

Notes to: Douglas Harbor dredging work group

August 25, 2008

Re: Douglas Harbor Sediment Evaluation

From Deborah Rudis
Environmental Contaminants Biologist
U.S. Fish & Wildlife Service
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Juneau, AK 99801

The U.S. Fish and Wildlife Service has reviewed the August 2008, *Evaluation of Sediment from Douglas Harbor in Juneau, Sampling and Analysis Plan*, prepared by NewFields, and offer the following comments. These comments are submitted based on our concerns for our trust resources that are found in Gastineau Channel, migratory birds and anadromous fish.

We offer the following comments and questions which were primarily addressed during the meeting of 20 August 2008.

Reference site location should be determined based on condition of similar sediment structure from a clean site. Because the channel has cleaner sediments towards the south, past Dupont Creek, we recommend a reference sample be collected in this area.

A preliminary Hg analysis is recommended to check that the reference site is low in Hg concentration.

Because longer-lived organisms and higher trophic level organisms bioaccumulate Hg, we suggest testing resident flat-fish (i.e. arrowtooth flounder) to look at present Hg concentrations. This may give an indication if the Hg present in harbor sediments is presently bioaccumulating in resident organisms.

Although blue mussels are filter feeders and not sediment dwellers, they have been used in many sediment toxicity tests. They are another organism that could be sampled in the harbor to examine Hg concentrations present in resident biota.

If fine-grained sediments are uniformly distributed in the harbor, then composites should have similar structure. If any samples are coarse-grained, we suggest resampling in the area until a fine-grained - sample is collected.

When bioassay data are presented, it would be of interest to see comparisons with criteria and/or other germane Hg data.

There are major concentrations (1,000 – 3,000) of white-winged and surf scoters (seaducks species) that congregate in the channel during the early spring. These ducks feed primarily on blue mussels and also consume other mollusks. Their feeding habitat is in shallow water close to shore where mussel beds are located. We understand that the proposed dredge disposal area is located approximately channel center. We would have concerns if the location for disposal was located in an area where scoters and other waterfowl congregate.