

**INFORMATION NEEDED FOR ESA REVIEW OF FISH
FOR SECTION 10 - NEW DREDGING***

DREDGING**Vegetation**

- 1) Is there wetland vegetation in the area to be dredged? Freshwater or estuarine?
- 2) Show any eelgrass beds or other aquatic vegetation in or adjacent to the dredge area on plan and elevation view drawings.

T&E Species Habitat

- 1) What aquatic species inhabit or frequent the area to be dredged? Are any of them Federally proposed or listed Threatened or Endangered (T&E) species?
- 2) How readily is habitat available in area of project for the T&E species?
- 3) What is the environmental baseline in the action area – is habitat plentiful or scarce, healthy or degraded? (e.g., habitat can exist on the face of a pier apron, even if channel is deep next to it, per DFW staff, so describe such areas as well). Include discussion of habitat along any nearby shoreline.
- 4) What type of habitat is being dredged? Marine areas: Describe habitat by bottom elevation, in reference to Mean High Water (MHW) – predominantly mud, sand, cobble, or mix.? (Removing intertidal or shallow subtidal habitat is of more concern than deeper areas.) Freshwater areas: Describe habitat by bottom elevation, in reference to Ordinary High Water (OHW). Also describe habitat by substrate type, presence of pools or riffles, presence of side channels, etc.
- 5) How far offshore is the landward dredging boundary?

T&E Species Prey Habitat

- 1) Discuss habitat of prey species. Salmon and trout can prey on fish species and/or invertebrates on/in the bottom sediments
- 2) Fish prey species, such as herring, smelt, and sand lance, spawn over wide but variable time periods and depths. Discuss whether the action area is in or within 150 feet of spawning grounds of fish prey species
- 3) Discuss whether the action area contains invertebrates or other non-fish prey species, if this is known.
- 4) How far offshore is the landward dredging boundary?

Waterbody

- 1) Marine – Discuss if/when prey species (herring, surf smelt, sand lance) are present, vs. when not. Also presence of salmonids (migration).

- 2) Fresh – Discuss if/when salmonids are present, vs. when not. Also presence of any prey species.
- 3) Is water quality in the waterbody where work will occur typically impaired at the time of proposed dredging? If so, what parameters are impaired (e.g. temperature, chemistry, clarity, etc)?
- 4) Is the waterbody one of Washington State Department of Ecology's "303(d) listed" waters? If so, discuss status.
- 5) Give existing elevation and proposed elevation of the waterbody after dredging. Also give existing slope and proposed slope in the area to be dredged.

Sediment Quality

- 1) Discuss sediment testing conducted, if any, and results. High ranked projects under DMMP guidelines – all need testing; Moderate to low ranked projects – some don't need testing. Puget Sound: Follow the PSDDA guidelines. Lower Columbia River (CR): Follow the Lower CR Dredged Material Evaluation Framework.
- 2) Discuss grain size (gravel, sand, silt, etc) of material to be dredged.

Timing of Work

- 1) When is work proposed, by waterbody?
- 2) Were any dredge entrainment studies done and, if so, what were the results?
- 3) If work is planned in late summer, one issue for adult fish (summer Chum and Chinook) is they return when water is warm and flow is low – so any activity that can decrease available oxygen can cause additional stress to adult fish during migration. Discuss proposed measures to reduce turbidity in area of dredging (silt curtains, coffer dams, special dredge heads, etc).
- 4) How long would dredging occur – Days? Weeks? Months?

Types of Dredging

- 1) What type of dredge will be used for the work? (e.g., clam shell, hydraulic, hopper, etc)
- 2) If hydraulic, how will return water be handled?
- 3) If hopper, is overflow anticipated?

Dredging Plan

- 1) Discuss whether the dredging is "new work" (esp. elevation +8' to -8'), deepening of an existing channel, or maintenance work (O&M).
- 2) What volume is being dredged? Amount(s) of initial dredging and any proposed maintenance work.
- 3) If proposal is for O&M that is not currently authorized as part of an existing permit, when was such dredging last done in the area? What has the typical

schedule been? (For O&M authorized in an existing permit, see separate list titled "SECTION 10 - MAINTENANCE DREDGING.")

Mitigation

- 1) Discuss any mitigation (location, type, amount, etc) proposed for loss of intertidal or shallow subtidal habitat, or for other significant adverse effects.
- 2) Discuss both minimization techniques and compensatory mitigation (for remaining unavoidable impacts that are more than minimal).
- 3) What slope is proposed in the mitigation area(s)? What substrate?

Other Permits or Reviews

- 1) Has an Hydraulic Project Approval (HPA) been obtained from the Washington State Department of Fish and Wildlife (WDFW)? If so, what timing or other conditions were imposed?
- 2) Has Washington State Department of Ecology (Ecology) issued a Short-term Water Quality Modification? If so, what timing or other conditions were imposed?
- 3) Has the project gone through State SEPA review? (>50cy needs SEPA, <50cy is exempt, if for O&M) If so, what was result?
- 4) Has a local Shoreline permit been applied for? Issued?

TRANSPORT OF DREDGED MATERIAL

For In-water Disposal

- 1) Discuss how the dredged material will be transported to the disposal site.
- 2) Discuss controls against sloughing from barge or other transport method (e.g., no over-loading).

For Upland Disposal

- 1) If upland disposal is planned, discuss how the dredged material will be moved from the point of dredging to any temporary de-watering locations.
- 2) Also discuss how the dredged material will be transported to the final disposal site (e.g., truck, rail, etc).

DISPOSAL OF DREDGED MATERIAL*

In-Water Disposal

- 1) In Puget Sound, do you plan to take the dredged material to a designated DMMP (PSDDA) disposal site? If so, which one? If not, what is the location of proposed disposal? Is it deemed to be a dispersive or non-dispersive site?
- 2) In the Columbia River, do you plan to place the material in a flow lane, or take the dredged material to a designated disposal site? If so, where? If not, what

is the location of proposed disposal, and is it deemed to be a dispersive site or non-dispersive site?

- 3) In marine waters, do you plan to take the material to a designated ocean disposal site? If so, which one? Have you coordinated with the U.S. Environmental Protection Agency? If not a designated site, what is the location of proposed disposal?
- 4) In fresh waters, what is the location of the proposed disposal site?

Upland Disposal

- 1) What is the final disposal location?
- 2) Is it a “pre-approved” location such as a landfill? Or a new disposal site?

Definition of Terms

Action – all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies in the United States or on the high seas. [50 CFR 402.02] (**Note:** The issuance or modification of a Corps permit is a Federal action, as is the Corps approval that must occur during pre-dredge conferences.)

Action area – all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. [50 CFR 402.02] (**Note:** For dredging projects, the action area will typically include the actual area of dredging and outlying areas that may be directly affected by short-term or long-term turbidity and/or sedimentation from the operation, areas that have interrelated or interdependent actions that affect T&E species, and any areas indirectly affected by the proposed work. Consult the Corps when defining the action area for your project.)

Direct effects – the direct or immediate effects of the project on the species or its habitat, including any effects from interrelated or interdependent actions. Interrelated actions – those that are part of a larger action and depend on the larger action for their justification. Interdependent actions – those that have no independent utility apart from the action under consideration. [50 CFR 402.02] (**Note:** For dredging projects, the direct effects may include effects on water clarity, temperature, chemistry, etc; effects from sedimentation on the bottom; work along the shoreline that is interrelated with the dredging; work in certain upland areas that is interdependent with the dredging, etc.)

DMMP – Dredged Material Management Program of Seattle District Corps of Engineers.

Environmental baseline – the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early Section 7 consultation, and the impact of the State or private actions that are contemporaneous with the consultation process. [50 CFR 402.02] (**Note:** We take this to mean existing and anticipated impacts to the action area from: all actions already built, approved Federal actions not yet constructed, and any other approved actions presently under construction in the action area.)

Indirect effects – the effects caused by or which result from the proposed action, are later in time, and are reasonably likely to occur. They may occur outside of the area that is directly affected by the action. [50 CFR 402.02] (**Note:** For dredging projects, indirect effects can include use of the site after dredging is complete – e.g., are larger vessels anticipated to use the site and, if so, what effects will propeller wash from these vessels have on T&E species or their habitat such as benthic invertebrates that they prey on?)

PSDDA – Puget Sound Dredged Disposal Analysis program of Seattle District Corps of Engineers.

* This list just covers dredging to be authorized by Section 10 of the Rivers and Harbors Act. Disposal and return water from upland disposal sites are regulated under Section 404 of the Clean Water Act and a separate list of information needs is being developed for those activities. A separate list is also being developed for Section 10 maintenance dredging.