OLYMPIC COAST
NATIONAL MARINE SANCTUARY
Meeting Notes

OCNMS Advisory Council Meeting
November 8, 2019

Fairfield Inn & Suites by Marriott
Illahee Room, 239 4th St.
Bremerton, WA 98337

Olympic Coast National Marine Sanctuary
NOAA, Office of National Marine Sanctuaries
115 E. Railroad Avenue, Suite 301
Port Angeles, WA 98362-2925

Reviewed by OCNMS Superintendent:

Carol Bernthal

Carol Bernthal, Superintendent

Approved by AC Chair:

Lee M. Whitford

Lee Whitford, Chair

Advisory Council (AC) Members/Alternates in Attendance: Lee Whitford (Chair and Education), Steve Joner (Makah Tribe), Dann May (Education), Steve Shively (Tourism and Economic Development), Stephanie Sleeman and Cindi Kunz (U.S. Navy), Tami Pokorny (Marine Resource Committee), Dan Ayres (Washington Department of Fish and Wildlife), LDCR Keola Velasco (U.S. Coast Guard), Rich Osborne (Conservation), Katie Krueger (Citizen at Large), Jan Newton (Research), Joel Kawahara (Fishing), Josh Peters (Washington Department of Natural Resources), Scott Hecht (National Marine Fisheries Service), Dan Nutt (Marine Industry) and John Veentjer (Secretary and Marine Industry), and Teressa Pucylowski (Washington Department of Ecology).

Presenters and Others in Attendance: Christopher Murray, Chase Williams, Phyllis Bernard-May, Genevra Herker-Klines, and Dawn Grebner.

NOAA/OCNMS Staff in Attendance: William Douros (West Coast region Office of National Marine Sanctuaries), Julie Ann Koehlinger (Washington SeaGrant Fellow), Kevin Grant, George Galasso, Jenny Waddell, and Chris Butler-Minor (NOAA/Olympic Coast National Marine Sanctuary).

The meeting was opened by Lee Whitford. Attendees were welcomed by Stephanie Sleeman. She described the many naval operations within the Kitsap region, which constitutes the third largest concentration area of the Pacific Fleet and highlighted the significant economic benefit to the region. Operations in this area aimed to balance Title 10 responsibilities with environmental stewardship. Lee also shared that Carol Bernthal, OCNMS superintendent is on detail at Cordell Bank national Marine sanctuary until January 2020. Kevin Grant is acting superintendent for the duration.

Internal Affairs

- The draft agenda was revised for a presentation title change, then adopted by consensus https://olympiccoast.noaa.gov/media/docs/20190927-sac-agenda.pdf.
- Notes from the May and July meetings were approved. A motion by John venture and second by Scott Hecht led to the approval of the May meeting notes. https://olympiccoast.noaa.gov/media/docs/20190517-meeting-notes-final.pdf. A motion by Dan Ayres and second by John venture led to the approval of the July notes. https://olympiccoast.noaa.gov/media/docs/20190619-meeting-notes-final.pdf.

- Recommendations for two Advisory Council seats were approved by headquarters of the Office of National Marine Sanctuaries for approval: Mark Gleason as the Fishing alternate and Dr. Kevin Decker as the Tourism and Economic Development alternate. We welcome our two new members to the Council.
- Feedback on the Advisory Council's Ocean Acidification Sentinel site (OASeS) resolution from John Armor included a recognition of the effort by the working group and advisory committee in pioneering an expansion of the sentinel site model for the office of national Marine sanctuaries. While John Armor is disposed to support the resolution, some

administrative details need to be worked out. Additional information is expected by the next advisory Council meeting on the 8th of November.

Information, Discussion, and Action Items

Office of National Marine Sanctuaries West Coast Regional issues and updates

Bill Douros, director of the West Coast Region (WCR) offices spoke to the Council during his annual visit to OCNMS. He described the assignment that Carol Bernthal is fulfilling and thanked Kevin Grant for stepping up as acting superintendent. He also discussed 2020 priorities in the West Coast region and for headquarters. Multiple site efforts call for coordination to lead to management efficiencies. Over the last decade, the WCR has held leadership team meetings to identify regional priorities. Cross-cut teams helps to identify replicate interests at each of the sites. For 2020, five topics were identified as regional priorities: 1) whale ship strikes and entanglements, 2) deep-sea coral and benthic habitat protection, 3) improved enforcement outcomes, 4) narrowing down needs small boat program, and 5) soundscape management. Additional discussions included the proposal for a Chumash heritage national marine sanctuary, building better relationships with Pacific Fisheries Management Council, enhancing visitor centers, and advisory council visits.

Northwest Association of Networked Ocean Observing Systems (NANOOS) and Washington Ocean Acidification Center - program overviews and a glimpse into the current Marine heat wave

https://nmsolympiccoast.blob.core.windows.net/olympiccoast-prod/media/docs/20190927-nanoos-woac-mhw.pdf

Jan Newton spoke on three topics: Northwest Association of Networked Ocean Observing Systems (NANOOS), Washington Ocean Acidification Center (WAOC), and a marine heatwave (MHW) in the northeast Pacific Ocean.

She presented NANOOS' nine objectives for fiscal year 2019 which focused on maintenance of the organization, its outreach efforts, and its assets, observation capabilities, while providing products and services for stakeholders. Planed services included collection surface currents measurements and filling the navigation gaps along the outer coastline of Washington state via three high frequency radar (HFR). Permits have been submitted for installing systems near Westport and Kalaloch. In 2019, aka "year of the glider" with a focus on funding operations and maintenance for the Columbia glider as well as plans for new glide products and governance. Gliders are supporting the reality of near real-time tracking of hypoxia events along the La Push transit. Partnerships with the Northwest Fisheries Science Centers underwater robot (ESP) allows near real time identification of domoic acid as well.

Jan described WOAC as a three-legged stool of ocean acidification research: 1) buoys, shellfish, and hatchery access; 2) forecasts of aragonite concentrations; and 3) species. W OAC holds annual symposiums. This year WOAC focused on messaging: 1) many shellfish species are affected by ocean acidification not just oysters and there is a synergy with harmful algal bloom events; 2) the rate of ocean acidification is not linear; 3) there are strong variations with temperature and space; and 4) multiple stressors exacerbate ocean acidification.

Jan also discussed the recent MHW through definition and comparison with "The Blob" of 2014-2016. There are strong similarities to the 2014-16 "Blob" such as high pressure over the Gulf of Alaska, less wind, less mixing, and therefore less cold water upwelling. Uncertainty whether the high-pressure ridge will persist, if this anomaly will influence salmon returns, or whether the return of spring upwelling will trigger major harmful algal blooms. It is too early to assign cause and effect impacts.

Elevated marine CO2 and the potential harm to marine - phase salmon
https://olympiccoast.noaa.gov/media/docs/20190927-williams-talk.pdf
Chase Williams, National Research Council fellow with the Washington Ocean Acidification Center and NOAA's Northwest Fisheries Science Center, presented a preview of his research on the two-part effect of reduced carbonate availability and fish behaviors in low pH waters. Previous research on coral reef fish in lower pH waters indicates a drastic divergence from normal behavior in response to olfactory warning signals. His experiments demonstrated disruption of odor driven behaviors in Juvenile Coho salmon exposed to a high carbon dioxide (CO_2) levels; Exposure to high CO_2 levels induce significant changes in signaling within the brain, and significant changes in multiple genes' expression to neuronal signaling within the brain. Implications are likely that these types of disruptions are not limited to Coho nor to the olfactory system.

Pacific sand lance: an enigmatic forage fish with an uncertain sensitivity to climate change
https://olympiccoast.noaa.gov/media/docs/20190927-pacific-sand-lance.pdf
Chris Murray, researcher with the Washington Ocean Acidification Center, introduced his theoretic framework for investigating climate change effects on Pacific sand lance (*Ammodytes personatus*). They quintessential winter forage fish for a broad range of species from seabirds to whales with an unknown sensitivity to climate change. There is greater carbon dioxide flux on nearshore so inhabitants, such as spawning and juvenile Pacific sand lance must be more adapted to varying carbon dioxide levels. He hopes they will serve as a potentially useful model organism and is building upon a framework developed at the University of Connecticut. This model exposes sand lance offspring to various open ocean predicted carbon dioxide pressures and temperatures. Initial experimental objectives are to 1) quantify CO_2-reaction norms of *A. personatus* offspring; 2) test for CO_2 and temperature effects on survival and development; and 3) clarify underlying physiological mechanisms for observed results.

Multi-Agency Rocky Intertidal Network - program overview and present trends from the Olympic Coast with a look at sea stars and sea star wasting disease
https://olympiccoast.noaa.gov/media/docs/20190927-rocky-intertidal-network.pdf
Melissa Miner, University of California Santa Cruz, described the goals and protocols used in Multi-Agency Rocky Intertidal Network (MARINe) intertidal surveys since 1992. She and colleagues conduct long-term studies by collecting information on targeted foundation species and biodiversity assessments of assemblages, counts, and sizes of all species within explicit habitats in permanently established plot areas located on coastlines from Alaska to Southern California. These data are useful for a variety of purposes including assessing change and informing policy based on observed trends in species abundance over time.

Melissa discussed the long-term population data collected before and after sea star wasting disease (SSWD) spread along the west coast of the U. S. MARINe data illustrates changes in community structures as well as signs of ochre sea star population recovery in some areas in their northern ranges.

MARINe data indicates a northward shift in several intertidal populations of about 3-5 kilometer per year on average, consistent with species richness literature. Climate change resiliency of sea stars and other genera in terms of species evenness remains in question. Interactive online infographics for MARINe data allowing community exploration using GIS map with data callouts is now available for Monterey Bay and Channel Islands national marine sanctuaries. The OCNMS version is in process of development.

The Environmental Sample Processor (ESP) - strengthening early warning and forecasts of domoic acid events in the Pacific Northwest: using the ESP to close the data gap
https://nmsolympiccoast.blob.core.windows.net/olympiccoast-prod/media/docs/20190927-ESP.pdf
Nicolaus Adams of the NOAA's Northwest Fisheries Science Center provided background information on harmful algal blooms (HAB) and described the benefits of early warning detection and reporting to shellfish fisheries from the new technology such as the environmental sample processor (ESP) which is being used in monitoring HAB along the Washington coast. The self-contained ESP is an automated, quantitative, in situ, biological sensing system offering extended, high frequency, and responsive surveys through in situ water sample collection, analysis, and then transmission of data to shore within an average three to - time frame. Image analyses are ready for immediate NANOOS website posting. Probes can be designed for a tracking a given species on ESP and samples can be stored for later laboratory testing. Nearly real-time HAB data allows shellfish managers to oversee safe harvesting. Futre enhancements to the ESP include the ability to trigger increased sampling, optimizing system components, and integration with forecasting tools.

Superintendents Report
https://olympiccoast.noaa.gov/media/docs/20190927-office-rpt-vol7no4.pdf
Acting Superintendent Kevin Grant referred members to the office report and spoke briefly regarding efforts related to the U.S. Navy supported sound traps project. He announced that Alicia Friel's three-year NOAA Corp assignment would be complete in December. The new NOAA Corp Officer, Anna Hollingstad, is on board, allowing an overlapping in the vessel operations coordinators assignments to ensure the health and safe operations of the crew and boat. He reminded members that the sanctuaries job posting for a resource specialist closes on September 30 and application is available through USA jobs. He also expressed thanks to Julie Ann Koehlinger for her successes with the ocean acidification Sentinel site working group and offered congratulations on her new position as the Timber, Fish, and Wildlife Biologist with the Hoh Indian Tribe.

Future Agenda Topics

- Update on outcomes from the Governor's Orca Task Force related to addressing prey availability, contaminants, vessel traffic, and habitat factors.
- Salmon Ocean Behavior and Distribution (SOBaD) project

Location of Next Meetings

https://olympiccoast.noaa.gov/involved/sac/meetings.html
Friday, November 8, 2019
La Push at the Quileute Tribal Council Chambers – West Wing
90 Main St, La Push, WA 98350

Member Reports

Scott Hecht related three things: First, there has been a push for modifications to the endangered species act (ESA) which will come into effect next month for the National Marine Fisheries Service, specifically under section 7, interagency consultations and active push back legislation is expected; NMFS is moving forward with its five-year status report on Lake Ozette sockeye; and there is a completed draft on the oil spill contingency plan has been forwarded to the EPA and US Coast Guard for comments.

Tami Pokorny reminded members there is a request for proposal by the North Pacific MRC for the 2020-2021 biennium, due November 11 seeking projects that meet at least one of the six coastal benchmarks. She also announced the coastal MRC summit will be held on October 24 in Forks and October 25 in Neah Bay.

Joel Kawahara discussed what appears to be reduce enforcement of the area to be avoided (ATBA) noting observations of more traffic in the ATBA over the summer. He is interested in learning the data results when compliance reporting is completed.

Stephanie Sleeman reminded members of Carolyn Winters retirement and introduced Cindy Kunz as the new primary representative for the U.S. Navy.

Cindi Kunz briefly introduced herself to the council.

Jan Newton expressed thanks for science focused meeting and reminded members of the need for action to reduce carbon dioxide emissions and their effects.

Dan Ayres reported on the coastal Dungeness fishery ended 9/15. It yielded 12 million pounds worth $45 million in addition to tribal fisheries catch of another 3 million pounds. Whale entanglements are a big issue for crab fisheries and new regulations are expected soon. There will be an industry meeting on September 30. Razor clam fisheries for the 2019-2020 season opened today on the Long Beach peninsula and other sites will follow shortly. There are strong populations along the coast except for in Kalaloch. Annual sea otter data is expected to be reported in November, however preliminary data indicate the population has grown to approximately 2,800.

Mark Ozais confirmed Clallam County commissioners are actively engaged in outreach with constituents regarding what types of policies they would like to see related to climate change. New ordinances for 2020 are aimed to reducing solid waste and work towards an electrification of our transportation systems continues.

Steve Joner reported that negotiations between the Makah, NMFS, and International Halibut Commission has resulted in a 1.5 million pound, fixed allocation for halibut catch in area 2A, which is the largest amount in four years. For the past three years there have been an exceptional number of landings of small sable fish, which is problematic for vessels as they must then purchase and/or lease shares to accounts for the portion captured. Tribal catches have to be taken off the tribal share(s). There have been sable bycatch of 5,900 pounds in one Whiting tow. The 2016-year class is the largest in many years. Generally, they swim along the surface for one year as juveniles, then settle into benthic waters but, recently are inexplicably staying at the surface.

Steve Shively reported that concluding summer data show flat indicators of visitation to the Olympic Peninsula on top of four years of record highs. Positive factors likely include no forest fire smoke and conversely Washington, D.C. tariff decisions have reduced Asian tourism. Washington state now has money in the bank for Washington state tourism branding and products such as strategic toolkits to manage disaster responses. Out of last year's Tourism Summit has come sustainable destination promotions including an RFP via Clallam County in support of understanding sustainable destination management. There have been communication efforts related to transportation, such as Lake Crescent Road rebuild. The next focus area is communicating transportation issues related to the Hood Canal Bridge. On October 27, the Jamestown S'Kallam tribe will host a joint Olympic Peninsula Tourism Commission and Olympic Culinary Loop symposium as well as the first tasting of the quintessential Olympic Peninsula seafood chowder which was crowned the winner at this year's Crab Fest.

Rich Osborne described efforts to establish a relationship between Monitoring and Event Response for Harmful Algal Blooms (MERHAB) Research Program and the U.S. Coast Guard (USCG) wherein MERHAB can collect samples, usually by Quileute Tribal members, while USCG is training out of La Push. MERHAB is also in its third year of collecting sampling out of Neah Bay, near the Juan de Fuca Eddie and also obtaining nearshore samples. All data are fed to the NANOOS website. Rich also spoke of the thousands of people around the world who are striking today in demand of action to address climate change.

LCDR Velasco introduced himself and related that the US Coast Guard had a good relationship with TransCanada and will be working to increase acoustic data collection and sharing during the upcoming month. He also shared that Sector 13 is actively considering how to best allocate enforcement resources within its budget.

Katie Krueger also reminded members about the upcoming coastal MRC summit. She spoke briefly of the Jeffersonian dinner on September 24 with Clallam County Commissioner Bill Peach that engaged a diverse audience on the topic of climate change and needed actions.

John Veentjer described ongoing voluntary industry-led speed reductions in Harro Strait and Boundary Pass as well as lateral displacements in the Strait of Juan de Fuca. Transport Canada has implemented some mandatory traffic lane displacements for smaller vessels near the new sanctuaries. This resulted in a couple of operators leaving the lanes early near Swiftsure Banks, who have been asked to change their behavior. Monitoring of the area to be avoided (ATBA) was reassigned to the U.S. Coast Guard last year. There does indeed seem to be an unknown cause for the slight decline in ATBA compliance.

Dan Nutt confirmed that compliance with the U.S. Coast Guards' inspection regime (46 CFR Subchapter M - https://www.govinfo.gov/content/pkg/FR-2016-06-20/pdf/2016-12857.pdf) is at 25% for the towing industry. Major towing companies must meet these new rules and 50% of companies are expected to have completed certificates of inspection by July 20, 2020.

Teressa Pucylowski, spoke of DOE's efforts to reassess data from the marine spatial plan and how they can identify shared priorities. They are also looking to links to OCNMS efforts to establish ecosystem indicators.