
MEETING NOTES
JULY 23, 1997

COLUMBIA RIVER OFFSHORE DISPOSAL SITE WORKSHOP
Fisheries and Biological Resources Working-Group Meeting

Meeting Notes

Introduction

On July 23, 1997, a meeting was held at the U.S. Army Corps of Engineers (Corps), Portland District offices for Working Groups 1 and 2, subgroups of a larger group of public and private stakeholders who have convened to discuss offshore disposal options for the Mouth of the Columbia River (MCR) and the Columbia River Channel Deepening Projects. The purpose of this meeting was to discuss the development of overlay maps to in order to depict fishery and biological resources. Representatives from state, local, and federal agencies were in attendance, as were individuals representing the crab fishing industry. A neutral facilitator, Valerie Lee of Environment International, led the meeting. Notes of the proceedings were recorded by co-facilitator Margaret Merrens.

Opening Remarks

Mr. Kim Larson, group coordinator, welcomed all participants to the first meeting of the fishery and biological resource working group. Kim introduced co-facilitators Valerie Lee and Margaret Merrens of Environment International to the participants. Valerie explained that her role is as a neutral party, to assist the group in identifying common ground. She will encourage participants to raise and discuss issues and help to formulate a process for the identification of appropriate offshore disposal sites. A ground rule that evolved during the meeting, to which the participants agreed to abide, was that only one person would talk at a time.

Identification of General Questions of Concern

Valerie Lee encouraged the participants to identify general questions or concerns they have regarding the offshore site selection process.

Comment: Dale Beasley/Columbia River Crab Fisherman's Association (CRCFA) would like to see a complete history of the Corps' dredging and channel deepening activities. He is particularly interested in learning when the Corps deepened the channel to a depth of 55 feet.

Comment: Steve Barry/Washington State Department of Fish and Wildlife (WDFW) requested historical information (from 1977 on) regarding annual operation and maintenance (O&M) amounts dredged, the dates of all site designations, and amounts placed in each site over time.

Response: Mark Siipola/Corps indicated the Corps had the capacity to provide a dredging history dating back to the late 1800's. This would include information regarding depth of dredge and where the material was placed since the time of site designation.

Comment: Ben Meyer/National Marine Fisheries Service (NMFS) asked about the feasibility of dredging a shallower channel at the mouth of the Columbia River (MCR).

Responses: Laura Hicks, Corps of Engineers, said that as part of the feasibility study for the Channel Deepening Project, wave actions at the MCR have been investigated by Karl Eriksen. Karl has determined that a navigational hazard exists, as a result of wave action, at any depths less than 55 feet.

Mark Siipola indicated that the Corps could provide information on outbound grain ships that require extra depth.

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Comment: Edith Beasley/CRCFA would like to see the Corps provide an information manual to the participants involved in these workshops. She encouraged the Corps to refer to the 23 July 1997 letter sent to the Corps and signed by her husband, Dale Beasley, on behalf of the CRCFA. The letter provides the Corps with a list of several observations that would aid the Corps and the working groups identify the "safest, most environmentally friendly, and most acceptable location(s) for dredge disposal." The first item on the list is an information manual to include "all legislation, standards, policies and guides, all relevant facts, all biological and physical data, sediment analysis for carcinogenic materials - test results & date."

Responses: Kathi Larson/U.S. Fish and Wildlife Service (USFWS) commented that she believed most of this information would be or has already been obtained at these facilitated meetings (via handouts and meeting notes) and that she was comfortable collating them herself into a reference notebook. It was her opinion that the Working Group 1 & 2 meetings would focus sufficiently on biological issues and relevant policies had already been presented at the 10 July meeting.

Steve Barry/WDFW agreed with Kathi. He felt the handouts and meeting notes were sufficient and he would not like to create a bureaucratic overload for the Corps that would only serve to delay the process.

Ben Meyer/NMFS agreed with Kathi and Steve. He also questioned the need for detailed presentations at each meeting. He would rather see the Corps distribute the presentation materials in printed form prior to each meeting instead of via oral presentation. He would rather get down to the business of creating overlay maps.

Valerie Lee/facilitator asked Edith if she and Dale could agree to engage in a process by which Valerie would elicit their needs with more specificity, since the requests in the letter are rather broad.

Edith Beasley/CRCFA agreed with Valerie. She also indicated that it may be sufficient to obtain some of this information on Internet sites or at the library. She would like some assistance, however, locating the Internet sites and citations to laws and regulations.

Presentation Regarding Available Biological Information

An update on Available Data

Danil Hancock, Oceanographic Institute of Oregon (OIO), presented the group with a spreadsheet summarizing the data he has reviewed to date for bottom invertebrate and fish data at the MCR. *See Handout 1- Summary of Bottom Invertebrate and Fish Data from the Mouth of the Columbia River.* His summary includes: researchers and publication date, years sampled, the number of sites sampled, the total number of samples collected, the type of navigational assistance used to locate sampling sites, which part of the ocean was sampled (eg., infauna, epifauna, crabs, fish), the size of sampling gear used, statistical reporting techniques used, which disposal sites were sampled, and general comments about each study.

Danil explained that his goal was to make comparisons between existing sets of data. He provided the group with several maps showing locations of data samples taken for benthic invertebrates, sediments, bottom fish, and shellfish. Benthic invertebrate data coverage is good. Early studies were taken using a different sized sieve than later studies making them difficult to compare. Danil will estimate ball park figures for the group. Danil offered to provide data for various locations based on the desires of the group. He needs to know which data they would like to see on the overlay maps.

Comments: Edith Beasley/CRCFA asked about the validity of the data. Dale Beasley pointed out that the samples were not taken everywhere. He once found a clam in a pot that had not been

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discovered by scientists sampling in the area. He expressed concern that grab samples may not be representative of what is actually out there.

Response: Danil explained that a sample is a subset of a population. It's a bit like flying over New York and grabbing a subset of the people, your results may differ from day to night or between locations. The more diverse the community, the more samples a scientist must collect. With a diverse data set there is a chance that not every species could be found in a sample or set of samples. Scientists make a best effort to identify all species and to describe the population as best they can. Many of the studies available to the group explain in great detail how the sampling was done and how the scientists adjusted for variability. Danil has taken a look at the statistical accuracy of the results, including how many replicates were taken at each station. Each sample actually represents a number of replicates. Danil's believes that these data sets are indicative of some of the best sampling methods used in marine science.

Danil said that infauna densities in and around the mouth of the Columbia River may not be as productive as some other areas on the Washington or Oregon coast.

Comment: Edith Beasley/CRCFA asked Danil to specify which areas in Oregon and California he was referring to, what he meant by "productive," and if he is referring to benthics, what is the correlation of this information to crab populations.

Responses: Danil explained that productivity refers to the density of organisms. More productive areas might include areas around Tillamook or Grays Harbor. He also mentioned there is generally a good correlation between densities of food (benthic invertebrates) and where commercial fish and crab are found. It is his intention to provide such a comparison for the group and to have the crabbers assistance in collecting and providing crab density data.

Kim Larson/Corps reminded the group that the purpose of this investigation is to focus on the area around the MCR, to identify areas of productivity, and to locate new disposal sites based on available information. It is beyond the scope of this group to compare the productivity of the Columbia River with other areas.

Map of Bottom Trawl Locations

Danil presented the group with a letter and map depicting bottom trawl locations offshore from the MCR. See Handout 2 - Letter and Map of Bottom Trawl Locations. He received this information from Dave Fox of the Oregon Department of Fish and Wildlife (ODFW). This map represents trawl information collected between 1994 and 1996. Each circle on the map indicates an individual trawl. Each record has fields for latitude, longitude, time, month, depth, hours of effort, catch of each species, and other various identifiers for the vessel, port, etc. This information, however, is proprietary information and not readily available. The Corps may be able to access some of this information under restricted conditions for the purpose of assisting with the identification of offshore disposal site locations.

Danil's initial sense from the data is that the bottom fishers are not trawling inshore close to the mouth of the river and irrespective of where disposal sites are, they are catching fish in the area.

Comments: Christine Valentine/DLCD asked if WDFW could provide similar information.

Response: Steve Barry/WDFW said yes and indicated that the marine folks at WDFW could corroborate or add to the ODFW information. Danil indicated that any such information could be used to develop an overlay of concentrations of trawling locations.

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Goals and Objectives for the Overlay Process

Valerie assisted the group in identifying their goals and objectives for the overlay process. They were identified as follows:

1. To estimate the damage to crab resources (CRCFA)
To estimate the damage to fishery and wildlife resources (USFWS)
2. To ensure that the final site selection has the least impact on crabs (CRCFA)
To ensure that the final site selection has the least impact on all fishery and wildlife resources, including benthics, fish, shellfish, and marine birds (USFWS and NMFS)
To minimize long-term impacts to fish resources with special emphasis on Dungeness crab (WDFW)
To ensure long-term protection of renewable resources (DLCD)
3. To ensure for the safety of boats navigating in the area (CRCFA)
4. To investigate and utilize sites which are broadly beneficial (NMFS)
To investigate and utilize sites beneficial to organisms (DLCD)
5. To protect and prevent destruction of unique crab habitat, ie. areas where woody debris collects on the sea bottom (CRCFA)

Comments: Christine Valentine/DLCD said that she thought that safety considerations might be better addressed as part of the navigation discussions.

Steve Barry/WDFW agreed with Christine. Steve added that he would like to see Groups 1 and 2 focus on benthic data, since he believes this drives all the other resources in the area. Steve said that Danil's presentation regarding the importance of benthic resources corroborates all that Steve has learned from his own research and studies over many years.

Ben Meyer/NMFS acknowledged that he saw value and importance in investigating potential damage to crab resources, but he added that he was not sure if such information was germane to what they were doing. Ben said he was not sure if such information would provide a means for selecting a site, since all resources must be examined in the process. Ben would like to see site selected which provides a benefit to resources.

Christine Valentine/DCLD asked if there were disposal methods that might benefit crabs. She indicated she had heard that crabbers in Coos Bay obtained a benefit from disposal sites and actually used the sites for crabbing.

Danil Hancock/OIO acknowledged that what Christine had heard was true and that there was some evidence of this occurring at the mouth of the Columbia River as well.

Discussion of the Overlay Process and Selection of Disposal Sites

For the benefit of the participants, Laura Hicks revisited and reviewed the overlay and site selection process. She explained that the goal of the process is to select the least-impact disposal location(s) for materials from both the Columbia River Channel Deepening Project and O&M occurring on the river. Laura emphasized that at this point the Corps has no predetermined disposal sites. They intend to use the overlay process to assist with site identification and selection. No particular consideration of the overlay process, ie. navigation, physical processes, biological resources or fisheries is more important than another at this point.

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Comment: Edith Beasley/CRCFA drew Laura's attention to the 1987 Coal Channel Study. An overlay process was used to select disposal sites for that project. Edith read a line from the study indicating that the Columbia River Zone of Siting Feasibility (ZSF) is heavily used for shipping, and several other uses and the potential conflicts arising from these multiple uses are not serious enough to eliminate any candidate areas for consideration. Edith expressed concern as to whether this process to which she was a party would be a genuine one.

Responses: Laura Hicks/Corps reemphasized the importance of having stake holder participation in the process. The information the stake holders supply will influence the significance of the areas considered in the site selection and will aid the process. Laura cautioned Edith that the information available with regards to resources, physical processes, and potential users at the MCR is very different than now than it was 15 years ago when the Coal Channel Study was conducted.

Danil Hancock/OIO pointed out that all factors carried the same weight during the Coal Channel process. Now, however, the group has the capacity to weight certain factors, ie. crabbing or navigational safety. This difference in methodology will result in different determinations for site selection. Danil also drew attention to the ODFW trawl data that seems to indicate that fishing occurs in and around the disposal sites. In this situation, the presence of a resource in an area does not preclude disposal there.

Expertise of Participants

To better select task assignments for the overlay process the participants described their relative expertise and experience.

Kathi Larson/USFWS: has been a fish and wildlife biologist with USFWS in Portland since 1975; currently reviews Corps recommendations for development projects such as the Channel Deepening Project; will review the EIS for the ODMS and provide comments.

Steve Barry/WDFW: has been with WDFW for 22 years; has been with the shellfish program for most of these years studying razor clams, crab resources, crab management, and the ocean pink shrimp fishery; involved in channel deepening issues since 1980, beginning with the Grays Harbor process.

Ben Meyer/NMFS: currently works in the habitat conservation division of NMFS on behalf of all trust resources; his work is most directly related to anadromous salmonids and marine fish; assists with the review and designation of offshore disposal sites.

Dale Beasley/CRCFA: represents a crabbing organization which is over 40 years old; he and others (Dick Sheldon/Steve Gray) are more at ease than others representing the organization in a public setting; he encouraged the use of smaller meetings and direct requests to individuals (after October) in order to obtain information from fishermen.

Kim Larson/Corps: has a marine biology background; has been with the Corps for 20 years, was a consultant prior to that; studied direct impacts on marine biology and crab entrainment as a result of dredging in the late 1980's; developed a devise for the dredge drag head to reduce entrainment; most research has been done at Scripps Oceanographic Institute in La Jolla, CA.

Christine Valentine/DLCD: has a marine geology background with a Master's degree in ocean and coastal resource management; works to coordinate and to determine consistency of programs with

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state coastal policy; reviews permits within the state coastal zone; agency typically relies on CREST and ODFW for resource information.

Danil Hancock/OIO: with OSU for 24 years as a senior research professor; set up the Port of Portland's environmental services department; currently with Portland State University as a senior scholar; has worked in AK monitoring marine systems; has worked off the OR and WA coasts and in Hawaii on artificial reefs; has conducted nearshore coastal ecological studies in several marine ecosystems.

Mark Siipola/Corps: ocean dumping coordinator; oceanography degree from Humboldt State; M.S. in Marine Science studying beach nourishment processes; has assisted the Corps with the stabilization of beaches on the East Coast, including Miami Beach; began working on St. Helens' projects beginning in 1983; became the technical manager on several of the relevant studies to which Danil referred.

Eric Braun/Corps: holds degrees in wildlife management and biology; with the Corps since 1980; in the permit program division until 1987; in navigation after this; worked on the 1984 Channel Deepening EIS and the Coos Bay EIS; has an understanding of the EIS regulatory process; chief of the waterways maintenance process.

Further Issues to Address in the Overlay Process

Crab Issues:

Edith and Dale Beasley/CRCFA: identified item number 5 in their letter as an area they would like to see addressed in the overlay process for Groups 1 and 2. Item number 5 deals with collecting and compiling information on crab and bottom fish. More specifically, they would like to know how the benthic data correlates with crab data. They would like to know the impacts of pin-point and broad based dispersal to crabs. They would like to see the Corps consider evaluating and preserving unique bottom habitat of crab, which includes a "wood zone" where the crabs appear to congregate. This woody debris (water-logged wood) comes up with Dale's pots and appears to concentrate in a line offshore. Dale said there is a clear division between coarser sediments and this woody debris and finer grained sediments. The debris appears at the "edge of the tide - where it drops off" in a North/South line that could be identified on a map.

Danil Hancock/OIO: reiterated his belief that the group will benefit most from invertebrate densities and crab density data. The invertebrate data is robust and reliable. Highly productive areas are identifiable and densities are reliable. In general, the data on crabs is sparse and highly variable due to their mobility. Danil cautioned that research alone would not be able to tell them enough about crab density where avoidance of sampling traps and other variables are unknown. Danil indicated that the fishermen have the best sense and capacity to provide the Corps with information regarding crab density. The crabbers will also need to assist with the identification of critical crab habitat. Danil also thought that NMFS, ODFW, and WDFW may be able to provide further information on soft-shell crabs. Ben Meyer/NMFS agreed.

Dale Beasley/CRFCA: explained that crab pot location is a complex process of interaction that has developed over time. Part of this process is influenced by tides and individual fishing differences among crabbers. He explained that mere existence of other pots in an area will not prevent him from placing his pots there as well. On the spit the pots are so dense that he must drive his boat around about 15 other pots to travel from one pot to the next. Out to 75 fathoms is fished very heavily.

Danil Hancock/: requested to have these locations mapped.

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Eric Braun/Corps: said it would be helpful to know where the clusters are so as to avoid these areas.

Dale Beasley/CRCFA: indicated that he was working with Kim Larson to identify locations of productive pots without introducing biases. Pound per pot records may be available from some crabbers for certain areas. Dale indicated that he has kept such records at times. Dale asked for further information regarding crab mortality or the existence of crab mortality studies.

Danil Hancock/OIO: In response to Dale, Danil suggested that it may be necessary to create a couple of crab overlays to indicate: (1) where they are located, and (2) where they are targeted. He also said that Walt Pearson of Battelle has conducted crab behavioral studies up in Willapa Bay and these may be available.

Dale Beasley/CRCFA: indicated an interest in knowing more about the results of these studies.

Kim Larson/Corps: provided insights based his knowledge of crabs. He said that young of the year (YOY) crabs settle out in early spring . He indicated that in general they do not burrow in, but instead hide under debris. The YOY disappear in September to October in the MCR. A NMFS study indicated that the distribution of crabs in the estuary was not widespread except in Ilwaco and Chinook channels.

The area where Bob Burkle, WDFW, has proposed to have the Corp dump sand for beach nourishment (on the south side of the north jetty) is actually an area that has the highest densities of YOY crabs. There was once a dumping site there but the Corps no longer uses it.

Kim indicated that the Corps conducted entrainment studies in the past to analyze impacts of dredging to crabs. Crabs were sampled during the day and night but the Corps never identified a correlation between density of crabs and time of day. There was, however, a slight correlation with tidal cycles. There were fewer crabs present during ebb tides. On the whole distributions were extremely random.

Danil Hancock/OIO: asked if anyone had a sense of the mortality figures as a result of trawler impacts to crabs, specifically soft-shell crabs.

Steve Barry/WDFW: indicated that such impacts were little known.

Kim Larson/Corps: offered to provide further information on thin layer disposal and biological impacts. He also offered to present the Corps' findings on crab entrainment during dredging and to show a video produced during the entrainment studies at the next meeting. Studies were done at Scripps to indicate survival rates in a hopper when crabs are buried. They made a model and the video will show the crabs digging out.

Steve Barry/WDFW: indicated that crabber sampling data is targeted on male crabs, as is bottom fish data. The group will need to identify information on both juvenile crabs and fish.

Edith Beasley/CRCFA: inquired about the availability of data on soft-shell crabs.

Kim Larson/Corps: responded that soft-shell crabs are difficult to study. In general, handling of soft-shelled crabs is difficult and transit may lead to mortality.

Edith Beasley/CRCFA: asked if it was necessary to test soft-shell mortality or if it was sufficient to assume mortality.

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Kim Larson/Corps: replied that such an assumption would be a worst case scenario. He added that a winter storm generally picks up and distributes more sand than several dumps from a dredge, and he is not comfortable making such an assumption. Under such a presumption (100% mortality), all the crabs would be dead simply due to natural processes and this is certainly not the case.

Additional Issues:

Kathi Larson/USFWS: would like to have the Corps identify the productivity of areas further offshore with respect to fish resources, even beyond the 13 mile limit.

Ben Meyer/NMFS: added that the group should be utilizing existing data and that new studies would not fit within the time frame of the overlay and site designation process. Ben would like to see a sediment type overlay showing bottom stratification.

Mark Siipola/Corps: said the Corps could provide data correlating benthic infauna samples with sediment type and grain size.

Ben Meyer/NMFS: asked if the trawl data was from a certain time of year or if it might be seasonally biased.

Dale Beasley/CRCFA: mentioned that the trawl data will likely be biased since the crab pots get in the way of trawling.

Kim Larson/Corps: indicated that he had anecdotal information from a trawling source that juvenile fish congregate at the mouth of the river.

Summary of Opinions:

Based on the morning discussion the group reached consensus on the following issues:

1. They agreed to focus on available data and to work within a short time frame to meet 1998 deadlines.
2. They acknowledged they were comfortable using an overlay process to identify potential disposal sites of least impact.
3. They requested to have the Corps synthesize and present information on all known impacts to crabs, including the results of the entrainment studies and the video to which Kim Larson referred.

Items to be Addressed in Danil Hancock's Report

Kim Larson, reiterated that Danil Hancock was currently in the process of collecting data on sampling sites. The purpose of Danil's investigation is to provide information helpful to assist the group with the development of fishery and biological resource overlay maps. Danil will synthesize the available data and will seek to find parameters or data descriptors that are consistent throughout all data sets. Kim asked the participants to identify further needs or areas that they wished Danil to investigate and summarize in his report. The group came up with the following recommendations:

1. A summary/description of all available studies
2. A discussion indicating the validity of the sampling data - whether the data samples are representative of the real world
3. A discussion of the correlation between benthic data and shellfish/finfish data
4. A discussion of whether the dominant species sampled are important food chain species or not important at all

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5. A correlation between sediment grain size and biological communities
6. An explanation for why there is insufficient data to conduct a shrimp overlay or summary of shrimp data

Information Necessary to Create Overlay Maps

The group identified several overlay maps they wish to produce in the next two months and assigned an individual(s) to collect and investigate the data to be used to complete each map. The group agreed to attempt to collect all necessary information before the next meeting on Wednesday August 20. Tasks were identified as follows:

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| 1. Benthics: | Kim Larson and Danil Hancock |
| 2. Juvenile Crabs: | Kim Larson and Danil Hancock |
| 3. Soft-shell Crab Distributions: | Dale Beasley and Kim Larson |
| 4. Commercial Crab Fishery: | Dale Beasley |
| 5. Trawlfish: | Dave Fox (locations of juvenile fish, if possible) — <i>thru 11/96</i> |
| 6. Juvenile Flat Fish: | Ben Meyer, if available |
| 7. Razor Clams: | Steve Barry / <i>Dave Fox OR</i> |
| 8. Marine Mammals: | Ben Meyer |
| 9. Sea Birds: | Kathi Larson |
| 10. Shrimp: | Christine Valentine to ask Dave Fox ✓ |
| 11. Recreational Fishery: | Christine Valentine to ask Dave Fox |
| 12. Navigation for Commercial Fishery: | Dale Beasley |

Comments on the Recreational Fishery

Some discussion took place with respect to the issue of recreational fisheries. It was suggested that contact be made with bottom fish and charter boats working out of Ilwaco to determine where they are fishing. Dale Beasley indicated that there was an exclusion zone which prevented these boats from fishing around the MCR. When asked if the group wished to proceed with an analysis of recreational fisheries the group uniformly indicated that it would not be a worthwhile unless the data was available. This determination was despite input from Mark Siipola, Corps, that recreational fisheries has been a frequent factor of consideration in other overlay processes. It was agreed that Christine Valentine would ask Dave Fox, ODFW, to further investigate the availability recreational fishery data.

Other Business

Laura Hicks provided the group with an update on the status of Working Groups 4 and 5. Working Group 4, the navigation and operation group, is scheduled to meet next week. Navigational information and towboat lane information has already been prepared. It has been suggested that the information be distributed to Working Group 4, via e-mail or facsimile, and that the group coordinate and comment via e-mail and phone instead of through a formal meeting at this time. It was also suggested that information regarding access to and from commercial fishing areas (to be provided by Dale Beasley) be incorporated into the fishery overlays produced by Groups 1 and 2. It was agreed among all participants that this was a good approach.

Laura also indicated that Lynda Walker, the coordinator for Working Group 5, is currently evaluating cultural resources in the area. She will likely designate everything within the 40-foot contour as a cultural resource. Due to the limited number of participants in that group, it was suggested that Working Group 5 be coordinated and comments be provided via e-mail and telephone as well. The participants agreed that this should occur.

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Important Dates to Remember:

Wed. August 20
Wed. September 24
Wed./Thurs. October 22 and 23

Second Meeting of Working Groups 1+2 (Portland)
Third Meeting of Working Groups 1+2 (Portland)
Next Meeting of the Complete Group (Astoria?)