

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

DIVISION OF HABITAT

Sean Parnell, GOVERNOR

802 West 3rd Street
Douglas, AK 99824-0024
P.O. Box 110024
Juneau, AK 99811-0024
PHONE: (907) 465-4105
FAX: (907) 465-4759

MEMORANDUM

TO: Jackie Timothy
SE Regional Supervisor

DATE: April 8, 2010

FILE: 865

SUBJECT: Douglas Harbor Disposal
Site Dive Survey

FROM: Joe Hitselberger
Habitat Biologist

TELEPHONE NO: (907) 465-4346

JH

On December 21st, 2009 Alaska Department of Fish and Game Biologists Kyle Hebert and Dave Harris conducted a dive survey of the proposed open-water disposal site for the Douglas Harbor dredging project. The proposed site (Figure 1.) is located in Gastineau Channel, Sections 36 and 25, Township 41 S., Range 67 E, Copper River Meridian, USGS Quad Map Juneau B-2.

The City and Borough of Juneau (CBJ) is proposing to replace the moorage floats, upgrade the electrical and water services, and reestablish the harbor's depth so Douglas Harbor remains functional and safe. To reestablish the depth of the harbor to -14' MLLW, CBJ is proposing to dredge approximately 30,000 cubic yards (cy) of material from the harbor and dispose of it in Gastineau Channel. The site in Gastineau Channel has been used as a disposal site for dredged material from Douglas Harbor in the past, and the water is approximately 120' deep. In 1997, the United States Army Corps of Engineers disposed of 25,000 cy of material at the site, and in 2002, CBJ disposed of 15,000 cy of material at the site.

Recent analysis of the sediment in the harbor show elevated levels of mercury and methyl mercury. Methyl mercury is able to accumulate in the tissues of aquatic species. There is concern that if the dredged material is disposed of in Gastineau Channel, methyl mercury will accumulate in species targeted by commercial and sport fisheries. The purpose of the dive survey was to evaluate the habitat type of the proposed disposal site and determine if the area supports populations of species targeted by commercial and sport fisheries.

Observations

Before the dive, Kyle and Dave surveyed the proposed disposal site (approximately 5 acres in size) using a depth sounder on their boat. The purpose of the initial survey was to find a uniform depth and substrate density from the proposed disposal site to their actual entry point off of Mayflower Island. They descended from the steep shoreline of Mayflower Island for safety reasons, and then continued to

the proposed disposal site. During their dive, it is not certain if they made it to the boundary of the proposed disposal site. However, given the uniform depth sounder readings and their previous diving experience, they feel confident that what they observed was a good representation of the proposed disposal site.

Figure 1. Proposed Disposal Site



While on the seafloor, they took video footage of the area and collected sediment samples. The site is comprised of fine sediment (silt) and is very uniform throughout. There is no attached vegetation (some loose) or rock formations, and there is limited activity in the area. The video footage shows 3 Tanner Crabs, a small group of coonstripe shrimp, several unidentified small fish (possibly gunnels), a few snails and hermit crabs, and a few juvenile flat fish. Kyle and Dave spent approximately ten minutes on the seafloor, between 105 and 112 feet seawater.

Conclusion

I have consulted with Area Management Biologists and have reviewed historical harvest data to determine the fishing opportunities at the proposed disposal site. Location, habitat type and depth of the proposed disposal site drastically limit commercial and recreational fishing opportunities in the area. The site is located in the middle of Gastineau Channel, near the entrance to Douglas Harbor. Placing crab or shrimp pots at the site, or fishing stationary over the site would be difficult due to the large amount of vessel traffic. The habitat type and depth of the proposed disposal site is also not well suited for species targeted by sport and commercial fisheries.

The proposed disposal site is close to 120' deep, and is charted at 18 fathoms. Male Tanner crabs are commercially and recreationally harvested and they are found in muddy or very fine substrate in deep water between 50 and 200 fathoms. Tanner crabs migrate extensively to deeper water during the different stages of their life. Female Tanner crabs prefer harder surfaces, rather than the muddy substrate found at the proposed disposal site. Considering the size and shell appearance, the crabs observed during the dive were male tanner crabs. Dungeness crabs are also found in Gastineau Channel, and are fished for recreationally. These crabs are widely distributed throughout the channel and found in sandy or muddy substrate. Dungeness crabs are generally found at depth less than 15 fathoms and fishing for them usually occurs at 10 fathoms.

Other species including Pacific Halibut and salmon that are commercially and recreationally harvested are highly migratory, and the proposed disposal site is not a destination for them. Halibut spend the winter months spawning in deep water, approximately 600 to 1,500 feet. In the summer they move to shallow waters to feed. Adults generally migrate to the same feeding grounds every year. The proposed disposal site is not one of these feeding grounds. Salmon will migrate through the area two times during their life cycle. Various juvenile salmon species will out migrate from the streams emptying into Gastineau Channel in the spring and early summer. These juveniles will stay in the near-shore environment in shallow water before outmigrating to the ocean. Adults will migrate through Gastineau Channel to their fresh water spawning grounds. During this time they are not actively feeding and more focused on returning to their stream to spawn. During both of these life stages, it is unlikely salmon will be found at the depths of the disposal site.

ADFG has no evidence of aquatic species being harvested from the proposed disposal site. Considering the habitat type, depth and location, we believe that the proposed disposal site does not support important commercial, sport and personal use fisheries and hatcheries.

Email CC:

Al Ott, ADF&G-Habitat, Fairbanks
Brian Glynn, ADF&G-SF, Douglas
Kevin Monagle, ADF&G-CF, Douglas
Kyle Hebert, ADF&G-CF, Douglas
Dave Harris, ADF&G-CF, Douglas
Carrie Bohan, DCOM, Juneau
Teri Camery, Southeast Coastal Coordinator, Juneau
Deborah Rudis, USFWS, Juneau
Heidi Firstencel, USACE, Juneau
Chiska Derr, NOAA, Juneau
John Stone, CBJ
Chris Meade, EPA, Juneau
Chas Dense, DNR/ DMLW, Juneau
William Ashton, DEC
Alexandria Dugaqua, DNR/ DMLW, Juneau
Doug Dodyns, DIA