

Principal Conclusions, Recommendations, and Action Items from the  
HCD-AFSC Habitat Science and Management Coordination Meeting  
September 28-29, 2010

Recap, Conclusions, and Recommendations

- The meeting opened with a short overview of the national context for talking about habitat science in NMFS. In the Habitat program there have been recurring discussions over the years about the need for more habitat science to support management, and many efforts to build support for getting more resources for habitat science. Last May the NMFS Habitat Assessment Improvement Plan (HAIP) was published and the National Habitat Assessment workshop was held in St. Petersburg in conjunction with the National Stock Assessment Workshop. The HAIP was modeled after the Stock Assessment Improvement Plan which successfully drew new funds for stock assessments. It lays out the types of habitat research needed and the resources required.
- The Habitat Conservation Division (HCD) and Alaska Fisheries Science Center (AFSC) researchers work together on many issues. Coordination can always be improved and periodic meetings, perhaps biennially, would be helpful.
- HCD and AFSC each gave presentations to help everyone understand HCD activities and information needs as well as AFSC habitat research activities (see Powerpoints).
- HCD's major activities include:
  - Assist the North Pacific Fishery Management Council with habitat aspects of fishery management
  - Consult with federal agencies to help minimize adverse effects of their actions on EFH, and provide EFH conservation recommendations to federal and state agencies
  - Facilitate habitat restoration with the NOAA Restoration Center and other partners
  - Participate in fish habitat partnerships under the National Fish Habitat Action Plan
  - Pursue proactive opportunities to conserve habitat: dive investigations, invasive species monitoring, ShoreZone mapping, innovative approaches to compensatory mitigation, etc.
- AFSC's habitat research projects and publications funded with EFH dollars are listed at [www.afsc.noaa.gov/HEPR/efh.htm](http://www.afsc.noaa.gov/HEPR/efh.htm). About \$500,000 a year has been available for EFH research resulting in about 60 projects, plus more funded by other sources. Research priorities include coastal areas facing development; characterizing habitat utilization and productivity; recovery rates of disturbed benthic habitat; habitat impacts model; and seafloor mapping. AFSC staff summarized the following categories of research (which were representative of, but did not include all, types of habitat research conducted by AFSC staff):
  - Soft-Bottom EFH Research in the Eastern Bering Sea
  - Conservation Engineering: Modifying Trawls to Reduce Effects of Fishing
  - Essential Fish Habitat for Northern Rock Sole: Habitat Influences upon Processes or "Vital Rates"
  - Kodiak/ Newport Juvenile Tanner Crab Habitat Research
  - Juvenile Pacific Cod Studies
  - Seasonal Habitat Use and Overwintering Habitats of Juvenile Pacific Cod in Coastal Nursery Areas
  - Crab Habitat Studies
  - Assessing Habitat Utilization and Rockfish Biomass on an Isolated Rocky Ridge Using Acoustics and Stereo Image Analyses
  - Habitat and Marine Chemistry – Nutritional Ecology Laboratory
  - Coastal Research in Alaska: Shorezone Mapping and Nearshore Fish Atlas

- A discussion of research opportunities and funding sources led to a number of conclusions:
  - It may be useful to think of identifying “effective juvenile habitat” – habitats that have a disproportional contribution to adult populations (Dahlgren et al. 2009).
  - It’s helpful to establish chemical baselines throughout the state in addition to doing biological sampling. Sediment samples can be frozen for later analysis if there’s a spill.
  - Some needs can be addressed opportunistically. HCD has funded a number of AFSC requests that way, outside of normal funding cycles.
  - National hydropower funds are available via HCD for projects related to anadromous fish passage and river or estuary habitats (RFP in August for projects up to \$100K).
  - National “Refine EFH” funds are available via HCD for projects related to identifying EFH more precisely for managed species (RFP in August for projects up to \$100K).
  - An Interagency Support Agreement with the Army Corps of Engineers allows Corps to pay for NMFS to conduct research related to Corps civil works projects.
  - Mitigation funds are sometimes available via HCD from major development projects for habitat restoration that includes scientific monitoring (e.g., recovery rates).
  - RACE has \$250K annually for habitat research that has covered Bering Sea benthic work.
  - National funds for bycatch reduction and for ocean exploration could potentially be tapped for habitat projects.
  - AFSC proposals for NPRB funding are reviewed by AFSC division directors and then DeMaster prior to submission. There may be an opportunity for HCD input and coordination to help strengthen proposals and emphasize those that support habitat management needs.
  - We may also be able to do more to influence NPRB to include habitat items in its RFPs.
  - Bureau of Ocean Energy Management Regulations and Enforcement (former MMS) has funded fish surveys in the past. HCD may be able to help facilitate discussions between AFSC and BOEMRE in advance of the annual studies plan to increase the prospects for funding fish studies. Perhaps seek funds to do studies at the scale of the old Outer Continental Shelf Environmental Assessment Program (OCSEAP), especially if the area is planned for leasing?
  - We need to find a way to fund non-EFH habitat research too: herring, Gulf of Alaska crab, etc.
  - AFSC has very limited nearshore habitat research capabilities: just a handful of staff at ABL. This underscores the need for HCD to identify its highest priorities for nearshore research and be specific about what type of information is needed, not just the location.
  
- HCD presented a draft list of habitat science and information needs for discussion. The principal conclusion was that HCD should be more specific about its needs, both nearshore and offshore: prioritize the list of areas where nearshore research is needed (currently Table 2 of the EFH Research Plan) and also be more specific about what exactly is needed (e.g., just presence and relative abundance of fish species, or also other things?). Prioritize the priorities list!
  
- If HCD has specific science needs and has funds available, HCD should discuss with AFSC to see whether ASFSC can handle the work.
  
- HCD is seeking opportunities to study the recently discovered infestation of an invasive tunicate, *Didemnum vexillum*, in Sitka. It has great potential to impact Alaska habitats. There are some potential funding sources.
  
- Craig Rose noted that any information on habitat recovery rates, even for dissimilar habitats, could be useful for the habitat recovery rate parameter in the model of the effects of fishing on habitat. Examples are kelp colonization rates on rocky reef mitigation projects for nearshore development, and colonization rates of invasive tunicates recently discovered in Sitka.

- Should we hold a workshop to flesh out the types of research needed to help validate and refine the Fujioka-Rose model on the effects of fishing on habitat? Sandra Lowe noted that even with a better understanding of likely changes to habitat features, stock assessment scientists will still have no good way to translate that into specific effects of habitat changes on managed stocks.
- The group noted that salmon habitat expertise is lacking at AFSC, yet HCD reviews of coastal development almost always address effects to salmon habitat. It would be good to have AFSC experts to confer with on such projects.
- Access to information is important. HCD staff can use the HEPR website to find a list of EFH research. Sigler updates the list of publications on the site annually. Sigler can also provide a contact name for AFSC staff working on specific species or issues. Feel free to contact researchers directly for updates on in-progress studies. AFSC Quarterly Reports are another good resource.
- A number of ideas surfaced for improving the 2007-11 EFH Research Plan (to be updated in 2011):
  - Interpret postage-stamp scale studies on a regional scale
  - Develop accessible, flexible maps to incorporate habitat and study information (Ocean Zone)
  - Address ways to improve the habitat impacts model
  - Seek greater integration of studies
  - Focus on species tied to a benthic habitat, vulnerable habitats
  - Improve pelagic species EFH descriptions (mobile species affected by ocean conditions)
  - Estimate “effective” habitats (that have disproportionate contribution to mature populations)
  - Consider ways to address nearshore habitats, water quality (due to urbanization, resource extraction), and Arctic habitats
  - Address effects of anthropogenic activities on biological and physical processes (that could be applied at an Alaska-wide scale)
  - Bottlenecks: key times and places (e.g., sandlance spawning beaches)
  - “Predictive” habitats – strongly related to production
  - Broaden plan to include all habitat research in Alaska (including non-FMP species)
  - Address the need for baseline habitat information: biological, chemical, and physical
  - Encourage habitat research in the Northern Bering Sea
  - Specify what information is needed for decision-making and prioritize
  - Incorporate EFH information levels explicitly into the revised research plan
  - Include a list of funding sources for habitat research and deadlines for submitting proposals
  - Use the new habitat research plan to recommend habitat research priorities to NPRB (via AFSC director)
- National EFH regulations call for EFH sections of FMPs to be reviewed and updated as needed every five years. HCD and AFSC should start discussing the information needs in year one of this cycle.
- Incorporate habitat information into the Ecosystems chapter of the stock assessment documents.

#### Action Items

- HCD will refine its list of habitat science and information needs (nearshore and offshore) to be more specific.
- HCD will prioritize its list of areas where nearshore research is needed (currently in Table 2 of the EFH Research Plan) and will identify the specific types of information HCD would like to see collected.

- Whenever HCD has specific research needs and funds to do the work, HCD will discuss with AFSC to see if AFSC can handle the work before going to outside sources.
- Sigler and Kurland will lead a revision of the EFH Research Plan, broadening it to be a habitat research plan (EFH plus other habitat). The schedule is to meet during winter with review by HEPR, HCD staff, and AFSC Directors during early summer, with a goal of completing it in time for the FY2012 call for EFH funding proposals (August 2011). The revision will consider the issues identified above.
- Sigler will add to the HEPR EFH website a list of research areas and researchers.
- Everyone should review information on the HEPR website and provide any feedback for improving the site to Sigler.
- HCD will arrange a meeting with BOEMRE (formerly MMS) and AFSC to discuss prospects for funding fish and habitat studies in areas where BOEMRE anticipates future lease sales or development.
- Kurland will talk to Jennifer Ferdinand about establishing a process for HCD to have input to AFSC's annual recommendations to NPRB for research priorities.
- HEPR Program will consider ways to become more of a clearinghouse for all AFSC habitat research, not just EFH-funded research. This could include McConnaughey's work on Bering Sea soft bottom habitats, the work done recently by ABL to help refine the designation of EFH for salmon in marine waters, etc. The idea would be to help coordinate the planning for such work and the dissemination of results.
- HEPR and HCD should hold Habitat Science and Management Coordination Meetings every couple of years. The next meeting is tentatively scheduled for April or May 2012, tentatively in Kodiak (to help staff become more familiar with the Kodiak Lab's capabilities). Kurland and Sigler will consider designing the meeting to include breakout sessions for nearshore and offshore habitat research in addition to plenary discussions.