match towards this project will be focused on Objective 3 for a survey within Cook Inlet, focused on federal offshore waters of the lower Inlet. Specific details of this survey plan

are largely contingent on results from Kachemak Bay, but the fundamental goal is to obtain preliminary results that can generate further interest and funding to ultimately continue and expand future radium-based research. CIRCAC will collaborate on the (1) sampling within major rivers on the east side and in the upper and west side of the Inlet as well as at river mouths in soft-sediment embayment's to characterize river and groundwater end members, (2) collecting sediment grabs and suspended particle samples to approximate sediment and particle flux, (3) sampling along a transect out of the Inlet to assess surface water concentrations inside/outside the Inlet as well as offshore transport, and (4) sampling along surface transects in close proximity to a produced water discharge source (to examine a produced water signal).

November Update: Initial testing began in Kachemak Bay this summer and will continue through 2021. In 2022, an exploratory radium survey will take place in Cook Inlet, refined by information gained from the pilot study. CIRCAC's project support includes: (1) sampling within and at the mouths of major rivers to characterize river and groundwater end members, (2) collecting sediment grabs and suspended particle samples to approximate sediment and particle fluxes, (3) sampling a transect along the axis of the Inlet to assess surface water concentrations of radium isotopes inside and outside of the Inlet and evaluate offshore transport, and (4) sampling along surface transects in close proximity to a produced water discharge source to examine a produced water signal.

The UAF field team faced significant challenges for sampling this summer due to COVID restrictions in place by the University of Alaska for their research teams. The Cook Inlet (outside of Kachemak Bay) sampling portion of this project will hopefully still take place in 2022. Dr. Burt also provided a presentation of the 2020 sampling at the September webinar-meeting of the Kachemak Bay and Lower Cook Inlet Marine Ecosystem Workgroup.

2. **Hydrocarbon Oxidation Products in Cook Inlet**

Background: We will be coordinating research with Dr. Pat Tomco of UAA to more accurately assess the extent of potential petroleum-derived contaminants in Cook Inlet by including oxygenated polynuclear aromatic hydrocarbons (oxyPAHs) in a pilot sampling program in Cook Inlet. OxyPAHs are a class of oxidized molecules recently shown during studies following the Deep Water Horizon (DWH) blowout to be distributed throughout the aquatic environment; and had not been identified in prior studies. They form through physical and biological oxidation and degradation to a wide range of highly water-soluble and bioavailable compounds that are more bioavailable in the marine environment than their parent petroleum molecules.

This work is quite expensive, the applications are still being developed, and there are limited opportunities for contractual laboratory analyses, but this opportunity to collaborate will allow us to delve deeper into our analyses of potential hydrocarbon contaminants in Cook Inlet. Our research in Cook Inlet over the past 30 years has focused on parent PAH compounds and their alkylated homologues, often expanding the analyte list for collaborative studies to ensure we obtain data that can help us fingerprint hydrocarbon sources (including natural background sources). Our data and historical data from other studies focused on concentration levels of these PAHs along with aliphatic or straight-chain hydrocarbons to determine presence or absence of hydrocarbon contamination. However, based on the DWH studies, it has become clear that to accurately assess the extent of potential petroleum-derived contaminants in Cook Inlet, oxyPAHs

should be included in future analyses.

In EMC's Draft FY2021 budget, funds are included to extend the sampling area, substrates, and organisms included in the study.

November Update: Dr. Tomco submitted an additional proposal in September to the 2021 ConocoPhillips Arctic Science and Engineering Fund for additional support in developing oxy-hydrocarbon characterization techniques for sediments and mussels. He was notified in November that his proposal "*Oxidized petroleum detection in Alaska: Water, sediment, and biological tissues*" has been funded. This project will enhance the work of the Cook Inlet Oxy-PAH study and a brief description of this new proposal follows:

Oxidized petroleum detection has been identified as a priority class of chemicals that should be monitored following an oil spill, but in cold regions such as Alaska, the classification of these chemical compounds are poorly understood. This project will advance two new tools and techniques that are necessary for tracking oxidized petroleum residues that result from spilled oil in the Alaskan marine environment. The goals of this project are to 1) Concept proof a new fluorosensor design that can be used to detect oxidized petroleum residues in the water column, and 2) Characterize baseline levels of oxidized petroleum residues in water, sediment, and biological tissues in Cook Inlet. This project will involve students and leverage several future external funding requests. The project timeline is January 1- December 31 2021.

3. Cook Inlet Contaminants Database

Background: A robust CIRCAC on-line data-access tool is still a high priority and I am working with various contractors and partners to compile disparate datasets into an integrated database for query on-line. This is a complex problem given that data collected over decades will have (1) different method detection and reporting limits, (2) different site selection criteria that limit the ability to aggregate data, and (3) different studies collected data on different parameters, matrices, and analytes. Recently, BOEM announced their FY21-22 environmental studies plan that included their intent to fund a study titled "*Synthesis of Contaminants Data for Cook Inlet: Evaluation of Existing Data as "Baseline Conditions" and Recommendations for Further Monitoring."* Our work compiling our data will dovetail with their efforts and I will be looking to work with BOEM and their contractors as they move forward.

November Update: No new updates.

Kamishak Bay/Lower Cook Inlet Intertidal Habitats

1. Project Completion and Report Writing

Background: With our partners at NPS, NOAA, and UAF, we finalized data analyses and report writing and submitted our final report to BOEM for the Lower Cook Inlet Habitat Assessment Project. The citation for our report is:

> *Jones, T., S. Saupe, K. Iken, B. Konar, S. Venator, M. Lindeberg, H. Coletti, B. Pister, J. Reynolds, and K. Haven. 2019. Assessment of nearshore communities and habitats: Lower Cook Inlet Nearshore Ecosystem 2015-2018. Anchorage (AK): US Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2019-075. 221 pp.*

The report is posted by BOEM on their Alaska Environmental Studies program website and can

be downloaded at: https://www.boem.gov/sites/default/files/documents/regions/alaska-ocs-region/environment/BOEM%202019-075.pdf

Jim Pfeiffenberger of the NPS produced a video of our work in lower Cook Inlet/Kamishak Bay and NPS staff are currently working on an on-line Story Board that will include the video. The video can be viewed at: https://www.youtube.com/watch?v=cI-W5mDviM4&feature=youtu.be

Benjamin Pister of the NPS wrote a short article describing the project for the Spring/Summer 2020 Edition of the Department of Interior's NewsWave. The article is on page 34 of the newsletter at: https://www.doi.gov/sites/doi.gov/files/uploads/newswave-spring-summer2020.pdf?fbclid=IwAR3lHTQa6VMBWOas4y9I4N_WOCYh44DEqdHY1ZOUF0Ja1ckZ7FK_HmSTdYE

November Update: An update is provided later in this staff report regarding efforts to integrate the intertidal data with subtidal habitat information to develop a model for assessing region-wide subtidal habitat data.

2. Manuscripts

Background: We are in the process of identifying and outlining potential manuscripts for publication in peer-reviewed journals and have had several teleconferences among the various PIs. The first manuscript that includes data from our project was submitted by Danielle Siegert titled "*Trophic structure of rocky intertidal communities in contrasting high-latitude environments*" to a special journal of Deep Sea Research. Possible expansions of this work could be to compile a "catalogue" of isotopic signatures for a range of food web items in Cook Inlet, including areas in the middle and upper Inlet, and include organisms from additional habitats. For instance, much of upper Cook Inlet is soft sediment intertidal habitat so we would include infaunal organisms. CIRCAC's previous work with Lees, Driskell, and Payne in 2000 and 2002 showed low diversity in the upper Inlet, but a combination of filter and deposit feeders.

November update: After our internal reviews and edits, Danielle Siegert submitted the manuscript and awaits notification of whether it is accepted for publication (with or without significant revisions). I just received a form requiring me to confirm that I am an author on the manuscript and approve the submission, which is usually not required by the journal until they have accepted the manuscript, so I think it may be moving forward. Related to this project, in developing a 5-year plan for the potential funding of Cook Inlet ocean observations (described below under Physical Oceanography), I proposed a potential evaluation of the N-S gradient of sources and concentrations of water column minerals and Particulate Organic Matter (POM) and the %C, %N, $\delta^{13}C$, and $\delta^{15}N$ of POM in Cook Inlet to better understand potential impacts of changing freshwater flux into and circulation patterns within the Inlet. The project would evaluate these signatures in the context of the physical/chemical environment and tie it to nearshore biology. I included measures of nearshore and offshore POM along with the deployment of physical and chemical sensors in the Inlet.

3. Long-term monitoring at LCI Sites

Background: We are discussing potential long-term nearshore habitat monitoring based on our site assessments. We will continue to explore potential partnerships for incorporating a subset of our study sites into a long-term monitoring program such as the Gulf Watch Alaska or NPS's

SouthWest Area Network (SWAN). Our study area is immediately adjacent to new activities in the Cook Inlet OCS area, and are downstream of upper Inlet oil industry operations. The area is important spawning habitat for Kamishak Bay herring, and additional risks would be posed by activities associated with the marine operations for the Pebble Mine. There is a gap in the nearshore study component of the Gulf Watch Alaska and SWAN programs between the Shelikof portion of Katmai National Park and Kachemak Bay, so long-term intertidal monitoring sites should be established in Kamishak Bay and the west side of lower Cook Inlet.

November Update: I've had discussions with NPS about the shallow subtidal component of the nearshore environment and how to better characterize large scale subtidal habitats based on modeling adjacent intertidal data, nearshore oceanography, and nearshore bathymetry. I had hoped to participate with them on a small pilot project in late August that would include areas near our intertidal sampling sites. I was unable to participate due to a combination of COVID pre-survey quarantine restrictions and personal reasons. Their short survey to the west side of Cook Inlet was cut even shorter due to extreme weather, so they tested out some procedures in the Kachemak Bay region in preparation for field work in 2021.

Coastal Habitat Mapping Program

ShoreZone Habitat Mapping

1. NOAA ShoreZone Website

Background: The Alaska ShoreZone Program website hosted by NOAA is transiting from flash to javascript since flash is discontinuing support of their product by the end of 2020. In conjunction, the Shore Station database will also be moved to the javascript site. With our contractors at Archipelago Marine Research Inc. (ARCHI) and Coastal and Ocean Sciences, Inc. (CORI), we've been talking with NOAA's data team during this transition and are working to update the data to include the dozens (or more) of taxonomic changes that have taken place over the years. The NOAA javascript site is on-line for the aerial survey data. (https://alaskafisheries.noaa.gov/mapping/sz_js/).

November Update: Our contractors at ARCHI have been working with NOAA and CIRCAC to finalize the updates to the taxonomic classifications. These data were provided to the NOAA data team and are being incorporated into the new Shore Station database described below.

2. ShoreZone Shore Station Data and Website

Background: We have also begun a redesign of the Shore Station data and imagery so that we can migrate that information and develop a data visualization layer to be served on AOOS data portals. With our EMC funds, we are prioritizing the Alaska Peninsula, Kodiak Island, Katmai Coast, Cook Inlet, and the Outer Kenai Peninsula as datasets to serve on-line. We are seeking additional partners to expand the effort to include all shore stations from Alaska. CIRCAC developed a Scope of Work and contract with ARCHI so that they could being on Tasks 1-4 below, with Task 5 dependent on completion and approval of the results from tasks 1-4:

(1) Web-post the AK Peninsula sites to the new online NOAA Javascript ShoreZone site
(2) Update master species list in ACCESS database

(3) Assemble and check station photos
(4) Conduct a pilot project to integrate ShoreZone shore station data into Alaska Ocean Observing System data portal using Alaska Peninsula data.
(5) Expand database to include historical Gulf of Alaska shore station survey data and photographs and prepare data for serving on Alaska Ocean Observing System data portal.

November Update: I've received an invoice, phone calls, and email updates from our contractors at ARCHI and Tasks 1, 2, and 3 are well underway. Species and nomenclature data and site aerial photographs have been transferred to NOAA.

3. Alaska ShoreZone Partners:

Background: As a member of the Alaska ShoreZone Partners Steering Committee, I was contacted in spring 2020 by NOAA's SZ team about participating in updating the Alaska ShoreZone five-year plan. We planned to review it to recommend new priorities. Since then, for various reasons NOAA has decided to not revise the 5-year plan at this time. So, I have not submitted updated information for that plan. However, I did submit a proposal to NOAA for two priority items in their current 5-year plan. NOAA was unable to fund either this year. But, as described below, we will be partnering with the National Park Service (NPS) to conduct surveys for one of those priority projects – updated aerial survey and imagery of the outer Kenai Peninsula coast.

November Update: NOAA has appointed a new ShoreZone Contracting Officer's Representative (COR) to administer NOAA's Indefinite delivery/indefinite quantity (IDIQ) contract for ShoreZone services, as well as a staff member through their Habitat Conservation Division who will take on NOAA's ShoreZone project responsibilities other than the IDIQ. There have been two Alaska ShoreZone Partner's webinars with the new project team where they could meet those of us who have been funding and conducting ShoreZone projects in Alaska and we could talk about future plans. We did not have an annual ShoreZone workshop this year summer, nor is one planned for this fall.

4. ShoreZone Aerial Surveys

Background: CIRCAC conducted the first surveys of what is now the Alaska ShoreZone program in 2001 when we surveyed Cook Inlet. The following year we funded surveys along the outer Kenai Peninsula coast. In subsequent years, we either funded, wrote proposals for other agencies to fund, and/or participated in surveys that have now completed ShoreZone imaging and habitat mapping along our entire Area of Concern, including the Kodiak Island Archipelago, the Alaska Peninsula from Cape Douglas down to Mitrofania Bay (including the Shumagins, the Semidis, and Sutwik Island), and the Barren Islands. The imaging technology improved significantly since 2001 with the transition from analog to digital equipment, so we CIRCAC resurveyed Cook Inlet in 2009. The next oldest imagery is the outer Kenai Peninsula, and we included that as a priority in the ShoreZone 5-year Plan Administered by NOAA.

November Update: We had the opportunity to partner with NPS to conduct a survey along the outer Kenai Peninsula coast, planned for 2020, which we were unable to do due to COVID travel restrictions. EMC had been encumbering funds for several years in order to build up a budget capable of funding an aerial survey during a most of a low tide series. With contributions by NPS, we will be able to extend that survey significantly further along the coast during an entire

low tide series. I am working with Dr. Tahzay Jones to develop the survey plan for 2021 and CIRCAC is moving forward with our contract to CORI for a survey in partnership with NPS to conduct aerial and shore station surveys on the outer Kenai Peninsula coastline in 2021. We will also lead a limited survey of shore stations to obtain detailed species-level information. Currently, we only have the funds to conduct the aerial survey and posting of the newer high-resolution imagery. At this time, we don't plan to re-map the imagery and will wait until we have Continually Update Shoreline Product (CUSP) digital shorelines on which to map the geomorphic and biological habitat data.

5. **Shoreline Sensitivity**

Background: For a subject related to ShoreZone, I was asked to participate in a review of NOAA's Environmental Sensitivity Index (ESI) program in spring 2020. ESI data and maps provide shoreline habitat and use data to aid in oil spill planning and response. The data collected for ESI goes hand-in-hand with the imagery and data reported by ShoreZone methods and we have worked hard to integrate the two programs. With budget shifts within NOAA, there are questions regarding their ESI program's future and are working with users to identify how the data are used and how best to focus future data updates and methods of serving the data to the oil spill planning and response community. However, the meeting planned for March 10-12 in Silver Springs, MD (at NOAA Headquarters) was cancelled and rescheduled for fall 2020.

November Update: The original in-person workshop planned for last spring was rescheduled to four separate virtual meetings, the first of which was on October 28th where we reviewed NOAA's ESI mapping protocols and where several states demonstrated their state-sponsored databases that fulfill their ESI needs for oils spill planning and response. On November 10th we heard from federal agencies and tribes on their ESI perspectives. On November 18th we heard from NOAA's contractors and data managers about ESI data collections, integration, mapping, and access. A wrap-up discussion is planned for December 2nd. Following the October 28th ESI meeting, I had discussions with Scott Pegau of OSRI on ways we could potentially develop a demonstration project integrating ESI data into an AOOS data portal (i.e. the Cook Inlet Response Tool) using ShoreZone as the highest resolution shoreline segment data (with ESI categorizations). We agreed to seek additional interest in developing this project based on what we're learning from the ESI webinars and our first meeting of a small team from Alaska representing CIRCAC, PWSRCAC, OSRI, AOOS, and several agencies took place on November 13th. I will be working with Scott to develop some very first steps we can do to use the Cook Inlet Subarea as a potential demonstration project integrating ESI data with existing data portals at AOOS, using CIRT to serve a series of ESI data layers that can be integrated with all of the other information available on the portals.

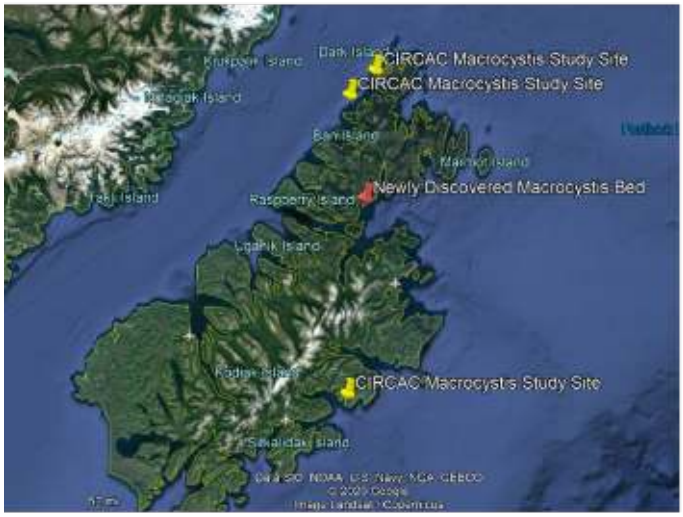
Macrocystis

1. **Macrocystis Kelp Bed Status**

Background: Since our last surveys of the Kodiak, Afognak, and Shuyak Island *Macrocystis* beds in 2006 and 2009, additional reports of *Macrocystis* kelp in the western Gulf of Alaska have been reported. One was several years ago for several plants observed on the east side of Afognak Island and a very recent observation of extensive beds in Zachary Bay near Sand Point

(https://www.leonetwork.org/en/posts/show/49EFB342-AFF4-4812-918E-4A5E57967566). This most recent sighting is a western range extension. I have talked with several researchers about collaborating to conduct a new survey in the Kodiak area and for parts of the Alaska Peninsula and work on genetic comparisons of the western Gulf of Alaska kelps compared to other areas. This kelp grows in thick beds very near shore and has implications for oil spill risk and oil retention, and is likely to respond to changes in sea surface temperature and circulation related to climate change. The map below shows our existing *Macrocystis* study sites (visited in 2006 and 2009) and the location of a new kelp bed that was recently documented on the east side of Kodiak. The images show that bed is well developed is growing right up to and within the *Nereocystis luetkeana* (bull kelp) bed.

November Update: I received a letter from a group of researchers from the University of British Columbia, University of Victoria, and the Hakai Institute soliciting participation in a new study focused on Macrocystis. They are developing a program to examine the population genetics and phylogeny of Macrocystic with the three primary goals being: (1) resolving taxonomic uncertainties and identifying cryptic species, (2) examining the genetic basis of intra-specific polymorphism, and (3) identifying local populations and patterns of gene flow and population connectivity. They want to receive specimens from as wide a range of the species' distribution as possible and our western Gulf of Alaska study sites are of particular interest since they are a western range extension for the North Pacific Ocean. Their research results could potentially be invaluable for understanding the route of spread of this kelp into the western Gulf of Alaska.



Photos by Patrick Saltonstall, Afognak Bay, Afognak Island.

2. **Macrocystis Surveys**

Background: I had hoped to meet with Kodiak-area researchers and fishermen in April while at the Kodiak Area Marine Science Symposium. This was to narrow a survey area for aerial and boat fieldwork for mapping *Macrocystis* kelp in our areas of concern. However, like many other meetings, this has been cancelled. We did not conduct any surveys in 2020 and will continue to seek information on other areas and conduct an aerial survey (hopefully) in 2021.

November Update: I have been talking with a professor at UAF who conducts dive surveys in nearshore environments throughout Alaska, with a focus on shallow subtidal invertebrates and algae. She is keenly interested in participating on our surveys as a diver, along with a graduate student(s). In 2009, she provided 3 of her graduate student divers to participate in our surveys and it was the only way we afforded the surveys financially. They participated under the UAF dive program so were covered by insurance and I will ensure CIRCAC will not be responsible for liabilities for UAF divers. I have also talked with an owner of a research vessel that I know will be heading out to the Aleutians next spring to see if we could more cost-effectively plan field work in some of the more remote kelp bed locations. We are figuring out if we could transit with the vessel from Homer to the study sites, conduct our work, and then fly home while the vessel continued on to its work in the Aleutians.

3. ***Cook Inlet Response Tool (CIRT)***

Background: Since our Cook Inlet Response Tool (CIRT) was migrated along with hundreds of other data sources to AOOS's Next Generation User Interface, we continue to provide training support and looking to update data layers. I had an invitation by ADEC to provide further CIRT and ShoreZone training for their Spill Prevention and Response division last spring, but that did not get scheduled, most likely due to COVID19. I will be in touch to potentially schedule an on-line training session but will wait until NOAA has worked out the bugs on their new JavaScript ShoreZone web site.

November Update: As mentioned above, we have been discussing the potential to integrate ESI data into the CIRT tool and had our first teleconference on November 13th. No new CIRT training workshops have been scheduled at this time.

Physical Oceanography

1. **Alaska Ocean Observing System (AOOS) Partnership**

Background: AOOS has requested input into the development of their next five-year plan. I reviewed our prior recommendations in light of accomplishments over the past five years and in late August submitted a few recommendations on their 5-year build-out plan.

November Update: I was asked to submit a proposal for a limited amount of funding for Cook Inlet ocean observing and modeling over a five-year period. This was in response to AOOS's two-tier proposal process; they are submitting two 5-year proposals to IOOS, with a "core"

proposal that will allow them to continue with their on-going projects and a higher budget proposal that would scale up the ocean observing and modeling capabilities in Alaska. In that larger proposal, they were including five years of funding to each of the RCACs. Though the funding would be significant, it would not be sufficient for the scale of some projects we would like to see conducted in Cook Inlet. To focus on tasks that would be beneficial and fundable, I talked with Dr. Amanda Kelly (UAF), Dr. Seth Danielson (UAF), Dr. Scott Pegau (OSRI), Dr. Steve Okkonen (UAF), Dr. Tahzay Jones (NPS), and Rachel Potter (UAF) about how we can best collect observational data that could help us evaluate and improve oceanographic forecast models in Cook Inlet. The plan I submitted focused on collection of higher resolution surface current measurements (e.g. with HF Radar), improved understanding of the seasonality and long-term trends of freshwater forcing and how that impacts circulation (e.g. with deployed moorings with Acoustic Doppler Current Profilers (ADCPs) and Temperature, Salinity, Pressure, Suspended Sediment sensors), as well as a better understanding of circulation in the very nearshore environment. In addition, I'm looking to better characterize the Inlet's chemistry and biology through measures of carbonate chemistry and particulate organic carbon (POM).

2. **Western Cook Inlet Nearshore Oceanography**

Background: I have been in conversation with Dr. Tahzay Jones of NPS regarding their efforts to better understand Cook Inlet circulation in the very nearshore environment, especially adjacent to Lake Clark National Park shorelines. He is working with physical oceanographers and modelers at UAF for plan for data collections this summer. Their needs overlap strongly with our needs regarding a better oil spill trajectory model for Cook Inlet so we will be coordinating with them and with NOAA (see bullets below). Their 2020 field work was initially canceled, but were finally given approval for a small targeted team to deploy an Acoustic Doppler Current Profiler (ADCP) and CTD mooring and multiple tilt meters in early September to collect data over the winter. Their goals overlap strongly with our needs regarding a better oil spill trajectory model for Cook Inlet so we will be coordinating with them and with NOAA (see bullets below). Ultimately, their work will improve our understanding of nearshore oceanography to better predict oil movement as oil moves towards shore. Their data can be used to compare observational data against both the BOEM-funded Regional Oceans Model S model and the newer NOAA model described below, and will enhance similar comparisons for the larger Cook Inlet domain. They are also interested in using some of our LCI sampling sites to develop a subtidal habitat model, based on adjacent region-wide intertidal ShoreZone habitat data and targeted dive surveys.

November update: The NPS/UAF project team was able to go over to the west side of Cook Inlet in early September and deployed tilt meters and the ADCP and CTD mooring to leave out over the winter. I was unable to participate in the project this year. Heavy weather cut their work short on the west side of the Inlet, and they moved to Kachemak Bay to test their nearshore habitat assessment protocols. We will be coordinating with them for work in 2021 (and beyond) for both the nearshore oceanographic work and the subtidal habitat assessments.

3. Cook Inlet Modeling

Background: NOAA's Cook Inlet Operational Forecast System (CIOFS) circulation and hydrographic model transitioned to operational mode in July 2019 and moved to the National Centers for Environmental Predictions (NCEP). The model will predict water levels, three-dimensional currents, temperature, and salinity based on inputs of meteorological and hydrological conditions. Its scope includes Cook Inlet and Shelikof Strait. This model can be used operationally by NOAA's Office of Restoration and Response for oil spill modeling in the event of a significant spill. But, at this time, CIOFS is not available for web-access or public use.

This summer, I was brought into the planning for a Cook Inlet forecast system strategy that was put forward by Dr. Kris Holderied of NOAA for their FY21 AK regional team plan to develop and implement a pilot trajectory tool for Cook Inlet. Currently, NOAA's Office of Response and Restoration (ORR) provides trajectories with their GNOME model (General NOAA Operational Modeling Environment) for significant oil spills. They provide trajectories for some drills (e.g. Spills of National Significance, or SONS Drills), but the tool is not streamlined for use by other organizations; a user would have to download a digital coastline, CIOFS model output, and wind forecast data (if applicable), then load the pieces into WebGNOME, set up and run the model. Although it is all available, it is not a realistic planning tool for most users.

We would like to develop a model that can be used outside of ORR and there is precedence in developing on-line oil spill trajectory tools developed by Axiom Data Sciences and housed at the Alaska Ocean Observing System. Ultimately, CIRCAC's goals is to have a desk-top accessible (preferably on-line) tool that can be used for planning purposes, risk analyses, etc… This is a priority of both EMC and PROPS; and was identified as a Council Priority in December 2019.

November update: Related to this project, in October I was contacted by Dr. Mark Johnson of UAF regarding a manuscript he had prepared titled Subtidal Circulation in Lower Cook Inlet and Kachemak Bay, Alaska. This paper relies heavily on data collections that CIRCAC had co-sponsored from surface and subsurface-drogued satellite drifting buoys. Mark's manuscript is updating our understanding of the circulation of lower Cook Inlet, since much of what we've relied on in the past is based heavily on studies conducted in the 1970s that developed surface circulation maps based on summer conditions only. My review comments focused on the risks associated with oil production and transportation to emphasize the need for his updated circulation maps.

We are working hard to ensure that we coordinate activities associated with model testing and filling data gaps. Within CIRCAC, EMC and PROPS are both committed to an accessible oil spill trajectory model for Cook Inlet oil spill planning and response (and risk assessments). The model should capture those features of Cook Inlet that significantly impact how spilled oil would move, both as a surface slick and a dispersed plume; necessitating an understanding of relatively fine-scale features such as the tide rips, seasonal broken ice formation and movement, freshwater forcing, and both baroclinic (density, or freshwater) and barotrophic (pressure, or tidal) driven currents.

Oil Fate and Effects Programs

1. Marine Oil Snow Field Studies

Background: For summer 2020, we had outlined field survey tasks for a new graduate student to extend the work by Jesse Ross that we supported in 2018 and 2019 on particle flux and marine oil snow aggregation for waters of Kachemak Bay, lower Cook Inlet, and the Albatross and Portlock banks east of Kodiak. Due to COVID travel restrictions by the Kasitsna Bay Laboratory and the University of New Hampshire, the student was unable to come to Alaska to do field sampling. I was also unable to ship him water samples for laboratory studies at UNH because of their restrictions on student access over the summer. However, we identified several tasks that could be done with the graduate student working remotely, including compiling data on areas in Alaska's marine environment where the environmental drivers for the formation of oil-related marine snow potentially exist (e.g. oil spill risk, high primary production, and link to benthic habitat).

November update: Through several webinars, our research team has identified a series of experiments that will be conducted this winter by graduate student, Quinn, to continue refining our understanding of the potential for marine snow formation and deposition in Cook Inlet conditions, even though the research will be conducted at UNH. Some of you saw the research that Jesse Ross had conducted and CIRCAC co-funded in 20018 and 2019 over at the Kasitsna Bay Laboratory. Because Quinn (the new graduate student) was unable to continue and expand the work in Kachemak Bay, his work this winter will focus on culturing a phytoplankton species common in the western Gulf of Alaska, creating marine snow using roller tables modified for larger volumes, and conducting settling experiments using a flume tank at UNH where he can measure particle aggregation, settling rates, and resuspension by varying the currents in the flume tank.

Through the efforts to identify research priorities for Quinn, I was put in contact with a newly hired researcher at UNH who specializes in satellite imagery and who is very interested in fine-tuning how we can interpret satellite imagery in coastal Alaska to differentiate between chlorophyll and suspended sediments. Currently, due to how the satellite sensors interpret the data, areas with high suspended sediments are characterized as having high chlorphyll (or fluorescence). Thus, especially in Cook Inlet, it is important to correlate satellite imagery with in situ measurements. I am providing him with in situ chlorophyll-a, fluorescence, and suspended particulate data from any of CIRCAC's historical data collections, focused on our EMAP and ICIEMAP data. Also, identifying other sources of data that he might find useful.

2. Marine Oil Snow Manuscripts

Background/August Staff Report: I was asked to join a team of authors working on a paper about Marine Oil Snow (MOS) and Marine Oil Snow Sedimentation and Flocculent Accumulation (MOSSFA) that would be geared towards policy. The rest of the team are MOS/MOSSFA research scientists, most focused on the Gulf of Mexico. When they sent me the draft, it was a great summary of the research, it seemed to be completely missing the policy part and focused too much on the Gulf of Mexico, leaving out any discussion on Arctic oil spills and associated risks for MOS or MOSSFA. I added several sections to the paper, including more

background on other types of oil-particle aggregates and discussions on shallow water production (benthic-pelagic coupling) and Arctic conditions. I also developed a decision-tree and supporting information that would help emergency responders and planners evaluate the potential for MOS/MOSSFA to reach the benthic environment when looking at habitats at risk.

November Update: Our manuscript "*Integrating marine oil snow sedimentation and flocculent accumulation (MOSSFA) events into oil spill response and damage assessmen*t" that was submitted to the Marine Pollution Bulletin was accepted for publication, pending our addressing peer-review comments. Other than some recommendations for clarifications and manuscript "clean-up," it was exciting to see the enthusiasm and overall views of the individual reviewers:

> *"The authors present a paper that analyzes and assimilates relevant studies related to oil spills and their potential complex interactions with naturally occurring marine snow processes. They then propose a forecasting spill decision tool for potential use by spill contingency planners and responders. The article is a good synthesis of much of the research conducted regarding MOSSFA events and presents a novel planning paradigm that could be adopted by spill emergency practitioners. The MOSSFA subject continues to be a popular research subject and the authors effectively ground their assertions and argument construction around some of the latest research and thinking on the subject. The paper appears to be appropriate for the Viewpoint article type in Marine Pollution Bulletin and it is recommended for publication with one round of revision."*
>
> *"This is a well-researched and well-written viewpoint article that provides a comprehensive review of the science related to MOSSFA, interpretation of the body of research in this area in an operational spill response framework, and translation of the science into consumable products and tools for decision makers. I am pleased to see an article that focuses on operationalizing research on a complex topic that is relevant to oil spill response and damage assessment. I recommend it for publication."*
>
> *"This is a very nice viewpoint article -- it clearly lays out the issues, provides helpful guidelines, and includes exhaustive references. It should serve as a very useful resource for oil spill responders and planners."*
>
> *"Very provocative paper in an area both needing more research and yet needing inclusion into oil spill strategies…"*

In addition to the manuscript discussed above, Jesse Ross has been organizing a manuscript that focuses on our Cook Inlet and Kodiak particle flux data. That paper is tentatively titled "*Characterization of particle sedimentation in a subarctic estuary: A sediment trap study over two productivity seasons*." We all provided our latest edits and comments and it has been submitted to Marine Pollution Bulleting for review.

Technical Review Program

1. Cook Inlet General APDES Permit

Background: We are still awaiting ADEC's final decision regarding the Cook Inlet general oil and gas discharge permit and I will update you when the final permit is announced. As you

know, in 2019, ADEC opened the draft Alaska Pollutant Discharge Elimination System (APDES) **General Permit** to Discharge to Waters of the United States - Oil and Gas Exploration, Development and Production in State Waters in Cook Inlet. We reviewed the permit and associated fact sheet, mixing zone model results, and other associated documents. The Permit would replace the expired 2007 general permit AKG315000 for discharges to state waters. The draft Permit also included mixing zones for discharges from a previously zero-discharge platform. I contacted Gerry Brown of ADEC in August to get an update on their plans for issuance of this permit and was told they planned to release it in fall 2020.

November update: ADEC has not yet released their final permit.

2. **Cook Inlet Energy/Osprey Platform Individual Permit (IP)**

Background: We are also awaiting a decision by ADEC regarding an Individual Permit that we reviewed in 2019. As a reminder: On April 24th, ADEC announced that they had prepared an Alaska Pollutant Discharge Elimination System (APDES) Draft Permit AK0053309 available for a 30-day public review. This was a proposed **Individual Permit (IP)** for Cook Inlet Energy, LLC, Osprey Platform. This platform was originally developed as a zero-discharge platform for produced water and has been operating as such since its inception. The General Permit (GP) above also included produced water discharges from the Osprey Platform in the proposed permit, so Cook Inlet Energy likely applied for an IP in case the GP was challenged in court. Comments were originally due on May 27th, just 5 days after the comments on the GP were due. They extended that deadline after receiving numerous requests from CIRCAC and others, though by only 5 days. The review period ended May 31st and CIRCAC comments were presented to the Protocol Committee for review, revision, and approval. I contacted Gerry Brown of ADEC in August to get an update on their plans for issuance of this permit and was told they planned to release the permit in fall 2020.

November update: ADEC has not yet released the final permit.

Background: Through the Protocol Committee, we submitted review comments on NOAA's 2019 proposed rule to authorize the take of marine mammals incidental to oil and gas activities in Cook Inlet, over the course of five years (2019-2024) by Hilcorp Alaska LLC. The proposed rule activities included 2D seismic nearshore surveys between Anchor Point and Kasilof, 3-D seismic surveys offshore in their OCS lease blocs, geohazard surveys in the lower and middle Inlet, exploratory wells in the lower and middle Inlet, exploration and development on the Iniskin Peninsula, Trading Bay and North Cook Inlet Unit well abandonment activities, and Drift River terminal de-commissioning. One of our main concerns was that NOAA did not require even Passive Acoustic Monitoring devices in Cook Inlet during the planned fall 2019 seismic surveys. Even though these data collections were not required by NMFS of Hilcorp, a group of scientists scavenged funding and partners to deploy sensors in the Inlet. We helped in the planning and provided some logistical support for deploying the sensors and collecting zooplankton samples. At a future meeting, we will request a presentation on the results of these October/November 2019 data collections.

One of the Principal Investigators, Manuel Castellote - NOAA Affiliate, said he will be conducting work in Cook Inlet on beluga whales starting a large project in Cook Inlet in partnership with ADF&G. He got $1.1M from NOAA for a 3 year project involving many

mooring deployments and beluga tagging as a continuation of a previous project started in 2017. The focus will be to gain a better understanding of whether noise is an issue for belugas, and to learn more about their winter foraging grounds.

November update: BOEM published a *Notice of Intent to Prepare an Environmental Impact Statement (EIS)* relating to a proposed 2021 oil and gas lease sale in the federal submerged lands under Cook Inlet, off Alaska's southcentral coast. The purpose of the EIS will be to analyze the environmental effects of the potential June 2021 lease sale. The EIS will analyze the potential effects of leasing, exploration, development and production of oil and natural gas in the proposed lease sale area. They conducted scoping virtual scoping meetings, one of which I attended, with the purpose of soliciting public input on the scope of the proposed 2021 Cook Inlet Lease Sale 258 EIS, significant issues, reasonable alternatives and potential mitigation measures. BOEM will consider this input when preparing the EIS. Though we did not submit comments under the public scoping, we will be ready to thoroughly review and comment on the draft EIS when it is prepared.

Additional Activities

OSRI Board: At the OSRI annual workplan meeting, we developed a one-year research plan and budget for approval by the full board (I am an At-large Board Member, representing coastal communities impacted by EVOS). The proposed workplan was adopted at our October 20th OSRI Advisory Board meeting. In addition to the standard operating and staff costs, the workplan includes the following projects (many of which overlap with CIRCAC interests):

- Identify needs associated with food security associated with oil spills ($75K)
- Evaluate impacts of oil on Arctic cod ($65K)
- Fund partnership with the North Pacific Research Board (NPRB) for proposals that overlap with OSRI's research plan ($100K)
- Collaborate with the Canadian Multi Partner Research Initiative ($100K) to examine non-traditional oil spill response.
- Partner with ExxonMobil and the Bureau of Safety and Environmental Enforcement (BSEE) to develop new tools that combine the application of herders with an ignitor system, and to develop tools appropriate for use with unmanned aircraft ($100K)
- Support Graduate Research Fellowships (Up to 3 x $30K each): These include two continuing fellowships and the plan to advertise for one additional student:
    - Continuing fellowship: Direct visualization of crude oil droplet colonization by oil-degrading bacteria
    - Continuing fellowship: Subtidal habitat mapping in the Cook Inlet lease area for current and predictive sea otter associations with habitat.
    - K-12 Programs: ($60K) to support the Prince William Sound Science Center's Headwaters to Ocean program
    - Workshops and Conferences ($20K) to support the Alaska Marine Science Symposium (AMSS), the Alaska Forum on the Environment (AFE), and workshops of opportunity.

Alaska Research Consortium (ARC): I've participated in two ARC Board meetings since August, focusing on coordinating efforts with the University of Alaska and seeking allocation from the TVEP fund. We collectively drafted and submitted a letter to the University's Interim President, Chancelor, and newly appointed Provost describing the work of ARC and our vision for coordinating our efforts under the Alaska Sea Grant Program and the use of TVEP funds. I joined the ARC board in 2018 to provide the perspective of marine research in the Kodiak region towards their mission of "Supporting sustainable fisheries and marine science in the north Pacific." Kodiak has become a center of mariculture, with a focus on ribbon kelp, *Alaria marginata*, and sugar kelp, *Saccharina latissima.* One of the concerns that has been raised by the farmers is contaminants (discussions also included concerns about commercial fish species) and there may be opportunities to leverage our efforts to collect background contaminants data with efforts to collect data for these other concerns.

BOEM Annual Studies Plan: The Bureau of Ocean Energy Management (BOEM) is seeking input for the development of the FY2022 BOEM Alaska Annual Studies Plan by December 4th. If they like a study plan idea, it does not in any way ensure that the submitter would be the one to conduct the research. They typically go out to bid or enter an inter-agency agreement. However, we have been able to successfully see study plans that we submitted move forward and have been able to partner in the research for multiple projects in the past (e.g. Alaska Peninsula ShoreZone, our lower Cook Inlet Nearshore Habitat Studies, Hydrocarbon Database). I will be submitting multiple study plan ideas, individually and in coordination with others, that apply to many of the programs in CIRCAC's Strategic Plan and EMC's Workplan.

Other:

- Over the past two months, I've written several proposal support letters and completed several on-line evaluations and letters of recommendation for prior contractors, graduate students, and even a past EMC member.
- I've been trying to look at the silver lining of not being able to conduct field work this year by trying to re-organize and inventory sampling gear and our field electronics and cameras…including identifying what needs to be updated or replaced and what accessories need to be replaced.
- I worked with the rest of CIRCAC staff to develop information for your December 2020 Strategic Plan session.

PROPS Staff Report

Ice Monitoring Cameras

Staff has been working with our IT contractor to facilitate the replacement of the Ice Monitoring Network camera located at the Port of Alaska. The current camera has been experiencing problems for some time, requiring its replacement.

The replacement camera will be one of the Sidewinder cameras purchased last year. The Sidewinder camera is a 1080p high definition, 30 power optical zoom with an additional 12 power digital zoom capable of 360 degree pan tilt rotation on each axis, with 64 preset positions, including title generation.

An additional advantage of the Sidewinder camera is that it does not require a proprietary operating system, which also lends itself to easier maintenance and troubleshooting by our IT contractor.

We have been working to replace each of the older style cameras initially installed to create the camera network. Upon completion of the replacement installation at the Port of Alaska, we will move to replace the camera located at the ferry terminal at Port Mackenzie. From there we will seek to replace the cameras at the Off Shore Systems Kenai (OSK) facility in Nikiski. Finally, we are planning the replacement of the camera at the Arctic Slope Regional Corporation (ASRC) facility also located in Nikiski.

Staff received notification form Glacier/Cook Inlet Energy (CIE) that they have shut in all facilities in the Cook Inlet operating area. That would include the Osprey platform, which would no longer have power generation capability and that navigation lights would be operating on batteries. That will mean there is no longer a power source for the ice monitoring camera located on that platform. Staff is working with Glacier/ CIE to remove our camera and associated equipment. Staff has begun the process of evaluating and negotiating for a new site elsewhere in the Cook Inlet.

Staff has also been in discussion with the U.S. Coast Guard to provide access to the ice monitoring camera system. The new Sector Commander, Captain Lusk has expressed interest in using it to enhance Coast Guard situational awareness. Likewise, since we have been upgrading the overall system we are now in a position to allow access to the system for use by the South West Alaska Pilots Association SWAPA, the marine pilot association that provides pilotage for all commercial vessels entering Cook Inlet.

Geographic Response Strategies (GRS)

As the Committee is aware, staff has been working to develop stream crossing GRSs' along the truck route from the BlueCrest Operating Alaska's Cosmopolitan facility in Ninilchik, 24 sites in all. We will be developing each GRS in the format used in the ADEC GRS catalog. Each anadromous stream that crosses the truck route has been surveyed to determine its viability for a response strategy and deployment. The survey team consisted of a CISPRI spill response

technician and two project contract personnel with equivalent spill response and GRS development experience along with CIRCAC staff.

Project contractors will use all available materials to ensure complete response strategies will be included for a summer and winter response at each site. The collected data will be placed in the format used in the ADEC GRS Catalog and in a format that will allow use in the State's GIS program. Upon completion, the data will be submitted to the Arctic and Western Alaska Area Plan GRS workgroup for review and final approval to be place into the ADEC GRS Catalog for access and use by area responders.

Vessel Traffic Study

Staff is working to conduct a vessel traffic study for the Cook Inlet. This study will bring forward the factors and principles established in the 2015 Cook Inlet Risk Assessment. Some factors that may impact vessel activity are, port expansion projects, changes in imports and exports, potential gas line projects, resource extraction activities, variances in crude oil and refined product movements, and fluctuations in population and economic growth.

The study will use data collected from 2011 through 2020. While the focus of the study will be crude oil carrying tank vessels, other vessel traffic will be included as any incident involving a crude oil carrier has the potential to affect all vessel traffic in Cook Inlet. Likewise, an incident involving another vessel of 300 gross tons or more has the potential to affect crude carrying tank vessel operations.

The study will use Automatic Information System (AIS) data purchased from the Marine Exchange of Alaska (MXAK) for 2011-2020. This data will be comprised of vessels 300 gross tons and larger throughout the areas most commonly used by tank vessels.

Barge 141 grounding

The Cook Inlet Spill Prevention and Response Inc. (CISPRI) barge (*Barge 141*) had been reported to have run aground in the early morning hours of September 30th, approximately one-half mile south of the Offshore Systems Kenai (OSK) dock in Nikiski.

CISPRI reported the grounding and associated fuel spill to the Alaska Department of Environmental Conservation and the U.S. Coast Guard shortly after its discovery. High winds and rough seas had pulled the vessel from its moorings allowing the vessel to drift aground. The stern of the barge came to rest on a partially buried abandoned large engine block causing damage to the barge's hull at the stern of the vessel. Approximately 10 gallons of diesel fuel was reported to have been discharged as a result of the grounding; the source was suspected to be residual fuel from on board piping. Responders were able to recover that fuel using sorbent materials.

The response barge is a key component for spill response throughout Cook Inlet, with an on water storage capacity of nearly 60,000 barrels. Along with the barges' on water storage capacity, it also acts in conjunction with a tow vessel as a response platform that various collection apparatus such as skimmers, current busters (a form of a skimmer), collection boom, and fire boom can be deployed from.

CISPRI worked with the Coast Guard and the Alaska Department of Environmental Conservation (ADEC) to determine the scope of the damage and how response coverage would be maintained.

The U.S. Coast Guard Marine Safety Detachment (MSD) Homer responders were in communications with the 17th Coast Guard District Salvage Emergency Response Team (SERT) to help determine the vessel's seaworthiness prior to refloating. The Coast Guard issued a Notice of Federal Interest (NOFI) letter to CISPRI regarding the grounded vessel. They also approved the dispatch of at least one additional vessel, the tug Bob Franco from Homer, to assist in refloating the CISPRI barge.

With the assistance of a high tide, the Tug Bob Franco successfully towed the *Barge 141* from the beach where it had grounded.

The Coast Guard approved the barge to be towed to the Seward shipyard for repairs, weather and sea state permitting. However, due to weather and a temporary response plan, the tug and barge went as far as Homer to await a break in the weather.

On the evening of Wednesday September 30th, as required by regulation, CISPRI submitted a letter of mitigation to the Alaska Department of Environmental Conservation (ADEC), for consideration and approval with their proposal for mitigating the removal of this response asset from service until repairs can be completed.

After careful review, the ADEC denied the plan and required CISPRI to resubmit the mitigation plan to better ensure response capabilities in Cook Inlet. CISPRI and Marathon, working together, came up with a mitigation plan that satisfied ADEC's requirements while allowing shipping to continue without loss of response capability. That plan included the inspection of the *Barge 141* to ensure its seaworthiness and ability to hold cargo for a short time before departing Cook Inlet for repairs.

The new plan required the *Barge 141* to be inspected by the Coast Guard or the American Bureau of Shipping (ABS) for seaworthiness while at anchor in Kachemak Bay. Marathon would then allow their regularly scheduled tanker to enter Cook Inlet and offload its cargo. Upon offloading, the tanker would then sail to Kachemak Bay and relieve the *Barge 141* of its response duties and remain at anchor until the next tanker (scheduled to arrive Oct 7th) arrived and offloaded its cargo. The second tanker would then relieve the tanker anchored in Kachemak Bay and will remain there with the duties of on water storage for recovered oil, should there be an incident. The empty tanker will remain at anchor until a replacement barge can be brought to Cook Inlet.

In the meantime, CIPSRI management is seeking to contract with a comparable barge to serve as a temporary replacement for the empty tanker (and *Barge 141).* The *Barge 141* departed Cook Inlet and was towed safely to the Seward shipyards where it has been evaluated and repairs begun. Currently the barge remains at the Seward shipyard were crews are working around the clock to complete repairs to the various damaged parts of the barge. Most of the damaged parts have been cropped out and/or refitted and in some instances repairs were completed. CIPSRI has reported they anticipate repairs complete by November 6th.

On November 11, CISPRI reported that on Nov. 6th the *Barge 141* had returned to service and was currently docked in Homer and was continuing to clean up after repairs, was reloading response equipment, and awaiting a U.S. Coast Guard inspection for a Certificate of Inspection (COI) document, scheduled for November 13th. Upon completion, the barge will be placed back into full service, ready for spill response.

PROPS Open Seat

In June of this year, Public Member Mr. Steve Lufkin, stepped down from the PROPS committee leaving that seat vacant. In accordance with council policy, that seat is allowed to remain vacant until the next term cycle to solicit public members for committee participation. The next public seat term cycle will begin in April. CIRCAC Administration staff will begin reaching out in January to the public members whose seat will be expiring. Staff will advertise for the vacant PROPS seat in time to fill that seat in the same term cycle as occupied by Mr. Lufkin, in order to maintain the public seat term rotation.

Cook Inlet Pre-winter Meeting

Staff attended the Cook Inlet Pre-Winter meeting hosted by Marathon Petroleum (virtually) this November. This year's attendance was impressive given Covid-10 protocols attesting to the importance of this meeting realized by the maritime community operating in Cook Inlet. Each year, just prior to winter conditions the maritime community comes together to discuss Cook Inlet marine operations in winter conditions, the operational issues discovered and resolved from last year, new and recently realized issues relevant to the area's operators that may present this winter season. Additionally each operator presents an operational update for their operations within Cook Inlet and if pertinent out-of-area operations.

Staff presented information about the Ice Monitoring Network and presented access to the network to the South West Alaska Pilots Association (SWAPA) for use by marine pilots as they transit large vessels (300 gross tons and above) to ports within Cook Inlet. Marathon announced they would be hosting a camera at their LNG facility as we now work through the details of that cameras installation.

Drills

Glacier/Cook Inlet Energy (CIE)

Staff attended a virtual drill exercise hosted by Glacier/CIE. Glacier/CIE made the decision to conduct the drill exercise regardless of having shut in Cook Inlet Operations. This exercise was the first drill exercise to be conducted since the Statewide COVID-19 protocols had been put in place. The exercise went well considering the new video/teleconference format. IMT members met via video teleconference from various locations. Some difficulties were recognized but were quickly overcome. The incident command successfully completed the goals identified and drill documentation was completed as each incident command system staff meeting was conducted to manage and direct the drill's response efforts.

Hilcorp

Staff had begun working with Hilcorp late in 2019 on planning the 2020 spring drill exercise. The drill was scheduled to take place in May of 2020. However, the Covid-19 pandemic began before the drill exercise could be conducted. Hilcorp elected to postpone the exercise in hopes the pandemic protocols would be eased enough to proceed. However, the protocols had not been lifted by September, when Hilcorp decided to proceed with a virtual exercise series. As part of CIRCAC's contribution to Hilcorp's drill plan the GRID program was to be exercised during the drill exercise to expose industry personnel to the program and to exercise the program as a way to ground-truth previous adjustments and repairs revealed at the previous real world test (Marathon 2019 drill exercise).

Hilcorp's virtual drill series began in October of 2020. The virtual drill exercise began with the preliminary portions of the drill process to initiate and manage a pipeline failure at the Swanson River facility. This was Hilcorp's first experience with the virtual drill process. Some of the same difficulties experienced at the Glacier drill exercise also had an effect on this exercise. However, just as during the Glacier exercise, Hilcorp's Incident Management Team (IMT) also overcame them. This first portion of the drill exercise set out the preliminary requirements to manage a spill response. The next virtual drill in the series will address response actions followed by resource management. It will be during the resource management portion of the drill that GRID will be exercised. Hilcorp has committed to a GRID training period prior to the drill to prepare the IMT members tasked with using the GRID program. If the Covid protocols are lifted prior to any of the future drill series dates, that drill portion will be conducted live in person at the Hilcorp alternate Command Post located at the Hilcorp gas field control center.

Protocol Control Committee

Since the last Council meeting the Protocol Control Committee has reviewed, approved, and submitted comments for the following Oil Discharge Prevention and Contingency Plans and information collection requests. Additionally, the Committee reviewed and approved to forward the proposed 2021 Protocol Control Committee budget for Council approval:

Comments regarding the Harvest Alaska, LLC, Oil Discharge Prevention and Contingency Plan. Our comments sought to enhance the plan's clarity and utility by identifying areas that need adjustment to make the plan more cohesive.

This plan revision included the addition of the Swanson River Oil Pipeline (SWOPL) and, as outlined in correspondence to us from ADEC, a reduction in the Response Planning Standard (RPS) due to an increase in accuracy of the topographic mapping due to the new federal USGS Digital Elevation Mode Mapping effort and changes in production flow rates.

Comments in response to the Bureau of Safety and Environmental Enforcement (BSEE) information collection request regarding Oil-Spill Response Requirements for Facilities Located Seaward of the Coastline. Our comments supported the collection and review of information to verify compliance with regulatory requirements that should be considered a cornerstone for a solid regulatory foundation.

Comments in response to the Bureau of Safety and Environmental Enforcement, information collection request regarding Pipelines and Pipeline Rights-of-Way. Our comments supported the collection of any and all information BSEE requires to ensure that operators under its jurisdiction fully comply with all relevant sections of 30 CFR 250; noting the safe operation of pipelines in Cook Inlet, in particular subsea pipelines, is of great interest to CIRCAC. Going on to state that the effective oversight of pipeline rights of way (ROW) and operation requires access to information as described in the Federal Register notice. Importantly, this includes access to the information necessary for ensuring that both BSEE and the Department of Transportation have a clear and consistent understanding of their respective oversight responsibilities.

Comments in response to a Request For Additional Information (RFAI) regarding the Tesoro Kenai Pipeline Company Oil Discharge Prevention and Contingency Plan. Our comments acknowledged that overall, this is a comprehensive plan and should provide good guidance and information in the event of an incident and planned exercises. Our comments went on to provide several suggested changes to further enhance the overall quality and usefulness of the plan by identifying areas for improvement and recommendations for clarification throughout the plan’s sections.

Administration Report
Cook Inlet RCAC Board of Directors Meeting – December 2020

Below you will find a brief update on the primary administrative tasks performed – or assistance provided – by CIRCAC Administrative staff since the August 2020 Board of Directors meeting:

CIRCAC Office – World headquarters remains closed to the public, with no more than one staffer in at a time. Staff has a coordinated schedule for all but essential tasks to minimize physical interactions. Christmas Cacti are blooming!

Board Elections/Appointments – Staff has begun the 2021 CIRCAC Election and Appointment process. Official activities – including initial notification of affected incumbents and the stakeholder groups they represent – begin immediately after this board meeting. Seats with terms expiring in 2021 are: Aquaculture Associations, the Commercial Fishing Group, and the Cities of Kenai, Homer and Kodiak.

Public Members – The process for filling the seats on the Environmental Monitoring Committee and Prevention, Response, Operations and Safety Committee will begin in January. Both committees have been advised.

Recertification – Thank you letters have been sent to all of the organizations and individuals supporting our recertification efforts. Notifications were sent out via our newsletter, website and submittals to organizations' newsletters.

Financial Audit – The field audit was scheduled to start the week of May 13, but was not undertaken until June 17. Auditors defined the 'unallocated funds' amount, and steps have been taken by the Director to distribute specific amounts to address needs in administration and program budgets. Committees have reviewed and re-allocated those available funds (see staff reports). Auditors submitted their findings and recommendations to a combined meeting of the Executive and Audit Committees on Nov. 3. The findings were reviewed and accepted, as was the Council's tax return, which was approved for submittal.

Scholarships – Both checks have been submitted to the appropriate schools for the 2020/21 school terms. Preliminary work began in November to update our records on schools, counselors and instructors throughout our target area, and to revise the application, guidelines and promotion materials were updated as well. Notifications to schools will officially launch in mid-January, although some outreach has begun. CIRCAC has submitted its check to AVTEC for our share of the $2,500 Maritime Trades scholarship they offer; now in our 2nd year of partnering with Marathon Petroleum Maritime.

Accounts Payable – Staff continues to implement the largely on-line process for payables. We have maintained a review and written approval procedure of all accounts - by the Executive Director, staff and Officers.

Grants – Staff closed out and invoiced all 3 of the active grants we had on our books. These were: the Pipeline and Hazardous Materials Safety Administration (PHMSA) grant under the PROPS Committee; the Ice Camera grant with the State of Alaska under the PROPS Committee; and our National Park Service (NPS) grant under the EMC.

Budgets – Development of the 2021 draft operating and program budgets began mid-June. The Executive Committee has reviewed them in draft form on October 16, approved the distribution of unallocated funds, and committees have met to recommend adoption of program budgets.

Insurance and Employee Benefits – CIRCAC's corporate insurance policies have renewed. In addition, staff facilitated the open enrollment period for employees' health and life coverage and Simple IRAs.

Organizational Support – Administrative staff participates with the Cook Inlet Harbor Safety Committee and Kenai Peninsula Borough Local Emergency Planning Committee (LEPC) as an Alternate Member (supporting Vinnie Catalano's primary role on both).

Staff Training – A training program of administrative tasks has largely concluded. A new Administrative Assistant will be hired and trained when our ability to do so is possible.

Support – Staff has worked to make virtual meetings by teleconference, videoconference, and webinar both effective and comfortable for participants, experimenting with different platforms.

December 2020

December 2020

Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
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27	28	29	30	31		

January 2021

Su	Mo	Tu	We	Th	Fr	Sa
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17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Nov 29	30	Dec 1	2	3	4 9:00 Board Meeting - videoconference 8:00am Payday	5
6	7	8 Election Notifications	9	10	11	12
13	14	15	16	17	18 8:00am Payday	19
20	21	22	23	24 Christmas - Office Closed	25 Bank Closed	26
27	28	29	30	31 New Years - Office Closed	Jan 1, 21	2

January 2021

January 2021

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
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February 2021

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28						

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Dec 27	28	29	30	31	Jan 1, 21 New Years - Office Close 8:00am Payday	2
3	4	5	6	7	8 Public Member Notifications	9
10	11 Scholarship Notifications	12	13	14	15 8:00am Payday	16
17	18 Martin Luther King Day - Office Closed	19	20	21	22	23
24	25	26 AK Marine Science Symposium - Virtual Event	27	28 PWSRCAC Board Meeting	29 8:00am Payday	30
31	Feb 1	2	3	4	5	6

February 2021

February 2021

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
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14	15	16	17	18	19	20
21	22	23	24	25	26	27
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March 2021

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21	22	23	24	25	26	27
28	29	30	31			

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Jan 31	Feb 1	2	3	4	5	6
7	8	9	10	11	12 8:00am Payday	13
	Alaska Forum on the Environment - Virtual					
14	15 Presidents' Day - Office Closed	16	17	18	19	20
21	22	23	24	25	26 8:00am Payday	27
28	Mar 1	2	3	4	5	6