US Army Corps
of Engineers®
Northwestern Division

RECORD OF DECISION

DREDGED MATERIAL MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT

McNary Reservoir and Lower Snake River Reservoirs

September 2002

1. INTRODUCTION

This 2002 Dredged Material Management Plan Record of Decision (2002 DMMP ROD) addresses actions related to dredging in the Lower Snake River Project Reservoirs and McNary Reservoir as discussed in the Dredged Material Management Plan/Environmental Impact Statement (DMMP/EIS). The DMMP/EIS is the U.S. Army Corps of Engineers' (Corps') programmatic 20-year plan for maintenance of the authorized navigation channel in the lower Snake River reservoirs between Lewiston, Idaho, and the Columbia River, and McNary Reservoir on the Columbia River. The management of dredged material from these reservoirs, maintenance of flow capacity in the Lower Granite Reservoir and the 2002-2003 dredging are also addressed. Environmental Protection Agency, Region 10 (EPA), was a cooperating agency for this plan. It is our understanding that EPA intends to utilize this plan in implementing their responsibilities under Clean Water Act authority and Regional Dredging Team responsibilities.

The Dredged Material Management Study (DMMS) was initiated under guidance provided in Engineer Circular 11 *65-2-200, Policy-Dredged Material Management Plans* (now incorporated into Engineer Regulation 1 W5-2-1 00) which directs the development of DMMPs for Federal navigation projects. This evaluation is also in response to guidance issued on May 4, 1995, by the Corps' Director of Civil Works to the Commander, North Pacific Division, by the memorandum entitled "Lower Granite Lock and Dam, Washington, Sedimentation Studies Related to the Level of Protection Provided to the City of Lewiston, Idaho." This memorandum discussed a study to evaluate restoring the performance of project levees constructed to protect Lewiston, Idaho, from inundation caused by the Lower Granite project.

1.1 Background

The DMMP/EIS for McNary and the Lower Snake River Reservoirs covers the five lock and dam projects (including the reservoirs and navigation channels) for the upper portion of the Columbia and Snake Rivers inland waterway. These projects are: McNary (on the Columbia River) and Ice Harbor, Lower Monumental, Little Goose, and Lower Granite (on the Snake River). Each of these projects is authorized to provide navigation facilities including locks. This portion of the waterway extends approximately 179 miles [288.1 kilometers (km)] from McNary to Lewiston, Idaho.

The Corps has used periodic dredging at several locations along the Snake and Columbia Rivers to maintain the authorized channel depth, and several ports have used dredging to address sediment-related problems in accessing their loading or docking facilities. The Corps has also performed periodic maintenance dredging of relatively small amounts of sediments around public recreation areas and irrigation intakes for wildlife management areas.

The upper reach of the Lower Granite reservoir serves as a sediment trap for most of the material carried in suspension in the free-flowing reaches of the large sediment-contributing drainage area that includes the Salmon, Grande Ronde, Imnaha, and Clearwater Rivers; and the local drainage of the Snake River between the Hells Canyon complex and Lower Granite. The quantity of sediment that collects in the Lower Granite reservoir exceeds the quantities observed in each of the other lower Snake River reservoirs and in the McNary reservoir.

The deposition of sediments at the upstream end of the Lower Granite reservoir impacts the project's ability to convey high flows. This, in turn, affects the backwater levee systems constructed at the city of Lewiston. The Lower Granite project included a backwater levee system in lieu of relocating the business district of Lewiston. This levee system was designed and constructed to be an upstream extension of the dam and provide a minimum freeboard of 5 feet [1.5 meters (m)] during a "standard project flood" (SPF) event of 420,000 cubic feet per second (I 1 893.1 cubic meters per second) on the Snake River below the confluence of the Clearwater River. Periodic dredging of the Lower Granite reservoir has been used to partially restore flow conveyance capacity.

Dredged material was considered to be potentially beneficial in creating shallow water habitat for downstream migrating salmonid fishes and resident game fishes. A multi-year experimental in-water disposal test was implemented in 1985 with a monitoring program to assess the value of using dredged material for fish habitat enhancement. The results of the studies demonstrate that construction of shallow water habitat using dredged material has a potential for increasing habitat complexity in the reservoirs, thus potentially benefiting fish species listed under the ESA. See DMMP/EIS for additional background details.

Historical documents have been prepared for individual projects, including environmental impact statements prepared in the 1990s, which analyzed operation of the FCRPS. The documents relevant to projects in the DMMP/EIS study area include the following individual project environmental impact statements: Final Environmental Impact Statement, Ice Harbor (O&M) Lock and Dam, Snake River, Washington, June 1979; Final Environmental Impact Statement, Lower Monumental Lock and Dam, Snake River, Washington, February 1976; Final Environmental Impact Statement, McNary Lock and Dam, Columbia River, Washington and Oregon, April 1976; Environmental Impact Statement, Little Goose Lock and Dam, Snake River, Washington, October 1974; and the Final Environmental Impact Statement, Lower Granite Project, Snake River, Washington, May 1975. Other related documents include the 1992 Columbia River Salmon Flow Improvement Measures Options Analysis Environmental Impact Statement (OA/EIS) and its 1993 Supplement (SEIS), which analyzed alternatives to benefit salmon species listed under the ESA; Final Columbia River System Operation Review EIS (I 995); and the Lower Snake River Juvenile Salmon Migration Feasibility Report/Environmental Impact Statement (FR/EIS), February 2002. The DMMP/EIS analyses the effects of the maintaining the authorized navigation channel, and relies on some of the information contained in these prior documents.

1.2 Dredged Material Management Study and EIS Process

The Notice of Intent to prepare a draft DMMP/EIS was published in the Federal Register on August 5, 1998. In September 1998, the Corps hold two public scoping meetings, one in Richland, Washington, and one in Lewiston, Idaho. The stated purpose of the DMMP/EIS was to maintain the authorized navigation channel and publicly owned facilities in the lower Snake River and McNary reservoirs for 20 years; manage dredged material in a cost-effective, environmentally acceptable, and, wherever possible, beneficial manner; and maintain flow conveyance capacity of the Lower Granite reservoir for the remaining economic life of the project (year 2074). Meeting participants included representative(s) from ports, federal and state governmental agencies, local businesses, farming, and a member of Congress. The Corps used

the input and concerns from the scoping meetings to help define and refine the plan, alternatives, and the environmental documentation.

Following a preliminary development of alternatives, the Corps held a meeting in August 1999 with representatives of natural resource management agencies, regulatory agencies, and tribal interests to present the range of alternatives to be evaluated in the DEIS, including the recommended plan.

The Corps has hosted several meetings of the Local Sediment Management Group (LSMG). Representatives from federal and state agencies, ports, barging organizations, and tribes attended. At the July 2000 and February 2001 meetings, the Corps presented information on the DMMP projected schedule, effects of dredging on aquatic resources and dredging in the lower Snake River, an overview of the National and Regional Dredging Teams, a status report on the DMMP, a status report on the dredging framework for the lower Snake and Clearwater Rivers and McNary reservoir, and continued discussions of dredging and dredged material disposal activities. The LSMG met again in December 2001 to discuss the status of the DMMP process, beneficial uses of dredged material, the proposed woody riparian habitat program, the proposed 2002-2003 maintenance dredging, and the dredged material evaluation framework.

The Draft DMMP/EIS and its appendices were released for public review and comment in November 2001. The comment period on the Draft DMMP/EIS began November 23, 2001 and extended through January, 2002. Twenty-six comment documents (letters and e-mails) were received. The Corps also conducted two public meetings in December 2001 (in Pasco, Washington, on December 12, and Lewiston, Idaho, on December 13) to discuss the DMMP/EIS and receive comments. In addition to the opportunities to comment on the DMMP/EIS, the Corps has coordinated and consulted with agencies, affected tribal groups, and interested members of the public throughout the process. The Corps considered all public comments received throughout the evaluation process. Where appropriate, the Corps revisited and/or revised the documentation, data, and/or analysis that were presented in the Draft DMMP/EIS. The responses to the comments on the draft DMMP/EIS can be found in Appendix 0 of the Final DMMP/EIS.

The Corps announced the release of the Final DMMP/EIS and its 15 appendices on August 9, 2002, with a Notice of Availability (NOA) in the Federal Register. The Final DMMP/EIS incorporates evaluation of additional data, comments, and other information gathered since release of the draft document. During the development of this 2002 DMMP ROD, the Corps also considered all comments and new information received between the August 9, 2002 NOA and the signing of this 2002 DMMP ROD. The Corps also received comments on the Final DMMP/EIS and the public notice regarding 401 water quality certification. These comments and responses can be found in Attachment A of this 2002 DMMP ROD.

This DMMP/EIS was prepared pursuant to regulations implementing the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.) and documented the plan's purpose and need, alternatives, affected environment, environmental consequences, mitigation, public involvement, and regulatory compliance.

2. ALTERNATIVES CONSIDERED IN THE STUDY AREA

Corps dams and reservoirs in the Columbia River Basin as well as maintenance of the navigation channel are authorized for construction, operation and maintenance in accordance with specific legislation. The Corps' decisions on the construction, operation and maintenance of its multiple-purpose projects are made taking into account statutory and regulatory responsibilities, operating experience, public concerns, available water, public health and safety, available funding, international agreements, and the needs of the Pacific Northwest and the Nation. Details of uses and authorizing laws can be found in the DMMP/EIS.

2.1 Study Area

The Lower Snake River Project and McNary (Table 1) are multiple-use facilities that provide navigation, hydropower, irrigation, recreation, and fish and wildlife conservation benefits. These dams were not built to control floods. Storage reservoirs, such as the Dworshak Reservoir on the North Fork of the Clearwater River, are used to store water and adjust the river's flow patterns. The general characteristics of these projects and their associated reservoirs are summarized in the following table.

Table 1. Characteristics of Affected Projects

Project Name	Location (River Mile)	Year Completed	Reservoir Name	Reservoir Size[1] (surface acres)	Reservoir Length (miles)	Reservoir Elevation (NGVD29[3])
McNary	292 (Columbia)	1953	Lake Wallula	37,000	61.6	335-340
Ice Harbor	9.7 (Snake)	1961	Lake Sacajawea	8,375	31.9	437-440
Lower Monumental	41.6 (Snake)	1969	Lake Herbert G. West	6,590	28.7	537-540
Little Goose	70.3 (Snake)	1970	Lake Bryant	10,025	37.2	633-638
Lower Granite	107.5 (Snake)	1975	Lower Granite Lake	8,900	39.3[2]	733-738

1 At normal operating pool elevation.
2 Does not include 4.6 miles of impoundment on mainstem of Clearwater River.
3 NGVD29 = National Geodetic Vertical Datum

2.2 Other Projects, Programs, and Initiatives

There are other projects, programs, and initiatives that the Corps considered in developing the DMMP/EIS. Some examples include, but not limited to: Juvenile Salmon Transportation Program; Columbia River Fish Mitigation Program; Phase 11 Dissolved Gas Abatement Program; Anadromous Fish Evaluation Program; Water Quality Plan; Payos Kuus Cuukwe Cooperating Group; Northwest Power Planning Council; Columbia River Treaty; Dredged Material Evaluation Framework: Lower Columbia River Management Area; Columbia River Channel Improvement Project; Lower Snake River Juvenile Salmon Migration Feasibility Study; Lower Snake River Fish and Wildlife Compensation Plan; and the Corps Regulatory 404 (CWA) permits program.

For further discussion on these programs see the DMMP/EIS.

2.3 ALTERNATIVES CONSIDERED

The four alternatives that are evaluated in the DMMP/EIS are:

- Alternative I - Maintenance Dredging with In-Water Disposal (No Action/No Change).
- Alternative 2 - Maintenance Dredging with In-Water Disposal to Create Fish Habitat and a 3-foot (0.9-m) Levee Raise.
- Alternative 3 - Maintenance Dredging with Upland Disposal and a 3-foot (0.9-m) Levee Raise.
- Alternative 4 - Maintenance Dredging with Beneficial Use of Dredged Material and a 3-foot (0.9-m) Levee Raise.

The following Table 2 provides a summary comparison of the alternatives and Sections 2.5.1 through 2.5.4 of the DMMP/EIS provides detailed descriptions of the alternatives.

Table 2. Comparison of Alternatives

Alternative	Dredging Requirement	Dredged Material Disposal	Annual Dredging Costs	Levee Modification	Relocation/ Acquisition Requirements
1 – No Action (No Change) – Maintenance Dredging with In-Water Disposal	Maintenance(1)	In-water, primarily to create shallow water fish habitat	$560,000	None	None
2 – Maintenance Dredging with In-Water Disposal to Create Fish Habitat and a 3-Foot (0.9-m) Levee Raise	Maintenance(1)	In-water to create shallow water fish habitat	$560,000	Raise levees up to 3 feet (0.9 m) to maintain flow conveyance capacity	Limited raising of roadways
3 – Maintenance Dredging with Upland Disposal and a 3-Foot (0.9-m) Levee Raise	Maintenance(1)	Upland at "Joso" site in Lower Monumental reservoir	$730,000	Raise levees up to 3 feet (0.9 m) to maintain flow conveyance capacity	Limited raising of roadways
4 – Maintenance Dredging with Beneficial Use of Dredged Material and a 3-Foot (0.9-m) Levee Raise	Maintenance(1)	Beneficial use	$560,000(2)	Raise levees up to 3 feet (0.9 m) to maintain flow conveyance capacity	Limited raising of roadways

Note:
(1) Includes maintenance of the authorized navigation channels of the lower Snake River reservoirs and McNary reservoir, maintenance dredging of access channels to port and moorages on an as-needed basis, public recreation areas (swimming beaches and boat basins), irrigation intakes for wildlife HMUs and recreation sites; and flow conveyance capacity of the Lower Granite reservoir.
(2) Beneficial use see Section 2.5.4.2 of the DMMP/EIS.

3. SELECTED ALTERNATIVE

3.1 Description of the Selected Alternative

The Corps' selected alternative or plan for long-term management of dredged material is "Alternative 4 - Maintenance Dredging with Beneficial Use of Dredged Material and a 3-Foot (0.9-m) Levee Raise."

The dredging procedure will vary depending on the location of the dredging (see Table 3). For the dredging proposed for the navigation channels, slips, and berths of the Columbia/Snake/ Clearwater Rivers navigation system, mechanical dredging would be used. Dredging would be performed within the established in-water work windows, which currently are December 15 through March I in the Snake and Clearwater Rivers and December I to March 31 in the Columbia River. Dredging outside these work windows, such as summertime, would be subject to coordination' with LSMG and state and federal resource agencies and evaluation for compliance with NEPA, Clean Water Act, Endangered Species Act, and other applicable environmental laws. The disposal plan will seek and incorporate beneficial uses for each dredging activity, as appropriate.

Off-channel dredging projects are to involve either mechanical methods or non-agitation hydraulic methods and discharging to barge or truck for transport or piping to an upland disposal location. Appropriate upland disposal sites include, but are not limited to, Corps land, beneficial use upland applications, and local landfills. This off-channel or backwater dredging activity would use the in-water work window or possibly an alternate summer work window if one were approved for the specific project.

Table 3. Dredging Options by Area

Area to be Dredged	Dredging Option*		
	Time of Year To Dredge	**Method of Dredging**	**Disposal Location**
Navigation Channel	Winter	Mechanical	In-water or upland
Ports	Winter	Mechanical	In-water or upland
Boat Basins	Winter	Mechanical	In-water or upland
	Summer	Mechanical or hydraulic	Upland
Swim Beach	Summer	Mechanical or hydraulic	Upland
	Winter	Mechanical or hydraulic	In-water or upland
Irrigation Intakes	Summer	Mechanical or hydraulic	Upland
	Winter	Mechanical or hydraulic	In-water or upland

* Options listed in order of preference.

For detailed descriptions of the dredging activities per reservoir, dredging specifics, template design, quantities, material types, beneficial uses, unsuitable material disposal option, and levee raise, see the information the DMMP/EIS, associated appendixes. The Corps will continue to update this information and make it available to the public.

3.2 The Local Sediment Management Group

As part of the DMMP process, a Local Sediment Management Group (LSMG) was formed to provide agency and stakeholder input to the Corps on dredged material management. This group's formation and direction is consistent with the inter-agency National Dredging Team's guidance. The LSMG will continue to develop in accordance with policies and procedures currently evolving for the Regional Dredging Team (RDT), as referred in the April 26, 2002, policy letter jointly signed by Brigadier General David A. Fastabend (Corps of Engineers Northwest Division Commander) and L. John lani (EPA Region 10 Administrator).

The LSMG is intended to play an important role in the implementation of the DMMP. It would assist in the development and adoption of appropriate method(s) for management of dredging and use and/or disposal of dredged material from federal navigation and maintenance projects. In the formulation of these management policies, the LSMG would be asked to consider key environmental laws and regulations involved in this process; consider the responsibilities of other federal, state and local resource agencies; and help develop a process for coordinating dredging and beneficial use of dredged material. In addition, the LSMG would discuss evaluation of dredging and dredged material management activities and options consistent with an adaptive management approach, strategies to reduce dredging requirements, suggestions for beneficial uses of dredged materials, and comment on proposals for in-water habitat creation using dredged materials. The LSMG could also serve as a forum for discussing with the Corps improved the implementation of the DMMP.

Present LSMG attendance includes tribes and state and federal agency representatives. Additionally, public ports within the study area have been invited to participate in the LSMG, and other local entities with interest in the management of resources involved in dredged material management (e.g., counties, municipalities, environmental groups, and transportation interests) would be asked to participate on a regular basis. In addition, the LSMG has been identified as a forum to address regional sediment issues in the lower Snake River. The land management and conservation agencies such as the U.S. Forest Service and the Bureau of Land Management will also be asked to participate in the LSMG.

3.3 The 2002-2003 Dredging

The Corps has identified the first dredging activity that would be conducted under the DMMP/EIS. This dredging is currently proposed for winter 2002-2003 and includes dredging the navigation channel at the confluence of the Snake and Clearwater Rivers, several port facilities in the Lewiston-Clarkston area, several recreation facilities in Lower Granite and Little Goose reservoirs, navigation lock approaches to Lower Granite and Lower Monumental, and several other potential areas. The Corps briefed the LSMG, which provided input on the proposed 2002-200-'l dredging and dredged material management. The Corps is currently proposing in-water disposal to create shallow water fish habitat and a woody riparian habitat planting bench in Lower Granite reservoir at RM 1 16 as a beneficial use of dredged material, which is a modification of the disposal plan presented in the DMMP/EIS, Appendix N, Dredging Proposed for Winter 2002-2003. The Corps plans to monitor the dredging and disposal as provided for in the Appendix M, Monitoring program, and is preparing a monitoring plan specifically for the 2002-2003 dredging. The Corps will make the revised disposal plan and the monitoring plan available to the public.

3.4 Monitoring

The Corps has anticipated the need to perform monitoring of the dredging and disposal activities. The Corps has performed monitoring in the past and will continue in the future. For a complete discussion on monitoring associated with this DMMP/EIS see the final report, Appendix M, Monitoring Program. The Corps monitoring plan for the 2002-2003 dredging will be made available to the public once the plan is completed.

3.5 Plan Selection Rationale

3.5.1 Key Reasons

Alternative 4 was selected be' cause:

- The Corps will implement the plan consistent with National Marine Fisheries Service (NMFS) 2002 DMMP Biological Opinion and USFWS concurrence.
- It fulfills the need to maintain the navigation channels of the system.
- It manages dredged material from the reservoirs.
- It maintains flow capacity in the Lewiston-Clarkston area.
- It has the least negative environmental impacts of the alternatives considered, the greatest potential environmental benefits, is cost effective, and it most completely and efficiently meets the project purpose and need.
- It incorporates features that have potential to restore valuable aquatic and terrestrial habitat to the system.
- Provides the greatest beneficial use of dredged material.
- It incorporates an adaptive management approach providing for ongoing evaluation of dredged material management activities and opportunities to adapt and adjust actions based on these evaluations.

The distinguishing characteristic of Alternative 4 is that the primary focus of the management strategy for dredged material would be to incorporate and maximize beneficial uses of dredged material. For each dredging activity, the Corps would identify potential beneficial uses and coordinate the uses with the LSMG prior to selecting a use. Potential beneficial uses that could be initially considered include: fish habitat creation; woody riparian habitat program; riparian habitat restoration; bank stabilization; Hanford remediation and closure activities capping material; potting soil; fill at Port of Wilma; fill on non-federal lands; and fill for roadway projects.

For the planned dredging in winter 2002-2003, the Corps proposes to use dredged material to develop a woody riparian area and create shallow water habitat for juvenile salmonids at RM II 6 in Lower Granite Reservoir. This beneficial use would create shoreline habitat in line with the goals of the Lower Snake River Fish and Wildlife Compensation Plan. It is the Corps' policy to manage dredged material associated with the construction or maintenance dredging of navigation projects in a manner that is consistent with sound engineering practice and meets applicable Federal environmental standards in the least costly manner.

3.5.2 Considerations Affecting Decisions and Implementation

3.5.2.1 Authorities and Funding/Appropriations

Currently, the Corps has authority to implement the actions described in the selected plan/alternative in the DMMP. However, if any additional action is deemed necessary in implementing the DMMP and/or requiring additional authority and/or Congressional direction, the Corps, on a case-by-case basis, will examine the appropriate course of action. This may include preparation of authorizing documents, requests for appropriations, notification to congressional committees, preparation of NEPA documents, or other actions.

The Corps will review the actions in the selected plan and the NMFS 2002 DMMP Biological Opinion within the annual budgetary guidance. Based on annual appropriations, the Corps will implement the selected plan as described in the Final DMMP/EIS and this 2002 DMMP ROD.

3.5.2.2 Emergency Dredging

Under any dredging and dredged material disposal measure considered, the Corps may need to perform dredging on an emergency basis. An emergency, as defined in 33 CFR 335.7, Operation and Maintenance of Army Corps of Engineers Civil Works Projects Involving the Discharge of Dredged or Fill Material into Waters of the U.S. or Ocean Waters, is a situation that would result in an unacceptable hazard to life or navigation, a significant loss of property, or an immediate and unforeseen significant economic hardship if corrective action is not taken within a time period less than the normal time needed under standard procedures. There are several potential situations that could occur in the Snake and Columbia Rivers that may require emergency dredging. For an emergency dredging situation, the Corps would perform environmental coordination on an expedited basis. The Corps would perform as much coordination as possible before initiating the emergency dredging, but some coordination may be performed during the dredging or after the dredging is completed.

3.5.2.3 Tribal/Trust Responsibilities

The sovereign status of Native American tribes has long been recognized. Principles outlined in the Constitution, treaties, Federal statutes, regulations, and executive orders continue to guide national policy towards Native American nations. Working within a govemment-to-govemment relationship with Federally recognized tribes, agencies consult, to the extent practicable and permitted by law, with tribal governments; assess the impact of agency activities on resources; ensure that tribal interests are considered before the activities are undertaken; and remove procedural impediments to working directly with tribal governments on activities that affect the rights of the tribes.

This relationship recognizes that tribal governments are sovereign entities with rights to set their own priorities, develop and manage tribal resources, and be involved through the consultation process in Federal decisions or activities that have the potential to affect these rights. The development of this DMMP/EIS has included efforts to obtain tribal views of agency responsibilities or actions related to this study, in accordance with provisions of treaties, laws, and executive orders, as well as principles found in the United States Constitution. Several tribal chairs/leaders have met with Corps commanders/leaders with regard to this study. The Corps has also reached out, through designated points of contact, to involve tribes in collaborative

processes designed to facilitate information exchange and consideration of various viewpoints. Tribal members have participated or attended meetings where these issues were discussed.

The Corps' Northwestern Division Commander met with tribes that requested a government-to-government meeting. The DMMP/EIS ROD and other issues were discussed. A meeting was held on June 13, 2002, with the Confederated Tribes of the Umatilla Indian Reservation; on July 1, 2002, with the Confederated Tribes of the Colville Indian Reservation; and on August 1, 2002, with the Confederated Tribes and Bands of the Yakama Nation. The tribes were informed of the DMMP/EIS ROD signing and were invited to share concerns during the consultation meeting or in follow-up.

3.5.2.4 Environmental Compliance Documentation

When selecting the recommended plan (preferred alternative) for the DMMP/EIS, the Corps reviewed its compliance with applicable laws, Executive Orders, and relevant agreements. These laws include, but are not limited to:

- National Environmental Policy Act.
- Archaeological Resources Protection Act.
- National Historic Preservation Act.
- Native American Graves Protection and Repatriation Act.
- Clean Air Act.
- Federal Water Pollution Control Act (Clean Water Act).
- Endangered Species Act.
- Federal Water Project Recreation Act.
- Fish and Wildlife Coordination Act.
- Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act).
- Migratory Bird Conservation Act.
- Coastal Zone Management Act.
- Safe Water Drinking Water Act.
- Flood Control Act of 1944.
- Magnuson-Stevens Fishery Conservation and Management Act.
- Wild and Scenic Rivers Act.
- Federal Pollution Control Acts.
- River and Harbors Acts.
- Executive Orders and Council on Environmental Quality (CEQ) Guidelines and Memorandum.
- Other Federal, State, and Local Plans and Laws.
- Relevant Agreements.

The Corps has evaluated the actions of the Dredged Material Management Plan described in the DMMP/EIS and this 2002 DMMP ROD and considered the effects of those actions in regard to standards or requirements set forth in these and other applicable laws and regulations in making decisions. The selected plan is in compliance with laws governing water, air, and land resources including the Clean Water Act, ESA, fish and wildlife requirements, and cultural resources requirements.

The CEQ regulations for implementing NEPA require agencies to consider the consistency of a proposed action with approved state and local plans and laws. State and local government agencies operate a variety of recreational, infrastructure, and related resources along the river system. Impacts to these resources that could result from the various alternatives are identified in DMMP/EIS. In accordance with Executive Order 12372, the DMMP/EIS was circulated to the appropriate state agencies for review during the process.

The Corps will obtain compliance with NEPA with the completion of this 2002 DMMP ROD. Documentation of compliance with these and other applicable environmental laws, rules, regulations, and executive orders can be found in the DMMP/EIS and in other documentation cited or referenced in this 2002 DMMP ROD. Three of these acts warrant specific discussion and are briefly discussed below.

Endangered Species Act (ESA)
The Corps has completed ESA Section 7 Consultation and will continue to consult when appropriate with NMFS and USFWS concerning listed species that could be affected by the actions addressed in this DMMP/EIS. The consultations with NMFS resulted in a Biological *Opinion, Endangered Species Act - Section 7 Consultation, Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation On the Dredged Material Management Plan for the McNary Reservoir and Lower Snake River Reservoirs,* July 30, 2002. (NMFS 2002 DMMP Biological Opinion). See Appendix F, Endangered Species Act Consultation for Anadromous Fish Species. This opinion includes the Snake River sockeye (SR), Snake River Fall chinook, Snake River Spring/Summer chinook, Snake River steelhead, Upper Columbia River Spring chinook (UCR), Upper Columbia Steelhead, and the Middle Columbia Steelhead (MCR).

NMFS 2002 DMMP Biological Opinion states "the effects of the proposed action will not jeopardize the continued existence of SR sockeye, SRF chinook, SRSS chinook, SR steelhead, UCRS chinook, UCR steelhead, or MCR steelhead. The proposed action is not expected to degrade baseline habitat functions necessary for the survival and recovery or any of the subject species." The Biological Opinion included an Incidental Take Statement with the following Reasonable and Prudent Measures:

- Minimize take of listed species through implementing conservation measures
- Monitor DMMP operations to minimize take
- Adaptively manage DMMP operations to minimize take
- Minimize take by conducting DMMP activities so that they do not contribute to anthropogenic sedimentation.

In addition, the Biological Opinion included discretionary Conservation Recommendations. One of the recommendations requested the COE seek authorization and appropriations to conduct a general investigation study on issues that the COE determines relate to activities and/or areas within its control. The Walla Walla District will initiate efforts in 2003 to seek the appropriate authorization by 2004 to conduct the necessary sediment management planning for the Lower Snake River. If Congress provides the necessary authorization, the District will then seek necessary appropriations to undertake this study effort. The purpose of this planning effort is to

investigate sources and types of sediment that inflow into the Lower Snake River and evaluate alternative measures to reduce or manage this sediment.

Consultation with the USFWS is discussed in the DMMP/EIS, Appendix G, Endangered Species Act Consultation for Non-Anadromous Fish and Terrestrial Species. Through informal consultation, the USFWS by letter concurred in the Corps findings of "may effect, but not likely to adversely affect" regarding the following listed species: bull trout, bald eagle, water howellia, Ute ladies' tresses, and a "no effect" on Spalding's silene. In their concurrence letters, USFWS identified several conditions or assumptions, including the need for consultation on specific dredging and associated actions and compliance with the terms of the USFWS Biological Opinion for the FCRPS regarding bull trout in the lower Snake River system (see DMMP/EIS, Appendix G).

The Corps intends to comply with the measures in the incidental take statements of the NMFS 2002 DMMP Biological Opinion and USFWS conditions when implementing the DMMP. The Corps intends to comply with the Conservation Recommendations to the extent practicable, and report to NMFS on their implementation, as requested in their Biological Opinion.

Additional ESA coordination will be performed for future dredging activities. Impacts would be assessed on a case-by-case basis through this process. The Corps will consult with USFWS up to every 5 years for future dredging. The Corps will provide annual updates to NMFS summarizing the dredging-related activities (including monitoring) that occurred that year, discussing the impacts of those activities and describing future planned activities. The Corps must reinitiate consultation with NMFS and USFWS if there are changes in impacts that were not addressed in the initial consultation. The Corps will initiate consultation with NMFS and USFWS, as necessary, including consultations for changes in impacts.

Federal Water Pollution Control Act (Clean Water Act)
The DMMP/EIS includes a programmatic Clean Water Act 404(b)(1) evaluation addressing potential water quality impacts of proposed in-water discharges of dredged materials, as part of the 20-year plan proposed in the DMMP for dredging operations on the lower Snake River and McNary Reservoir. (See Appendix I Section 404(B)(I)of the DMMP/EIS). The dredged material management strategies regarding the DMMP that are adopted by the Corps will also be considered during 404 Permit evaluations. The 404(b)(1) evaluation is consistent with and appropriately implements policies expressed in the Clean Water Act (CWA).

The CWA 401 water quality certification for the selected alternative will be requested for future disposal activities from the regulating agencies for the States of Washington, Idaho, and Oregon for each dredging activity, as appropriate. Separate 404(b)(1) evaluations will be prepared for each in-water disposal activity and submitted to the appropriate state(s) along with a request for water quality certification. A 404(b)(1) evaluation was prepared for the winter 2002-2003 activity and is included in Appendix N of the DMMP/EIS. The monitoring program can be found in Appendix M. Monitoring updates and updated disposal (beneficial use) location drawings for disposal at RM 116 will be made available to the public by the Corps.

Total dissolved gas and water temperature concerns in the Columbia Basin have been and continue to be addressed by the Corps through participation in regional processes such as the development of total maximum daily loads (TMDL), evaluation of Corps' facilities effects on

water quality such as the dissolved gas (DGAS), and construction of structural modifications such as flow deflectors at mainstem facilities. The Corps has addressed its responsibilities under the CWA and ESA through consultation with NMFS and USFWS on the operation of the FCRPS and in cooperation with EPA and other Federal agencies.

Because the Corps has not completed the Mid-Columbia and Lower Snake River Region Sediment Testing Framework, the Corps, in coordination with EPA and Washington Department of Ecology (WDOE) will use the applicable portions of the Dredged Material Evaluation Framework: Lower Columbia River Management Area to evaluate sediments prior to dredging. When performing dredging and disposal activities, the Corps will monitor water quality to ensure that its activities do not exceed state water quality standards outside of the "mixing zone" associated with the dredging and dredged material placement activities.

The National Historic Preservation Act (NHPA)
Based on available information, the Corps has identified the known historic properties (terminology used in NHPA) in the project area and evaluated both the effects of the proposed alternatives on these sites and the measures that might be implemented to mitigate the potential effects pursuant to Section 106 of the NHPA (16 U.S.C. 470).

The Corps' preliminary determination found that DMMP/EIS dredging and disposal actions potentially could affect historic properties. The Corps has consulted with the SHPOs of Washington, Idaho, and Oregon, Native American Tribes (Tribes), and other interested parties. The Corps proposes to consult with the SHPOS, Tribes, and other interested parties each time a dredging activity is planned. The Corps is also considering entering into programmatic agreements for proposed dredging activities with the Washington, Idaho, and Oregon SHPOS. Also, Washington and Idaho SHPOs have provided concurrences with the proposed 2002-2003 dredging and dredged material management activities. Related laws that were also considered in the preparation of this DMMP/EIS include, but are not limited to: The Antiquities Act of 1906; Historic Sites Act of 1935; Reservoir Salvage Act of 1960; Archeological and Historic Preservation Act of 1974; Archeological Resources Protection Act; Native American Graves Protection And Repatriation Act and American Indian Religious Freedom Act.

3.5.2.5 Other Regulations and Guidance

Other regulations and guidance include Executive Orders, Council on Environmental Quality (CEQ) Memorandum; Corps regulations; and other Federal, state, and local plans and laws. For discussion of applicable regulations and guidance see the DMMP/EIS. As an example of this type of guidance is the Executive Order 12898, which requires federal agencies to consider and address environmental justice by identifying and assessing whether agency actions may have disproportionately high and adverse human health or environmental effects on minority or low-income populations. This DMMP/EIS programmatically considered the effects of the categories of actions contemplated. These actions are not anticipated to be borne predominantly by any particular low-income or minority group such that the effects would be considered disproportionately high and adverse with respect to low-income or minority populations. Maintaining the level of flow conveyance would involve raising levees in the Lewiston area and is similarly not expected to disproportionately affect any particular demographic group.

3.5.2.6 Other Considerations

The Corps has incorporated the best information and science available at the time into the evaluations associated with the development of the DMMP/EIS and reviewed updated information in the formulation of this 2002 DMMP ROD. There are some uncertainties and controversy in the scientific information regarding the biology, as well as water quality impacts and economics. A sensitivity analysis was conducted and is included in the DMMP/EIS evaluation. The Final DMMP/EIS and the ROD is based on the best information available to date and is sufficient to support the selection of Alternative 4 - Maintenance Dredging with Beneficial Use of Dredged Material and a 3-foot (0.9-m) Levee Raise for implementation.

The Corps also identified as the environmentally preferred alternative: Alternative 4, the selected plan. This alternative would have the least environmental impacts and greatest potential environmental benefits of the alternatives considered. See DMMP/EIS for further discussion.

The Corps conducted a thorough economic analysis located in Appendix C, Economic Analysis of the DMMP/EIS. The Corps has updated its evaluation to include some recent economic data and completed its review before signing of this 2002 DMMP/EIS ROD. Some of this recent data is referenced and discussed in the Attachment A Response to Final Comments of this ROD.

A cumulative impact analysis is included and cumulative effects are discussed throughout the DMMP/EIS. In Section 4 of the DMMP/EIS, each affected resource is described. See Section 4.15, Cumulative Effects, of the DMMP/EIS for a specific discussion.

Several other factors including, but not limited to, regional acceptability, implementation impacts, short-term uses and long-term productivity, irreversible and irretrievable commitment of resources, short-term and long-term effects, and indirect, direct and cumulative impacts were considered in this decision-making process. See the DMMP/EIS for further details.

4. STATEMENT OF DECISION

I have taken into consideration the environmental consequences, the socioeconomic costs, and the biological data pertinent to the actions to be implemented as a result of the DMMP/EIS. I have determined that adequate authority, NEPA documentation, and scientific rationale exist to implement the Dredged Material Management Plan and the 2002-2003 Dredging in the Lower Snake River Project and McNary Reservoirs.

The Corps requested on June 14, 2002, a 401 water quality certification from the State of Washington Department of Ecology (WA DOE). It is our understanding that WA DOE will have completed processing the request by or around October II, 2002. The requested certification is for the disposal of dredged material within the project area. The Corps will not begin dredging until it receives a water quality certification for each dredging cycle in the DMMP, including the dredging cycle in 2002-2003). The Corps plans to proceed with this dredging beginning December 15, 2002. Should the Corps decide not to begin dredging under the DMMP this year, it will issue an appropriate notification.

I have taken into account the Northwest treaty tribes' fishing rights, the United States' trust responsibility to Native American Indian Tribes, and the United States' responsibility to act in a manner consistent with the trust responsibility. The actions the Corps will implement are

designed to maintain the navigation channel and associated public areas, and maintain flow conveyance. The beneficial uses associated with these actions which assist the listed salmon species should potentially have beneficial results to the treaty tribes' fishery and benefits to the Northwest region as a whole.

Although there is some scientific disagreement, the conclusions in the NMFS 2002 DMMP Biological Opinion take **into** account the differing scientific opinions and interpretations of available information, including the research on salmonid habitat creation. The Corps' decision to rely on the biological information contained in the NMFS 2002 DMMP Biological Opinion and the consultation with USFWS is based, in part, on NMFS and USFWS consideration of the differing scientific (biological) information and their expertise on the effects on other species.

I find that the evaluations and documentation that support the NMFS 2002 DMMP Biological Opinion, the USFWS concurrence, the 2001 ROCASOD, the FR/EIS and the DMMP/EIS are sufficient to support the selection of the DMMP/ElS' recommended plan (preferred alternative): Alternative 4 - Maintenance Dredging with Beneficial Use of Dredged Material and a 3-foot (0.9-m) Levee Raise. The Corps has determined that these actions, taken together, will meet the Corps' responsibilities under the ESA to avoid jeopardy to the listed anadromous species: the Snake River spring/summer chinook salmon, fall chinook salmon, steelhead, sockeye salmon, Upper Columbia Basin steelhead, Middle Columbia Basin steelhead, and Upper Columbia Basin spring run chinook salmon. Also, these actions may affect but are not likely to adversely affect other species listed under the Endangered Species Act, e.g. bull trout, bald eagles, Ute ladies' tresses or water howellia, and will have no effect on Spalding's silene .

I have taken into consideration the specific environmental consequences, the socioeconomic costs, and the biological data pertinent to each alternative and compared each DMMP/EIS alternative for a plan to manage dredged material. After careful evaluation of all these issues, those above, and consideration of public concerns, I have decided to implement Alternative 4 - Maintenance Dredging with Beneficial Use of Dredged Material and a 3-foot (0.9-m) Levee Raise as set forth in the Final DMMP/EIS and this Record of Decision as the selected plan.

Issued on September 27, 2002.

/Signed/

David A. Fastabend
Brigadier General, U.S. Army
Division Engineer

ATTACHMENT A
Responses to Final Comments

The following pages have been modified from the original version to improve readability. The original comment letters have been re-scanned to provide a clearer image. The content and wording of the responses are unchanged.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

Reply To
Attn Of: ECO-088 SEP - 6 2002 Ref: 01-084-COE

Jack Sands, Project Manager
U.S. Army Corps of Engineers
Walla Walla District
201 North 3rd Avenue
Walla Walla, Washington 99362-1876

Dear Mr. Sands:

The Environmental Protection Agency (EPA) has completed its review of the final Environmental Impact Statement (EIS) for the proposed **Dredged Material Management Plan for the McNary Reservoir and the Lower Snake River Reservoirs** (CEQ No. 020336) in accordance with our authorities and responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. The EIS has been prepared by the U.S. Army Corps of Engineers to evaluate long-range options for maintenance of the navigation channel from Lower Granite reservoir on the Lower Snake River through the McNary reservoir on the Columbia River. The final EIS identifies an alternative to conduct maintenance dredging in all reservoirs in the project area and to dispose of the sediments in a beneficial manner as the Corps of Engineers' preferred alternative. The preferred alternative would also involve raising levees in the vicinity of Lewiston, Idaho and Clarkston, Washington.

While we continue to be supportive of the efforts being taken to develop the Dredged Material Management Plan (DMMP), we continue to have significant concerns with the currently proposed plan (as embodied in the preferred alternative) and the content of the EIS. We find that the final DMMP/EIS does address some of the questions we raised in our comments on the draft EIS (e.g., it confirms that the Local Sediment Management Group (LSMG) has been formed and has met). However, the major issues and concerns identified in our comments on the draft EIS and on a preliminary version of the final EIS (see June 18, 2002 letter from Regional Administrator Iani to Colonel Wagenaar) have, by and large, not been addressed in a substantive manner. The areas where we continue to have major concerns are highlighted below. 1

Lack of a Sediment Reduction Strategy - We remain concerned that the plan still does not include a strategy for reducing the input of sediment into the project area. While the final DMMP/EIS does indicate that LSMG will be a forum to discuss possible strategies for reducing sediment inputs, it does not convey the importance of proactively investigating and ultimately pursuing and implementing such strategies that we believe should be reflected in the DMMP. We believe that the DMMP should reflect a comprehensive strategy for addressing the sources contributing to sedimentation as well as the dredging and disposal of accumulated sediments. We see the presently proposed plan as being focused almost exclusively on the latter. We continue to believe that the general objectives of the DMMP related to reducing sedimentation should reflect a more active and committed approach to reducing sediment inputs. 2

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Proposed Creation of Salmonid Habitat - In investigating the proposed disposal strategy to "create salmon habitat" by creating shallow near-shore benches, we conclude the following:

1. The body of available information (much of it funded by the Corps) does not lead to definitive conclusions that the proposed disposal approach will indeed benefit salmon;
2. The proposed disposal approach should be viewed more as *potentially beneficial and experimental* than as an approach that has been demonstrated to achieve the results described;
3. Attempts to create salmonid habitat should be accompanied by a rigorous, long-term monitoring program. **3**

Our June 18, 2002, letter included suggested text changes intended to provide the public and the decision maker with a more balanced and accurate understanding of the technical information that has been developed related the issue of creating salmonid habitat in the Lower Snake River. Those suggested changes are not included in the final DMMP/EIS. As a consequence, we believe that the EIS continues to provide an incomplete characterization of the potential consequences of the currently proposed disposal strategy. The implementing regulations for NEPA direct Federal agencies to "insure that environmental information is available to public officials and citizens before decisions are made" (40 CFR 1500.1(b)) and to "objectively evaluate" alternatives in the EIS (40 CFR 1502.14(a)). Our proposed text changes/additions were provided to better meet the intent and direction of those provisions of the regulations.

Monitoring and Adaptive Mangement - We provided comments in our June 18 letter about the need to expand the proposed monitoring plan (contained in Appendix M) to include a comprehensive monitoring strategy to evaluate the overall success of the plan in meeting its defined goals and objectives (including the creation of salmonid habitat). We continue to believe that Appendix M (which remains unchanged from the version included in the draft EIS) does not reflect a systematic approach to gathering and analyzing data that would be used to evaluate the effectiveness of the proposed management program over the entire 20 year life of the plan. Such an approach is critical to implementing a meaningful adaptive management strategy and should be included as a fundamental component of the DMMP. **4**

Local Sediment Management Group (LSMG) - The DMMP remains unclear with respect to the role of the LSMG and decision making associated with the implementation of the plan. While the DMMP suggests that the LSMG would have a potentially significant role in developing management approaches and formulating policy, the DMMP lacks information needed to understand the true nature and scope of expected decisions to be made as well as the organizational structure and process(es) that would be used to reach such decisions. Thus, the specific relationship of the activities of the LSMG to decisions to be rendered remains relatively undefined. We are concerned with the lack of clarity, given that the function of the DMMP is to define how sediment management activities and decision making are to be conducted over the 20 year life of the plan. **5**

Thank you for the opportunity to provide comments on the final EIS. Should you have any questions, please contact Bill Ryan, of my staff, at (206) 553-8561.

Sincerely,

Judith Leckrone Lee

Judith Leckrone Lee, Manager
Geographic Unit

RESPONSES to EPA Comments

1. Comment noted.

2. The LSMG (which is co-chaired by EPA) has been identified as a forum for discussion of strategies to reduce sediment entering the lower Snake River system and, thus, the overall long-term need for dredging. In addition, the National Marine Fisheries Service's Biological Opinion (Appendix F of Final DMMP/EIS) included, as Reasonable and Prudent Measure (RPM) No. 4 -"minimize take by conducting DMMP activities so that they do not contribute to anthropogenic sedimentation." The Biological Opinion includes specific, terms and conditions to bring the issue of anthropogenic sedimentation to the LSMG for further investigation concerning whether these industries still contribute significant quantities of sediment to the action area. If the LSMG determines that studies need to be conducted, the COE will cooperate with the agencies and such entities within the limits of its authority and appropriations.

In addition, the Biological Opinion included discretionary Conservation Recommendations. One of the recommendations requested the COE seek authorization and appropriations to conduct a general investigation study on issues that the COE determines relate to activities and/or areas within its control. The Walla Walla District will initiate efforts in 2003 to seek the appropriate authorization by 2004 to conduct the necessary sediment management planning for the Lower Snake River. If Congress provides the necessary authorization, the District will then seek necessary appropriations to undertake this study effort. The purpose of this planning effort is to investigate sources and types of sediment that inflow into the Lower Snake River and evaluate alternative measures to reduce or manage this sediment.

3. Regarding the proposed creation of shallow-depth habitat as "experimental," modifications were made to Appendix F that state that this approach is "somewhat experimental," and that "the Corps, along with various other agencies including NMFS and interest groups, believes that beneficial use of dredged material, specifically salmonid habitat restoration/creation, should be viewed as an adaptive management technique." (See page FB-12 of Appendix F and Section 4.3 of this ROD.)
In addition DMMP/EIS Section 4 (page 4-4) notes shallow water disposal is being done “in an attempt to create and enhance fish rearing habitat." The Corps proposes to monitor the effectiveness of the dredged material management techniques, such as the proposed shallow-depth fish habitat creation, to assess the effectiveness at meeting objectives, such as establishment of invertebrates and use by juvenile salmonids. Appendix M provides a framework for monitoring habitat creation sites.
The proposed habitat creation methods have undergone rigorous and peer-reviewed testing that supports the use of dredged material for salmonid rearing habitat. The Corps believes the Final DMMP/EIS meets the intent of NEPA and has objectively evaluated the alternatives.

4. Appendix M presents a monitoring program that provides *a framework* that will be used to ensure compliance with applicable environmental laws and regulations; assess the

effectiveness of beneficial uses of dredged material; and provide feedback to the Corps and LSMG to improve the long-term dredged material management program. The monitoring program is also intended to:

- Provide an effective way to document activities and decisions and to communicate the data collection design to others.
- Enable data users and relevant technical experts to participate.
- Clarify vague objectives and influence decisions that will be made.
- Focus data collection operations so that they are resource-effective.
- Define performance requirements that are appropriate for the intended use of the data.
- Facilitate a working relation ship with regulators and stakeholders.

While the Monitoring Program does not present specific monitoring procedures methods, or locations, it does present a programmatic approach for monitoring. In addition, the Monitoring Program is essentially a "living document" that is subject to change and refinement as the DMMP is implemented. The monitoring program will continue to add specifics over the life of the program based on results from on-going monitoring. The Monitoring Plan for the 2002-2003 proposed dredging is specific and can be found at the Corps website http://www.nww.usace.army.mil/dmmp/nionitor.htm. and a request for a copy can be made to the Walla Walla District office. A public notice relating to the request for 401 certification was distributed with details of the proposed dredging including a discussion of the 404(b)(1) analysis. The monitoring program presents a programmatic approach for monitoring and is subject to change.

5. The overall scope, roles, and responsibilities of the LSMG are stated in Section 1.8 of the DMMP/FEIS. This section notes that overall charge of the LSMG is evolving, and that "the roles within the LSMG will continue to develop in accordance with policies and procedures currently evolving for the [Regional Dredging Team], as referenced in the April 26, 2002 policy letter jointly signed by..." the EPA Region 10 Administrator and the Corps of Engineers Northwest Division Commander. Further discussion on the LSMG can be found in this 2002 DMMP ROD.

WASHINGTON STATE DEPARTMENT OF
Natural Resources

DOUG SUTHERLAND
Commissioner of Public Lands

Mr. Jack Sands, Project Manager
US Army Corps of Engineers, Walla Walla District
201 North 3rd Avenue
Walla Walla, WA 99362-1876

04 September 2002

Subject: McNary Reservoir and Lower Snake River Reservoirs DMMP and EIS

Dear Mr. Sands:

It has come to my attention that some portions of the dredging and disposal operations planned for the McNary Reservoir and Snake River system outlined in the recent EIS are to take place on aquatic lands owned by the State of Washington and managed by the Department of Natural Resources. I found no reference to said ownership in the DMMP/EIS and the department has not participated in the Local Sediment Management Group described therein (per our discussion last week, we may or may not have been invited). If future meeting announcements are sent to my attention, I can assure you that the department will participate. As the comment period for the above-referenced document is still in effect, I wish to bring it to your attention that there are certain requirements that must be met for all activities that will occur on state-owned aquatic lands or use state-owned materials in habitat or flood-control projects, to include federally-sponsored projects. The most significant requirement is a Right-of-Entry, which must be issued by the department prior to the commencement of any work to be conducted on state-owned aquatic lands. 1 2 3

The point of contact for initiating a dialogue between our two agencies will be Mark Mauren, the Assistant Region Manager for the area in which the work is proposed. He may be reached at (360) 825-1631, or via email at mark.mauren@wadnr.gov. As I indicated in my phone call last week, I still wish to be notified of any meetings of the LSMG, as I typically represent the department when dredging issues are being discussed. I will notify Mark that you will be contacting him soon, and will forward copies of the maps showing which work is proposed for state-owned aquatic lands. If you would like copies of those maps, or have any questions for me, please contact me at (360) 902-1083. Thank you for your attention to this matter. 4

Sincerely,

Robert J. Brenner
DMMP Coordinator

c. Mark Mauren
Fran McNair

AQUATIC RESOURCES DIVISION ▮ 1111 WASHINGTON ST SE ▮ PO BOX 47027 ▮ OLYMPIA, WA 98504-7027
TEL: (360) 902-1100 ▮ FAX: (360) 902-1786 ▮ TTY: (360) 902-1125
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RECYCLED PAPER

RESPONSES to WA DEPT. OF NATURAL RESOURES Comment

1. Yes, some of the dredging will take place on state land and applicable requirements will be met.

2. According to the Corps records, the Washington State Department of Natural Resources (DNR) has been invited to participate and a representative has attended the LSMG. It should be noted that the LSMG is an evolving group, and invitations sent to agencies, such as the Washington State DNR may not have been routed to the correct staff. In the future, information about the LSMG will be directed to the staff specified in the comment letter.

3. The Corps will comply with all applicable requirements for activities that occur on state-owned aquatic lands, and will coordinate with DNR with respect to these matters. However, navigational servitude will be a controlling factor during this coordination.

4. Comment noted. As noted in response 2, above, future correspondence will be directed to those persons indicated in the comment letter.

THE CONFEDERATED TRIBES
of
THE COLVILLE RESERVATION
POST OFFICE BOX 150-NESPELEM WASHINGTON 99155 PHONE (509) 634-4711

Mr. Jack Sands, Project Manager
USACE Walla Walla District
201 North Third Avenue
Walla Walla, WA 99362

September 6, 2002

Re: Comments on the Dredge Material Management Plan & EIS

Dear Mr. Sands,

A government-to-government consultation meeting occurred this summer between the Confederated Tribes of the Colville Reservation (CCT) and the Army Corps of Engineers at Nespelem, Washington. At that meeting, you stated that you were still waiting for comments on the Dredge Material Management Plan & Environmental Impact Statement and that no cultural resource comments were forwarded from the CCT on the Draft DMMP & EIS.

Please recall that it was CCT representatives that brought the whole consultation question to the forefront at the Federal Columbia River Power System cultural resources working group meeting at Walla Walla in September of the year 2000. The October 2000 follow up meeting largely focused on this issue; consultation occurred at the technical and managerial level. We forwarded our cultural resource concerns at those meeting and keenly followed the progress of the DMMP ever since. You attended both of those meeting. Minutes are on file at the Walla Walla District for reference. 1

We do our best to represent the interests of the CCT; we resent the characterization to the General, Colonel, and our Business Council that we are not following important issues. We will not hesitate to inform you if we have future concerns for cultural resources related to the DMMP or the actual dredging.

Sincerely,

Adeline Fredin

Adeline Fredin
Program Manager, History Archaeology

CC General Fastabend
Colonel Kertis
Joe Pakootas
Joanne Leith
Chrono
2904 Account
Guy Moura

RESPONSE to
CONFEDERATED TRIBES OF THE COLVILLE RESERVATION Comments

1. Comment noted.

Columbia River Inter-Tribal Fish Commission

729 NE Oregon St.
Suite 200
Portland, OR 97232

t • (503) 238-0667
f • (503) 235-4228
i • www.critfc.org

September 10, 2002

Lt. Edward Curtis, Jr.
Walla Walla District
Corps of Engineers
201 North Third Avenue
Walla Walla, WA 99362

L. John Iani
Regional Administrator
Environmental Protection Agency Region 10
1200 Sixth Avenue
Seattle, Washington 98101

RE: Final Comments on the Walla Walla District, Corps of Engineers and Environmental Protection Agency's Final Dredge Material Management Plan and Environmental Impact Statement (DMMP/EIS) Environmental Assessment for the Interim Lower Snake, Clearwater and Mid-Columbia Rivers Dredging

Dear Lt. Colonel Curtis and Mr. Iani:

The Columbia River Inter-Tribal Fish Commission (CRITFC),[1] on behalf of its member tribes, appreciates the opportunity to review and provide final comments to the Walla Walla District Draft Dredge Material Management Plan and Environmental Impact Statement (FEIS). In addition to the following comments, we incorporate by reference previous comments on the DEIS submitted January 7, 2002 and January 18, 2002. We have structured these comments on the FEIS to address the Corps' responses. Our comments are not all-inclusive, but cover many of the important issues.

We are primarily concerned about the lack of viable alternatives in the FEIS and the lack of communication between the Corps, EPA and CRITFC's member tribes. This project may adversely affect treaty interests of CRITFC's member tribes. Accordingly, we concur with the January 18, 2002 comments submitted by the Nez Perce Tribe requesting government-to-government consultation with the Corps and EPA on the proposed actions and alternatives. This consultation was never initiated. Consequently, the agencies should engage in consultation with the member tribes prior to issuing the Record of Decision (ROD). Without such consultation, the Corps and EPA are not upholding their federal trust responsibility to the tribes. 1

[1] CRITFC was created in 1977 by the Nez Perce Tribe, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Reservation of Oregon and the Yakama Nation. The governing body of CRITFC is composed of the fish and wildlife committees of its member tribes. Protection and enhancement of those streams and flows that provide spawning, rearing and migratory habitat for anadromous fish are of critical importance to the tribes. CRITFC provides technical and legal support to the tribes to carry out those goals.

1977-2002
•
25 Years of Protecting Salmon and Tribal Treaty Rights

CORPS RESPONSE TO CRITFC JANUARY 18, 2002 COMMENTS

Comment 6

We do not agree with the Corps' statement that breaching the Lower Snake dams would not meet the project authorization for navigation. The river without the channel and pools would continue to be navigable, just not at a depth of fourteen feet. **2**

Comment 9

We note that the Corps did not offer any comment regarding the need to maintain an explicit fourteen-foot navigation channel in McNary Pool and the Lower Snake River. By this answer, we believe that the Corps, while authorized to maintain a navigation channel, is not *required* to keep it at fourteen feet. Thus, the Corps should consider alternatives that do not keep the channel at fourteen feet. **3**

Comment 10

As stated in our earlier comments, Appendix C fails to describe or analyze the effects of the FEIS alternatives on tribal communities. All of the alternatives other than the "no action" alternative decrease salmon production in varying degrees through dredging activities over a twenty-year period. Such dredging activities could potentially release toxic contaminants buried in sediments back into the water column, or end up in dredge spoils that are disposed of in the river or on land. This has the potential of adversely affecting tribal and public health, and is not addressed in the FEIS. **4**

Comment 13

We note that EPA and the Corps are currently updating the Dredge Material Evaluation Framework (Malek, 2001 pers. comm.). The ROD should not be signed until the FEIS is modified to conform with the new framework, as the framework is critical to identifying procedures to prevent contamination from entering the water column and biota. **5**

Comment 16

NMFS' studies have shown that fall chinook that overwinter in Lower Snake reservoirs and migrate seaward the following spring have higher smolt-to-adult survival rates than fall chinook that are transported from the Lower Snake or migrate in-river in the summer and late fall. These fish play an important role in the recovery of fish stocks because of their higher survival rates. Since they are present in significant numbers during the dredging season, however, the fish could be adversely affected by dredging activities. The FEIS should be modified to reflect this potential. **6**

Comment 17

The FEIS continues to support disposal of sediments to create shallow water habitat. Other organizations, including EPA, noted that such habitat without woody debris or "structure" **7**

is of little utility because it does not provide a foundation for invertebrate fauna or protection against predators. The proposed shallow water habitat will also cause increased heating of the near shore environment. Temperatures in the Lower Snake and McNary pools already exceed water quality standards. Increased shoreline shallow water areas will exacerbate these conditions, and will also add warm water fish predator habitat. The FEIS needs to be modified to address these issues. **7 (con.)**

Comment 19

Dredging backwater areas will impact invertebrate production that is important for salmon foraging. Spring migrating juveniles and adult salmon typically use the thalweg of the river for thermal refugia and higher velocities for migrations. We concur with the WDFW's DEIS comments that the Corps should seriously consider a "flushing alternative which would drawdown Snake River pools during the spring freshet to clear the navigation channel." This would be consistent with the normative river paradigm. Juveniles could be spilled; spill has the higher rate of dam passage survival. The eddies resulting from the spill would not increase fish travel time or exposure to predators any more that current fish migration through pool forebays and delayed passage through screen systems. If the Corps believes that this is so, then tests should be conducted and the FEIS modified. **8** **9**

Comment 21

The reason for the Corps adopting the criteria that sediments should not exceed 30% silt for in-water dredging disposal is not clear. Sediments with silt less than 30% may act as binders for toxic materials. Over time, dredging sediment compositions could change. The continual influx of toxic contaminants from the Potlatch Mill and other point and non-point sources could change toxic levels in sediments proposed for dredging. Would the Corps extensively test each area before dredging to examine sediment composition, presence of contaminants and the effect of these contaminants on the biota? **10**

Comment 24

The sediment sampling data set being considered in the FEIS is insufficient and therefore too inconclusive for the Corps to proceed with the ROD. Even the NMFS Biological Opinion for the FEIS notes: "The degree to which contaminants would be suspended during dredging and in-water disposal and the effects of the contaminants on listed salmonids are not clear". There are no recent toxic sampling data available with respect to proposed dredging sites, nor are there recent fish surveys indicating the presence or absence of salmon in the vicinity of proposed dredging area. The Corps should test sediments for the presence of contaminants before the environmental review process is concluded. Risk assessments using screening and bioassays should be performed on the sediments. Bioaccumulation studies may also be necessary. The FEIS use of numbers from the literature is not appropriate from a precautionary approach when species that can be adversely affected are listed under the ESA, and where there is a potential risk to human health. These issues should be addressed before the ROD is signed. **11**

CONCLUSION

CRITFC appreciates the opportunity to provide final comments on the FEIS. In our final assessment, we believe that there are too many outstanding issues that the Corps must address before signing the ROD. The first issue is the lack of meaningful consultation with CRITFC's member tribes who have interests in the affected resources and who may be adversely impacted by the dredging activities. Likewise, the FEIS did not evaluate any environmental justice issues. 12

The FEIS failed to consider an authentic, "no action" alternative, or other viable alternatives that CRITFC would support, such as a dam breaching alternative. The project, as proposed, would be an irretrievable commitment of significant federal funds that would prejudice any future dam breaching decisions. In addition, the FEIS did not consider the alternative of drawing down the Lower Snake and McNary pools in order to flush sediments from the channel. Accordingly, the FEIS should examine these alternatives before the Corps signs the ROD. 13

The FEIS is based on an outdated dredged material evaluation framework; the new framework now undergoing regional review should be completed before the ROD is signed. The Corps should adopt a precautionary approach when evaluating risks to fish and human health posed by toxic contaminants in dredge sediments. The Corps should consider screening and conducting bioassays on a representative sampling of organisms and sediments in all of the proposed dredging areas.

Given the depth and extent of the foregoing issues, we recommend that the Corps immediately engage with our member tribes on resolving these issues via formal consultation. This should occur before the District Commander signs a ROD. Should you have questions regarding these comments, please contact Bob Heinith at (503) 731-1289.

Sincerely,

Don Sampson
Executive Director

Cc: Commissioners, Tribal program managers, NMFS, USFWS

REFERENCE

Malek, J. Team Leader EPA Region 10 Sediment Management Program. Advanced Conference on Sediments. Environmental Law Education Center. Portland, Oregon. September 6, 2002 personal communication

RESPONSES to CRITFC comments

1. In accordance with the National Environmental Policy Act (NEPA) and Corps planning guidance, the Corps considered a wide range of alternatives in the DMMP/EIS. Section 2 of the DMMP/EIS presents the process used to develop and evaluate alternatives. The response to comment 13 below discusses the consideration of several specific alternatives.

With respect to communication between the Corps, EPA, and tribes, the Corps has completed government-to-government consultations as requested by affected tribes. We have been in contact with the Nez Perce tribe during this process and believe that government-to-government consultation was handled in a manner consistent with their expectations.

2. Breaching any of the dams would not meet the purpose of maintaining the authorized navigation channel within the five reservoirs. Therefore, dam breaching was not considered as an alternative. However, this does not mean that possible dam breaching was not considered in the preparation of the DMMP/EIS. Section 1.6 of the DMMP/EIS addresses the relationship of the DMMP/EIS to the Lower Snake River Juvenile Salmon Migration Feasibility Study (Feasibility Study). The Feasibility Study analyzed the impacts of breaching the four lower Snake River dams as one of the alternatives. Therefore the DMMP/EIS did not repeat this analysis.

3. The legislative history of lower Snake River navigation indicates Congress intended for the lower Snake River to have a navigation channel 14 feet deep and 250 feet wide up to, and including, Lewiston, Idaho. The Corps plans to continue to carry out the intentions of the United States Congress as closely as possible. See further discussion in these comments and the DMMP/EIS for the economic justification of maintaining the channel at 14 feet.

4. Section 4.6.5 of the Final DMMP/EIS documents the potential effects of the proposed action on tribal communities. Potential effects of dredging and disposal of dredged material, particularly with respect to the potential contaminants in dredged sediments, are addressed in Section 4.9.1 of the Final DMMP/EIS. Based on historic sampling of sediment in the areas proposed for dredging, there is a very low likelihood of contaminated sediments being dredged and affecting public and tribal health. The Dredged Material Evaluation Framework: Lower Columbia River Management Area (DMEF) jointly developed with the EPA and States, utilizes sediment chemistry screening levels based on conservative estimates for potential of toxicity and/or bioaccumulation in the environment. No screening levels were exceeded. An EPA report, *The Columbia River Basin Fish Contaminant Survey 1996-1998* states "The chemicals which were estimated to contribute the most to potential health effects (PCB, DDE, chlorinated dioxins and furaiis, arsenic, mercury) are the chemicals for which regulatory strategies need to be defined to eliminate or reduce these chemicals in our environment." The Corps concurs in this approach and will continue to reaffirm that sediments dredged are within acceptable levels.

The EPA and WDOE indicated this framework is the best science to apply at this time and that the interim use of the Lower Columbia framework during the development of the Mid-Columbia and Lower Snake River framework is sufficient to evaluate dredged material and prevent disturbance of contaminated materials from entering the water column and biota during the initial implementation of the DMMP. The Corps is complying with all applicable environmental laws and regulations.

5. Section 3.9 of the Final DMMP/EIS notes: Since there are no uniform freshwater sediment quality criteria that provide a definitive numerical standard for evaluation of dredged material, the Corps is developing a Mid-Columbia and Lower Snake River Region Sediment Testing Framework. In the interim as a result of coordination with EPA and WDOE, the Corps will use the DMEF to evaluate the potential water quality impacts of dredging and dredged material management and the suitability of dredged material for in- water disposal. The specific procedures in the Lower Columbia Framework will be used and evaluated for their applicability for adoption as part of the Mid-Columbia and Lower Snake River framework.

6. Fall chinook typically have an ocean type rearing life history and typically outmigrate seaward during the summer as subyearlings. (Tiffan et al, 2001). According to Williams and Bjornn 1998, "A small proportion of hatchery and natural subyearling fall chinook salmon residualized and migrated early in spring 1997; however, as with fish released in 1995, the number that overwintered and migrated seaward as yearlings in spring was small and did not effect survival estimates." This indicates that a small proportion of fall chinook may over winter every year. NMFS' Biological Opinion (included in Appendix F) includes a discussion on Fall Chinook and determined the proposed activities are likely to adversely affect fall chinook salmon. However, with the implementation of the Reasonable and Prudent measures, NMFS determined the impact is acceptable.

7. The Corps of Engineers believes that creating the shallow water sand bars along the shorelines is an improvement to the juvenile salmonid habitat that is currently in the lower Snake River including Lower Granite Reservoir. The new habitat structure proposed for Knoxway Canyon will most likely require some amount of cobble to stabilize the bank against wave action. This may have some benefits to invertebrates and therefore salmonids. A proposed riparian area at Knoxway may also serve to allow more structure in the water as trees progress through their life cycle. However, Bennett et al 1995a, reported that juvenile fall chinook salmon in the reservoir were actually seeking habitat without structure while predators were typically found to be using areas with structure. By creating shallow water sand bars in the reservoir without relief or structure, habitat was created for juvenile resident and anadromous fish. However the larger predatory fish that typically prey upon salmonids did not use these areas regardless of the temperature. EPA's comments were more indicative of the habitat preference of salmonids in shallower water salmon streams, not the large river and reservoir environment.

Although it is recognized that increased temperatures may cause health problems in fish there is a very small amount of influence with these actions. Combined with the increased depth in the confluence area, and considering the amount of water exchange occurring in the reservoir, the Corps does not anticipate any appreciable increase in overall reservoir temperatures. The benefits to fall chinook, however, of having these small areas where the temperatures may be slightly higher than the rest of the reservoir, includes greater food production, increased growth rates, and increased overall survivability through the hydrosystem on their downstream migration. Monitoring of temperature is an integral part of these activities including the habitat areas constructed as a part of this plan.

8. The backwater areas that will be dredged will most likely have a temporary negative effect on

the invertebrate populations of those areas. However, the areas that are proposed to be dredged are typically quite small and are not expected to create a noticeable reduction in food for fish that will be foraging in the following spring.

9. A "flushing alternative" was considered and a discussion is provided in Section 2.2.2 of the Final DMMP/EIS. The drawdown of the reservoir of 10 to 15 feet during the annual flood season and smolt outmigration has some potential. One of the major drawbacks of drawing the reservoir down to that degree during the fish outmigration period would be the rendering of the juvenile fish passage system at Lower Granite Dam as unusable. Fish would pass through the turbines, with possibly higher than desired mortality rates. In addition, a large number of fish would be trapped in the gatewells with no opportunity for exit, and a great number could eventually die there. If an all-spillway route were determined to be the most appropriate passage route, with no powerhouse operation, a large eddy would be set up in the tailrace of the dam. If an eddy is set up, it has the potential to continually cycle juvenile fish within the eddy and constantly expose them to more predators. In addition, spawning migrations of fish into Alpowa Creek may be blocked by drawdown operations. Rearing areas important to fall chinook and sturgeon would be rendered less usable if drawdown occurred. Invertebrates that use the Port of Wilma, Centennial Island and other known shallow water rearing areas would be desiccated and would provide little to no benefit to fish rearing in the area either during drawdown or after water up. Bennett (1995) demonstrated that after the drawdown event, smallmouth bass changed their predation targets, from preying on primarily crayfish to a diet composed of more juvenile salmonids. This was due primarily to the reduction in the number of invertebrate species caused by the drawdown. Because these invertebrate species would be negatively affected, other species that prey on them including white sturgeon, channel catfish and other predatory species all have the potential to change predation targets and negatively affect salmonid smolts. Disruption of the food web on a repetitive basis would cause overall detrimental effects to the limnological characteristics of the reservoir. Major infrastructure impacts were demonstrated during the drawdown test of 1992, these would continue for each flushing cycle until major investments were made to secure this structures.

10. Section 4.9.1.1.1 of the Final DMMP/EIS notes that contaminants are most often associated with silts. This section also notes that, based on physical and chemical sediment sampling data of the areas where proposed dredging would take place, there is little or no contamination present. The Corps will test sediments and monitor water quality in dredging areas to assess the potential presence of chemicals of concern in sediments and evaluate the potential effects of dredging and dredged material management on water quality and living resources (see DMMP/EIS Appendix M and the Corps website for updated information). The criteria for 30% silt is based on slope stability, not the potential for contaminants in the sediments. The Corps determined that based on current knowledge of slope stability, any underwater embankment constructed with dredged material should contain no more than 30% silt to ensure that the embankment remained stable. The Corps was concerned that an embankment with more than 30% silt by volume may slump or drift. The Corps intends to monitor the percentage of silt placed within any created underwater embankments and monitor the embankments for stability after construction. If the embankments do not appear to be stable, the Corps may reduce the percentage of silt in future embankments, or may include other provisions for future in-water

disposal such as the construction of berms to keep the embankment material in place.

11. See responses to Comments 5, 6, and 10 above.

12. DMMP/EIS Section 3.6.3 and 4.6.3 present evaluations of environmental justice issues. The proposed project alternatives would not result in disproportionately high and adverse impacts to the environmental justice communities identified by project area census tract in section 3.6.3. The proposed levee raises would not result in disproportionate flood hazard to the identified low-income and minority communities. The alternatives documented in the DMMP do not result in any significant impacts to the aquatic or cultural resources which are important to the Tribes.

13. When preparing National Environmental Policy Act (NEPA) documents, the "No Action" alternative can also be called the "No Change" alternative, as in no change in the current way of doing business. For the DMMP/EIS, "no action" was defined as no change in the way the Corps is currently maintaining the navigation channel, port facilities, boat basins, or irrigation intakes. Therefore, the "no action" alternative may be thought of in terms of continuing with the present course of action until that action is changed." Regarding consideration of dam breaching, see response to Comment 2 above.

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September 9, 2002

Jack Sands
Project Manager
U.S. Army Corps of Engineers
Walla Walla District
201 North 3rd Avenue
Walla Walla, WA 99362-1876
VIA EMAIL AND U.S. MAIL

Re: Final Dredged Material Management Plan and EIS

Dear Mr. Sands,

These comments are submitted by National Wildlife Federation on behalf of Idaho Rivers United, Save our Wild Salmon coalition, American Rivers, Trout Unlimited, Sierra Club, Salmon For All, Pacific Coast Federation of Fishermens' Associations, Institute for Fisheries Resources and Friends of the Earth (collectively, "NWF"). The comments pertain to the July 2002 Final Environmental Impact Statement ("EIS") on the Dredged Material Management Plan ("DMMP") for McNary and Lower Snake River reservoirs. Pursuant to NEPA, NWF submits these comments on the FEIS prior to the execution of a Record of Decision. 67 Fed. Reg. 51949 (August 9, 2002) (wait period ends Sept. 9, 2002). These comments and its attachments should be incorporated into the administrative record for the final decision.

NWF regrets that the U.S. Army Corps of Engineers ("Corps") has elected to ignore the substantial weight of agency and conservation interest comments that were submitted on the Draft EIS. The Corps has still failed to justify the project economically, has failed to consider an appropriate range of alternatives, and has failed to explain the environmental risks presented by this long-term dredging project. 1 2

NWF is attaching three documents for consideration by the Corps and inclusion in the record prior to execution of the ROD. First, consultant Anthony Jones, an economist with longtime experience with navigation issues in the Columbia-Snake basin, has prepared a comprehensive critique of the economic analysis that the Corps has used to justify this project. As Mr. Jones explain, the Corps has vastly overstated benefits, ignored categories of costs, and used dated, obsolete and discredited data. The result is that the Corps' economic analysis fails to satisfy NEPA's mandate of full disclosure. NWF believes that a credible analysis is required by NEPA prior to execution of a decision. 3

Second, we are attaching the comments of the Save Our Wild Salmon coalition on the Corps' Final Lower Snake River Juvenile Migration Feasibility Report/Environmental Impact Statement (Feb. 2002). As pointed out in these comments, we believe that the Corps has violated 4

418 First Avenue West, Seattle, Washington 98119 • Tel: 206-285-8707 • Fax: 206-285-8698 • Website: http://www.nwf.org/

NEPA as well as common sense by segregating out maintenance dredging from ongoing management of the dams, and presenting separate conclusions about costs and benefits of what is essentially a single management package. **4 (con.)**

Third, we are submitting for the record a recent study completed by the RAND Corporation on the economic impacts of dam removal. The report questions some of the conclusions drawn in the DMMP regarding the economic impacts of altering navigation patterns through dam removal. **5** While we acknowledge that the DMMP does not evaluate dam removal as an option, we question the Corps' conclusions regarding the economic benefits that are realized by virtue of maintaining the navigation system. **6**

If you have any questions or comments regarding this material, please do not hesitate to call me at (206) 285-8707 ext. 105. Thank you for the opportunity to comment on the DMMP FEIS.

Sincerely,

Jan Hasselman
NWF Counsel

Enclosures

RESPONSES to NWF Comments

1. The Corps has considered all comments received on the Draft DMMP/EIS. The Final DMMP/EIS reflects changes that were incorporated based upon those comments. In addition, Appendix 0 presents all public comments submitted on the Final DMMP/EIS and the Corps' responses to those comments.

2. Section 1.7 of the Final DMMP/EIS presents the economic justification for both maintenance of a 14-foot-deep channel in the lower Snake River and McNary reservoirs, and for flow conveyance in Lower Granite Reservoir. See response to Comment 3, below, for discussion of NWF's comments on the economic justification for the DMMP. Regarding the range of alternatives considered, the Corps considered a wide range of alternatives in development of the DMMP. Section 2 of the Final DMMP/EIS describes the iterative process to develop a range of alternatives that were responsive to the purpose and need of the DMMP. This process is consistent with NEPA, the CEQ and Corps regulations implementing **NEPA,** and the Corps' planning guidance. See Final DMMP/EIS, Appendix 0, Responses to Save Our Wild Salmon comments 5, 7, and 9. Regarding environmental risks presented by long-term dredging, Section 4 of the Final DMMP/EIS presents a detailed presentation of the anticipated environmental effect of each of the four DMMP alternatives. The Corps carefully analyzed these impacts and developed strategies to address impacts wherever practicable. The Final DMMP/EIS presents a comprehensive assessment of the environmental impacts associated with each of the alternatives, consistent with the requirements of NEPA.

3. The Corps has taken into account the best economic information available. The Corps has also considered the comments presented in the attachment titled, "An Analysis of the Economics of the Dredged Material Management Plan and Environmental Impact Statement," prepared by Anthony Jones, dated September 9, 2002. Mr. Jones makes five main points in his report and the specific comments and responses are presented below.

Point: The ACOE relies on a forecast of freight related benefits that was subsequently abandoned by other divisions of the ACOE. The revised
forecasts are for substantially lower freight volumes; a fact that indicates the ACOE overstates the benefits of dredging in the DMMP/EIS.
Response: Updated draft commodity shipment forecasts for the Columbia River Improvement Project (channel deepening to 43 feet - March and July 2002) were reviewed to determine if they would alter the findings presented in the Final DMMP/EIS. These new forecasts provide lower projections of commodity shipments, but did not provide data contradicting the findings of the Final DMMP/EIS. The continued maintenance of all navigation channel segments is justified, even considering the reduced tonnage scenario presented in the updated Columbia River export forecast. In addition, the Corps considered recent trends in commodity shipments (i.e., 1995 - 2000) and used the actual 2000 lower Snake River grain shipment data in a re-evaluation of its economic analysis.

Point: The forecast used in the DMMP/EIS to justify Freight Benefit predicts freight growth rates that are highly unlikely to be achieved for reasons that the ACOE has known

about for at least 3 years. By clinging to the improperly constructed forecast, the ACOE overstates the benefits of dredging in the DMMP/EIS.

Response: See response to comment above regarding evaluation of future growth in commodity shipments. The comment references forecasts that have been known "for at least three years." However, the updated Columbia River projections are still in draft form and were released in July 2002. Economic analysis utilized the most current available data at the time of the analysis. The incremental analysis considered all relevant costs based on recent data and trends, and provides a realistic comparison of benefits and costs associated with dredging. The incremental analysis considered grain shipments only, which represents approximately 78.8 percent of commodity shipments on the lower Snake River. Other commodities shipped include petroleum, fertilizer, wood chips and lumber, aggregate, and other products. Therefore actual benefits considering the total percentage of commodity shipments would be greater than those demonstrated in the incremental analysis.

Point: In calculating the cost-benefit ratio of the proposal, the ACOE compares the costs of maintenance dredging to all of the benefits of the navigation system. This is absurd. Navigation benefits could not be realized without numerous additional actions, not least of which is the construction, maintenance and operation of the dams and locks. To ignore the much greater initial construction cost of the dams and ongoing operation of the locks (costs that make the dredging project necessary in the first place) is to grossly overstate the benefit of dredging the channel. It is like comparing the benefits of living in a home to the cost of paying a cleaning service, while ignoring the mortgage and utility bills.

Response: The Corps disagrees and as per regulation ER1105-2-100, E.15.b(4), Planning Guidance Notebook, the analysis demonstrated continued maintenance is economically warranted. The examination that was done was based on standard economic principles of comparing the remaining benefits of the navigation system to the remaining costs to operate and maintain the system. These included the $43.2 million annual benefits of the navigation system compared to all navigation O&M costs. See Lower Snake River Juvenile Salmon Migration Feasibility Report/ Environmental Impact Statement (FR/EIS) for discussion. The average annual cost of $2.7 million included the cost of operating and maintaining the locks, the navigation-allocated joint O&M costs, and the total expected dredging costs. The benefit/cost ratio is approximately 16:1.

Point: The freight benefits in the DMMP/EIS are from the FR/EIS and represent the total elimination of freight from the river in year one of the project. To assume that all freight will leave the entire system in year one of the DMMP/EIS if the dredge program is not initiated immediately is absurd. Rather, navigation would continue to be possible to some or all Snake River ports for some time, and would gradually taper off as sediment increased. By clinging to this assumption, the ACOE overstates the benefits of dredging in the DMMP/EIS.

Response: The incremental analysis of navigation does not assume all freight will leave within one year, but rather it assumes shoaling (over time) throughout the lower Snake

3. The purpose of this DMMP/EIS is, in part "to develop and evaluate alternative programs to maintain the authorized navigation channel and certain publicly-owned facilities in the lower Snake River and MeNary reservoirs for the next 20 years". The Draft DMMP/EIS performed a benefit analysis on the authorized Federal navigation project to ensure that the project remained economically feasible. For this analysis two shallower Federal navigation channels, with controlling depths of 13 feet and 12 feet, were assumed to result from termination of maintenance dredging. Grain shipments, representing 78.8% of the commerce on the Snake River for the period of 1987 to 1996, were selected to represent the impacted commerce. Grain barge costs for shipments from the various ports on the Snake River system were developed to reflect light loading to accommodate the shallower channels. Reduced cargo capacity of the standard 3,600-ton grain barge (274 feet long, 42 feet wide, and 13.5 feet draft) with drafts of 12.5 feet and 11.5 feet were determined to be 3,270 tons and 2,950 tons, respectively. The impact of this reduced capacity would be to raise per ton barge costs by 10% and 22%, respectively. The resultant increase in transportation costs for moving the forecast grain shipments from the Snake River in the 20-year period from 2004 to 2024 was compared to the avoided annual cost of maintenance dredging. The result of this analysis, based on 1999 costs, indicated that dredging costs were equal to the estimated increase in barge costs when the channel capacity was reduced by only one foot. However, where channel depths were reduced by two feet, the cost of dredging was about half of the increased cost to barge transportation. In essence, shoaling that reduces the channel depth by one foot represents the "break even" point where maintenance dredging is feasible and cost-effective.

River system and, thus, impacts related to multiple shoaling scenarios. There are an infinite number of combinations of shoaling scenarios. Due to uncertainties associated with sedimentation and in compliance with guidance, the DMMP incremental analysis used average annual costs (expected average annual dredging costs over the 20 year period) and benefits (the annual transportation cost savings by foregoing light-loading) to demonstrate that each reach increment was economically justified. In accordance with current policy and regulations, the analysis considered average annual cost to average annual benefits based on historical dredging requirements for the lower Snake River, to provide an appropriate estimation of average annual conditions over period of analysis for the DMMP.

An incremental analysis was performed and demonstrates that dredging each increment was justified. In the past, barge operators have been forced to light-load on occasion due to shoaling. The incremental analysis assumes light loading (e.g., assume 13 foot and 12 foot channel depths) would be required, and compares the cost of light loading to the cost of dredging. The incremental analysis demonstrates that if all dredging cost were incurred to prevent even a one-foot shoal, dredging is economically justified for each increment of the system. See other responses regarding total system benefit analysis.

Point: Undocumented Costs in a viable Benefit Cost Analysis (BCA) must incorporate all known costs and benefits associated with a projects if the conclusion is to be bias free. However, the City of Lewiston and the Port of Lewiston indicate that raising the levee

will reduce the marketability of the area. The ACOE concurs with the City and the Port's conclusion but includes no estimate of the cost. By ignoring this cost the ACOE overstates the benefits of raising the levee.
Response: The proposed levee modification involves raising a portion of the West Lewiston levee in the area of the confluence of the Snake and Clearwater rivers by approximately 1.5 feet, raising Highway 129 approximately three feet, and raising Snake River Road above Asotin by approximately two feet. Final DMMP/EIS provides detailed description and illustrations of the proposed levee modifications. The proposed levee modification would be very minor in relation to the existing height of the levee. The proposed modification does not involve raising the entire levee system in the Lewiston/Clarkston area by three feet. As such, the "undocumented costs" for reduction of "marketability" of in the Lewiston area is not anticipated. Proposed levee modifications would minimally affect current views of the waterfront in the vicinity of the levees and only temporarily restrict existing access to the rivers. Issues raised by the .Port of Lewiston and City of Lewiston on the Draft DMMP/EIS were addressed in Appendix O of the Final EIS.

4. The Save Our Wild Salmon comments on the February 2002 Lower Snake River Juvenile Salmon Migration Feasibility Report/EIS (FR/EIS), have been considered by the Corps and can be reviewed in the 2002 LSR Record of Decision, Attachment A Response to Comments. The Corps believes that both the FR/EIS and the DMMP/EIS demonstrate compliance with NEPA. The Corps dredging is a separate activity, independent of the operation of the projects for multiple purposes. It is possible for navigation to continue, albeit not at full capacity, without dredging. The Corps is approaching dredging through the development of DMMPs so that it can manage dredging on a long-term basis and analyze the effects of an activity undertaken apart from project management on an as needed basis.

5. The Corps has reviewed and considered the RAND study titled, "Generating Electric Power in the Pacific Northwest: Implications of Alternative Technologies" The Corps disagrees that the RAND report questioned some of the conclusions in the DMMP regarding the economic impacts of altering navigation patterns. The RAND report does not examine the economic viability of the continued maintenance of the Lower Snake navigation system. The RAND report does not at any point question the direct economic benefits of the navigation system nor does RAND examine whether continued maintenance dredging is economically warranted. The RAND report did not question the navigation economic effects estimates from the FR/EIS and in fact incorporated them into their model. The RAND report examined dam removal and did not address the continued maintenance of the navigation channel with the dams in place which is the action examined in this DMMP.

6. Section 1.6 of the Final DMMP/EIS explains the relationship between the DMMP and the FR/EIS. This DMMP addresses the long-term need for dredged material management for the Lower Snake River Project and McNary, regardless of the ultimate decision on dam breaching. Further, the DMMP developed and evaluated specific plan

alternatives to meet the existing need for maintaining the authorized navigation channel and flow conveyance. Responses to Comment 3, above, address specific criticisms regarding the economic justification for the DMMP

Oregon Chapter Sierra Club
2950 SE Stark
Portland, OR 97214

Lt. Edward Curtis, Jr.
Walla Walla District
Corps of Engineers
201 North Third Avenue
Walla Walla, WA 99362

RE: **Final Comments on the Walla Walla District, Corps of Engineers and Environmental Protection Agency's Final Dredge Material Management Plan and Environmental Impact Statement (DMMP/EIS) Environmental Assessment for the Interim Lower Snake, Clearwater and Mid-Columbia Rivers Dredging**

Dear Lt. Colonel Curtis:

The Oregon Chapter of the Sierra Club represents over 20,000 members across the state. We are concerned about the future of salmon, steelhead, lamprey, and other species that migrate up the Columbia and Snake rivers that would be affected by actions proposed. Given these concerns, we are opposed to the DMMP/EIS. A "no-action" alternative, no dredging, must be considered until the NEPA process is finalized. This true "no action" alternative would be the far better than those considered for anadromous species, including ESA-listed Snake River sockeye, fall chinook, spring/summer chinook, and steelhead. 1

We continue to believe that partially breaching the lower four Snake River dams is a far better alternative to continuous technofixes that typically address one part of the problem at the cost of creating a new problem. We look upon the DMMP/EIS as "gold-plating" a failing system by making it even more expensive to eventually do the right thing for both the environment and the economy (as supported by the recent RAND study) and breach these dams. 2
We reject the Corps statement that breaching the lower Snake River dams would not meet the project authorization for navigation. Breaching would still leave the lower Snake River navigable, albeit perhaps not at 14 feet. But the Corps, to our knowledge, is not required to keep the channel at 14 feet. Thus the Corps should consider alternatives that do not require keeping the channel at 14 feet. 3

We believe that raising the levees at Lewiston is a perfect example of gold-plating the system. In basin after basin, Corps efforts to raise levees have only resulted in increases in the height of the river bottom, meaning even greater raises in levees are required. More catastrophic floods have also resulted when these levees eventually fail. The same level of protection of Lewiston could be maintained by lowering the level of Lower Granite Pool and accepting a shallower navigation channel. This alternative should be addressed by the DMMP/EIS. 4

The DMMP/EIS attempts to show benefits accruing to the disposal of sediments by claiming that it will create shallow water habitat. This shallow water habitat is likely of little value because temperatures in Lower Snake and McNary pools already exceed water quality standards during much of the summer. Increased shoreline shallow water habitat would have even higher temperatures. In addition, the shallow water habitat, as EPA and others noted, will be without woody debris and will thus be of little utility. 5

We are concerned with the impact of dredging on fish that may be rearing in the system. Increasing numbers of fall chinook overwinter in the reservoirs and would thus be affected by dredging. Recent NMFS smolt-to-adult survival estimates have shown that these fish have higher survival than those fish that migrate downriver during the summer and fall. 6

The Oregon Chapter of the Sierra Club appreciates the opportunity to provide final comments on the DMMP/EIS. We oppose the conclusions of the DMMP/EIS because it fails to consider a true "no action" alternative, or any alternative that does not maintain the present channel depth. A true "no action" alternative would be far better for salmon than that recommended by the DMMP/EIS. The conclusions of the DMMP/EIS, if implemented, also represent the further gold-plating of the present Snake River hydrosystem such as to make a future decision to breach the dams more costly, and therefore possibly less likely.

Sincerely,

Jeff Fryer
Salmon Issue Coordinator
Oregon Chapter, Sierra Club

RESPONSES to OREGON CHAPTER SIERRA CLUB Comments

1. When preparing National Environmental Policy Act (NEPA) documents, the "No Action" alternative can also be called the "No Change" alternative, as in no change in the current way of doing business. For the DMMP/EIS, "no action" was defined as no change in the way the Corps is currently maintaining the navigation channel, port facilities, boat basins, or irrigation intakes.

2. Breaching any of the dams would not meet the purpose of maintaining the authorized navigation channel within the five reservoirs. Therefore, dam breaching was not included as an alternative. However, this does not mean that possible dam breaching was not considered in the preparation of the DMMP/EIS. Section 1.6 of the DMMP/EIS addresses the relationship of the DMMP/EIS to the Lower Snake River Juvenile Salmon Migration Feasibility Study (Feasibility Study). The Feasibility Study analyzed the impacts of breaching the four lower Snake River dams as one of the alternatives. Therefore the DMMP/EIS did not repeat this analysis.

3. The purpose of this DMMP/EIS is, in part "to develop and evaluate alternative programs to maintain the authorized navigation channel and certain publicly-owned facilities in the lower Snake River and McNary reservoirs for the next 20 years". The Draft DMMP/EIS performed a benefit analysis on the authorized Federal navigation project to ensure that the project remained economically feasible. For this analysis two shallower Federal navigation channels, with controlling depths of 13 feet and 12 feet, were assumed to result from termination of maintenance dredging. Grain shipments, representing 78.8% of the commerce on the Snake River for the period of 1987 to 1996, were selected to represent the impacted commerce. Grain barge costs for shipments from the various ports on the Snake River system were developed to reflect light loading to accommodate the shallower channels. Reduced cargo capacity of the standard 3,600-ton grain barge (274 feet long, 42 feet wide, and 13.5 feet draft) with drafts of 12.5 feet and 11.5 feet were determined to be 3,270 tons and 2,950 tons, respectively. The impact of this reduced capacity would be to raise per ton barge costs by 10% and 22%, respectively. The resultant increase in transportation costs for moving the forecast grain shipments from the Snake River in the 20-year period from 2004 to 2024 was compared to the avoided annual cost of maintenance dredging. The result of this analysis, based on 1999 costs, indicated that dredging costs were equal to the estimated increase in barge costs when the channel capacity was reduced by only one foot. However, where channel depths were reduced by two feet, the cost of dredging was about half of the increased cost to barge transportation. In essence, shoaling that reduces the channel depth by one foot represents the "break even" point where maintenance dredging is feasible and cost-effective.

4. Raising the levees in the Lewiston area will not cause an increase in the elevation of the channel bottom. Although the Corps expects that sediment will continue to be deposited in the river channels in the confluence area, which will result in increased bottom elevations, raising the height of the levee would not contribute to that process. This increase would happen whether the Lewiston Levee System is raised or not. During the development of the DMMP/EIS, a range of alternatives for maintaining flow

conveyance capacity in the confluence area were formulated and evaluated. Based on that evaluation, the 3-foot levee raise in combination with dredging in the navigation channel was recommended because it satisfies the purpose and need of the DMMP, it is cost effective, and it will provide adequate flow conveyance capacity out to the year 2074. At that time, an additional evaluation should be performed to determine alternatives to ensure sufficient flow conveyance capacity into the future.

Lowering the normal operating level of Lower Granite Reservoir would not provide additional flow conveyance capacity during high flow events. The standard flood control operation already provides for lowering the reservoir at Lower Granite Dam down to elevation 725 feet, mean sea level when reservoir inflows exceed 300,000 cfs. Spring sediment "flushing" (both with and without drawdown) has been considered in the past, and is not a viable strategy for meeting the DMMP's objectives.

Without drawdown, a spring "flushing" operation would not develop sufficient velocities within the reservoir to pick up significant quantities of materials and transport them downstream. With drawdown, the sediment flushing could be effective, but the impacts to operations as well as project facilities and major support features and public infrastructure (as observed in the 1992 Lower Granite Reservoir Drawdown Test) would exceed the benefits of sediment flushing. Also, flushing would just move the sediment downstream, only to potentially cause problems elsewhere in the system.

5. The Corps of Engineers believes that creating the shallow water sandbars along the shorelines is an improvement to the juvenile salmonid habitat that is currently in the lower Snake River including Lower Granite Reservoir. The new habitat structure proposed for Knoxway Canyon will most likely require some amount of cobble to stabilize the bank against wave action. This may have some benefits to invertebrates and therefore salinonids. A proposed riparian area at Knoxway may also serve to allow more structure in the water as trees progress through their life cycle. However, the Bennett et al. 1995a report on created habitat indicated that fall chinook prefer areas of open, sandy substrate that did not have hiding places for predators.
Although it is recognized that increased temperatures may cause health problems in fish there is a very small amount of influence with these actions. Combined with the increased depth in the confluence area, and considering the amount of water exchange occurring in the reservoir, the Corps does not anticipate any appreciable increase in overall reservoir temperatures. The benefits to fall chinook, however, of having these small areas where the temperatures may be slightly higher than the rest of the reservoir, includes greater food production, increased growth rates, and increased overall survivability through the hydrosystem on their downstream migration. Monitoring of temperature is an integral part of these activities including the habitat areas constructed as a part of this plan.

6. Fall chinook typically have an ocean type rearing life history and typically outmigrate seaward during the summer as subyearlings. (Tiffan et al, 2001). According to Williams

and Bjornn 1998, "A small proportion of hatchery and natural subyearling fall chinook salmon residualized and migrated early in spring 1997; however, as with fish released in 1995, the number that overwintered and migrated seaward as yearlings in spring was small and did not effect survival estimates." This indicates that a small proportion of fall chinook may over winter every year. NMFS' Biological Opinion (included in Appendix F) includes a discussion on Fall Chinook and determined the proposed activities are likely to adversely affect fall chinook salmon. However, with the implementation of the Reasonable and Prudent measures, NMFS determined the impact is acceptable.

Washington State Department of Transportation
Douglas B. MacDonald
Secretary of Transportation

South Central Region
2809 Rudkin Road, Union Gap
P.O. Box 12560
Yakima, WA 98909-2560

509-577-1600
TTY: 1-800-833-6388
www.wsdot.wa.gov

July 8, 2002

Walla Walla District
Corps of Engineers
Environmental Compliance Section
201 N. 3rd Avenue
Walla Walla, WA 99362-1876

Attention: Sandy Simmons

Subject: Public Notice Number CENWW-PM-PD-E 02-01
U.S. Army Corps of Engineers, Walla Walla District
Lower Snake River Winter 2002-2003 Maintenance Dredging
South Central Region
US 12, MP 425.83 Left (Chief Timothy State Park) – Disposal Site
MP 432.62 Left (SR 128/Red Wolf Bridge)
MP 434.10-434.19 Both (US 12 Bridge)
SR 128, MP 0.00-2.24 Both (US 12 to Idaho state line) vicinity
SR 129, MP 39.57-40.19 Right (Post Lane to 22nd Avenue) vicinity
SR 193, MP 0.51-3.09 Left (SR 128 to end of state highway) vicinity
Northwest Region
SR 194, MP 0.00 (Port of Almota/Snake River)
SR 263, MP 3.06 (Lower Monumental Dam/Snake River)

We have reviewed the proposed project. The proposal identifies ten dredging sites and two disposal sites. Several state-maintained roads are adjacent to, or in the vicinity of, these sites. The highways include U.S. Highway 12, State Highway 128, State Highway 129, and State Highway 193 in the Washington State Department of Transportation's South Central Region, and State Highway 194 and State Highway 263 in the WSDOT's Eastern Region.

1. From a previous map sent by the Corps, it appears two of the dredging sites are adjacent to two state highway bridges. The U.S. Highway 12 Bridge connects Clarkston and Lewiston over the Snake River. It appears the dredging for the Green Belt Boat Basin is adjacent to this bridge. Also, SR 128 (the Red Wolf Bridge, MP 0.22-0.50) spans the Snake River from Clarkston north to SR 193. It appears the Hells Canyon Resort dredging site is adjacent to this bridge. We are not opposed to these dredgings, but the proponent must make sure not to damage our bridges by their dredging activities, or re-direct flow or increase velocities that would undermine the bridge structures. **1**

2. The Corps indicates that dredged material will be loaded onto barges for transport to the disposal sites, and thus, not utilize the state highway for movement. We support the use of the inland waterway system to handle and dispose of dredged material without impacting the highway transportation system.

   Alternatively, if there will be any oversized or overweight equipment or material hauls on WSDOT-maintained rights-of-way, the applicant must obtain the appropriate permit from WSDOT prior to transporting any of these hauls. It will be the applicant's responsibility to keep and maintain the state highways free of any of their debris. Any spilled material shall be cleaned up at the applicant's expense. **2**

3. The bridge connecting Clarkston to Lewiston on US 12 is a drawbridge. If dredging activities will require the drawbridge to be opened, traffic control is necessary. The proponent must coordinate the traffic control with the WSDOT Area Maintenance Superintendent. Please contact Bob Martin at (509) 527-4548 in Walla Walla. **3**

Thank you for the opportunity to review and comment on this proposed project. If you have any questions concerning our comments, please contact John Gruber at (509) 577-1636.

Sincerely,

Troy A. Suing, P.E.
Regional Planning Engineer

TAS: rh/jjg

cc: File #1, U.S. & State Agencies
Gary Beeman, Environmental Program Manager
Bob Martin, Area 4 Maintenance Superintendent
Greg Figg, WSDOT – Eastern Region

p:\planning\devrev\state_usa\corpsengr_02-03 snake dredging.doc

RESPONSES to WA DEPT. OF TRANSPORTATION Comments

1. Proposed dredging would not affect bridges directly, nor re-direct flow or increase velocities such that bridge structures would be damaged.

2. Comment noted.

3. The drawbridge may need to be raised and if so, the appropriate contacts will be made.

6-17-02

General comment:

Simply said - looks OK to me.

Alton Haymaker
1721 Cottonwood Dr.
Pasco, WA 99301

Alton Haymaker
1721 Cottonwood Dr.
Pasco, WA 99301

Dept of Army
Corps of Engineers
201 N 3rd Av.
Walla Walla, Wa

RESPONSE to ALTON HAYMAKER comments

1 . Comment noted.

Port of Lewiston

1626 6th Avenue N. • Lewiston, ID 83501
(208) 743-5531 • Fax (208) 743-4243
E-mail: portinfo@lewiston.com

PORT COMMISSIONERS:
President
Peter K. Wilson
Vice President
Dale R. Alldredge
Secretary-Treasurer
Terry B. Kolb

ADMINISTRATION:
Manager
David R. Doeringsfeld
Office Manager
Diane N. Hausen

July 2, 2002

Walla Walla District
Corps of Engineers
Environmental Compliance Section
ATTN: Sandy Simmons
201 N. 3rd Ave.
Walla Walla, WA 99362-1876

RE: Lower Snake River Maintenance Dredging

Dear Ms. Simmons:

The Port of Lewiston is in full support of the proposed maintenance dredging scheduled for the winter of 2002-2003. It is imperative that this work be completed as soon as possible. Operations at the Port of Lewiston are already impacted by shallow water conditions due to siltation. Grain barges have been light loaded for years and conditions are only getting worse. There are areas in the Clearwater and Snake Rivers that do not provide an unobstructed 14-foot navigation channel. 1

We have anxiously awaited the completion of the 20-year Dredge Material Management Plan (DMMP). For years, dredging on the Snake and Clearwater Rivers has been delayed awaiting the approval of the DMMP. Barge transportation is an integral part of the region's economy. We urge the Corps to complete the maintenance dredging as scheduled, so that commercial navigation is not further impacted.

If you have any questions regarding the impacts to the Port of Lewiston, please give me a call.

Sincerely,
PORT OF LEWISTON

David R. Doeringsfeld
Manager

RESPONSES to PORT OF LEWISTON Comments

1. Comment noted.

PNWA
PACIFIC NORTHWEST WATERWAYS ASSOCIATION
....Working to enhance economic vitality in the Pacific Northwest since 1934

June 25, 2002

Walla Walla District
Corps of Engineers
Environmental Compliance Section
ATTN: Sandy Simmons
201 N 3rd Avenue
Walla Walla, WA 99362-1876

Comment in support of dredging, Public Notice No. CENWW-PM-PD-E 02-01

On behalf of the Pacific Northwest Waterways Association membership, I am writing in support of the Lower Snake River 2002-2003 Maintenance Dredging in Washington and Oregon.

Navigation on the Snake River is a critical link in the transportation corridor that moves Northwest and other US products into world markets. Maintenance of the Snake River navigation channel and port facilities adjacent to the channel has been delayed for years, awaiting completion of the 20-year Dredge Material Management Plan and the issuance of a permit. This dredging is urgently needed now.

Lack of dredging has affected commerce and the environment. In addition to potentially obstructing navigation, lack of channel maintenance has required raising reservoir levels, thus affecting energy production and fish operations called for in the salmon biological opinion. Furthermore, this dredging will provide shallow water habitat for fish.

Navigation is the lowest cost, most fuel-efficient and least polluting mode of transportation. It is important for the proposed maintenance dredging to occur this year so that both economic and environmental benefits of the river system can be realized.

PNWA represents a wide range of public and private sector economic interests in Washington, Oregon and Idaho. We strongly urge the Corps to issue the permit and complete the Snake River maintenance dredging as proposed and as scheduled. 1

We appreciate the opportunity to comment.

Sincerely,

Glenn Vanselow
Executive Director

1500 NE Irving, Suite 540 ▪ Portland, OR 97232 ▪ 503-234-8550 ▪ Fax: 503-234-8555 ▪ www.pnwa.net ▪ info@pnwa.net

RESPONSE to PNWA Comments

1. Comment noted.

Lewiston CHAMBER

July 12, 2002

Walla Walla District
Corps of Engineers
Environmental Compliance Section
ATTN: Sandy Simmons
201 N. 3rd Ave.
Walla Walla, WA 99362-1876

RE: Lower Snake and Clearwater River Maintenance Dredging

Dear Ms. Simmons:

The Natural Resources Task Force (NRTF) is a joint sub-committee of the Lewiston and Clarkston Chambers of Commerce. The NRTF is in full support of the proposed maintenance dredging on the Snake and Clearwater Rivers scheduled for the winter 2002 – 2003.

For the past several years, riverside grain elevators have been struggling with trying to load barges without having them stuck on the bottom in berthing areas. Because of the lack of dredging, the elevators now take approximately 20% longer to load a barge. There are areas on the river further down from Lewiston/Clarkston that restrict elevators from loading barges to a 14-foot draft. Elevators have restricted barge draft to a maximum of 13-feet 6-inches. While this restriction appears small, it translates into a significant additional cost for grain transportation.

Additionally, the proposed dredging will improve recreation access at Hells Canyon Resort Marina, the Green Belt Boat Basin and Swallows Park Swim Beach and Boat Basin. Each of these facilities is important to the local economy. Tourism trade is increasing in importance to our economy and with the Lewis-Clark Bicentennial quickly approaching, access to the river from these locations is imperative to the community.

The joint Natural Resources Task Force of the Lewiston, ID and Clarkston, WA Chambers of Commerce strongly urges the Corps to issue the required permits and complete the Snake and Clearwater dredging as soon as possible. 1

Sincerely,

Jerry Klemm, Chairman
NRTF

Lewiston Chamber of Commerce
111 Main Street ◆ Suite 120 ◆ Lewiston, ID 83501
208.743.3531 ◆ 208.743.2176 Fax ◆ lccdir@lewistonchamber.org

Lewiston CHAMBER

July 12, 2002

Walla Walla District
Corps of Engineers
Environmental Compliance Section
ATTN: Sandy Simmons
201 N. 3rd Ave.
Walla Walla, WA 99362-1876

RE: Lower Snake and Clearwater River Maintenance Dredging

Dear Ms. Simmons:

The Board of Directors of the Lewiston Chamber of Commerce is in full support of the proposed maintenance dredging on the Snake and Clearwater Rivers.

The port districts at Lewiston, Clarkston, and Wilma are a very important part of the local and regional economy. They provide critical access to world markets for manufacturing, farming, tourism, and recreation.

Maintenance of the channel to proper depth for full access is critical. In these economic times, any disruption in service, or what may (in better economic times) be construed as a minor cost increase can be enough to cause us to lose markets. Loss of access to those markets translates directly into a loss of jobs.

The Lewiston Chamber of Commerce strongly urges the Corps to issue the required permits and complete the Snake and Clearwater dredging as soon as possible. 1

Sincerely,

Daniel A. Wenstrom

Daniel A. Wenstrom, President
Lewiston Chamber of Commerce

RESPONSE to LEWISTON CHAMBER OF COMMERCE Comments

1. Comment noted.

DIRK KEMPTHORNE
governor

Richard J. Collignon
director

Rick Cummins, Administrator
division of management services

Dean Sangrey, Administrator
division of operations

IDAHO PARK AND RECREATION BOARD

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region six

IDAHO DEPARTMENT OF PARKS AND RECREATION

p.o. box 83720
boise, idaho 83720-0065

(208) 334-4199

fax (208) 334-3741

tdd 1-800-377-3529

street address
5657 warm springs avenue

www.idahoparks.org

July 9, 2002

Walla Walla District
Corps of Engineers
Environmental Compliance Section
ATTN: Sandy Simmons
201 N. 3rd avenue
Walla Walla, WA 99362-1876

RE: Public Notice No: CENWW-PM-PD-E 02-01

My staff has reviewed the above referenced document concerning dredging along the Lower Snake River.

The Idaho Department of Parks and Recreation has no concern about the proposed dredging, but I would like to take this opportunity to draw your attention to an additional dredging need.

The entrance to the Hells Gate Marina will need to be dredged in the next few years. While the marina was recently redesigned with the intent of substantially reducing the amount of sediment that would accumulate, the design will not stop all sedimentation. The build-up will need to be removed at some time in the future, as sedimentation continues. Therefore I am asking that you put us on your list for dredging to be done in the next cycle, and contact us at that time. 1

Thank you for the opportunity to comment.

Sincerely,

Rick Collignon, Director
Idaho Department of Parks and Recreation

FINAL IDAHO STATE PARKS AND RECREATION COMMENTS

1 . Comment noted.

FINAL SAVE OUR WILD SALMON COMMENTS

AMERICAN RIVERS * FRIENDS OF THE EARTH * IDAHO RIVERS UNITED * INSTITUTE FOR FISHERIES RESOURCES * NATIONAL WILDLIFE FEDERATION * PACIFIC COAST FEDERATION OF FISHERMEN'S ASSOCIATIONS * SALMON FOR ALL * SAVE OUR *WILD* SALMON * SIERRA CLUB * TROUT UNLIMITED

July 14, 2002

Walla Wall District
Corps of Engineers
Environmental Compliance Section
ATTN: Sandy Simmons
201 N. 3rd Avenue
Walla Walla, WA 99362-1876

Dear Ms. Simmons:

This letter is written by the Save Our *Wild* Salmon coalition (SOS) and its undersigned member organizations in order to comment on proposed dredging activities associated with the 20-year Dredged Material Management Plan (DMMP) for the Lower Snake River. On January 18, 2002, SOS submitted comments on the Draft Environmental Impact Statement (DEIS) for the DMMP prepared by the Army Corps of Engineers ("DEIS Comments"). SOS attaches and incorporates those comments by reference and offers these additional comments on the proposed issuance of a Section 404 permit for Winter 2002-2003 Maintenance Dredging of the Lower Snake River.[1] 1

The earlier comments discussed in considerable detail the deficiencies of the DEIS under NEPA, as well as the major shortcomings of the DMMP generally. These comments will highlight additional concerns, emphasizing how the proposed dredging activities fall short of meeting the substantive requirements necessary to obtain a Section 404 permit under the Clean Water Act.

[1] In the DEIS comments, SOS criticized the Corps' failure to pursue a 404 permit for dredging activities associated with the DMMP, urging them to do so. The Corps recently issued a public notice for the proposed project pursuant to 33 C.F.R. § 337. These comments are submitted in response to that notice.

1

FINAL SAVE OUR WILD SALMON COMMENTS

General Comments

The Public Notice for the Winter 2002-2003 Maintenance Dredging permit indicates the Corps' intention to move forward in implementing its 20-year DMMP. As explained in the DEIS comments for the DMMP, SOS is strongly opposed to this Plan and finds it legally deficient in several respects. Thus, SOS' concerns with the dredging at issue in these comments are generally twofold- 1) the Corps is moving ahead with the DMMP, and 2) the Notice does little to show how the Corps will satisfy the substantive provisions of the Clean Water Act in executing this plan. 2

In contrast to NEPA, which imposes a set of procedural requirements on federal agencies pursuing a major federal action, Section 404, 33 U.S.C. § 1344, of the Clean Water Act imposes substantive requirements that must be met before the Corps may issue a permit for the discharge of pollutants into waters of the United States.[2] In evaluating whether a permit should issue, the Corps must follow its own regulations as well as the 404(b)(1) guidelines promulgated by the EPA. (see 33 C.F.R. §§ 320-325, and 40 C.F.R. § 230). 3

Overall, SOS is concerned that the Corps apparently intends to rely on the DEIS to satisfy its CWA obligations. Even if the DEIS did adequately analyze the impacts of the DMMP – and it did not – there is a fundamental disconnect between the broad scope of the actions analyzed in the DEIS and the specificity of the actions that must be analyzed before the Corps can issue a 404 permit under the CWA. This disconnect between the two projects prevents the Corps from blindly relying on it DEIS to support its actions here. The 404 permit must include a full, comprehensive public interest review and analysis necessary to fulfill the 404 (b)(1) guidelines. 4

I. A PUBLIC INTEREST REVIEW PURSUANT TO THE CLEAN WATER ACT CANNOT BE BASED SOLELY ON INFORMATION CONTAINED IN THE DEIS FOR THE DMMP.

Before the Corps may issue a 404 permit authorizing dredging under the Clean Water Act, it must conduct a public interest review pursuant to 33 C.F.R. § 320.4. "The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. 5

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[2] See *Sierra Club v. U.S. Army Corps of Engineers,* 772 F.2d 1043, 1051(2nd Cir., 1985) (holding that "[l]ike NEPA, the Clean Water Act requires that an environmental concern--here the impact on the aquatic environment--be considered at an early enough stage in the policymaking process to affect the agency decision. But the Clean Water Act provides for a more intrusive power of review, one whose purpose is to prohibit agency action whenever certain environmental impact thresholds are met. Instead of simply insisting procedurally that the agency weigh environmental concerns, the Clean Water Act specifically prohibits an agency from sanctioning a project that it finds will have a significant adverse impact on the marine environment. Therefore, when an agency approves a project that the record before a reviewing court reveals will have a significant adverse impact on marine wildlife, the agency determination must be reversed." See also, 40 C.F.R. § 230.10.

2

Evaluation of the probable impact which the proposed activity may have on the public interest requires a careful weighing of all those factors which become relevant in each particular case." 33 C.F.R. § 320.4(a). The Corps, in its Public Notice, acknowledges that it must base its decision whether to perform the dredging on a public interest review. SOS is concerned that the Corps intends to rely on its evaluation of impacts in the DEIS to conduct its public interest review for the Winter Dredging proposal.

The only discussion of environmental impacts in the Public Notice for the Winter Dredging proposal is a short paragraph incorporating by reference the impacts discussed in the DEIS. The Corps' evaluation of environmental impacts in the DEIS is insufficient and fails to provide a foundation from which the Corps may conduct an adequate public interest review.[3] The DEIS "presents sweeping generalizations and unsupported assertions, and promises environmental benefits that are either unsupported or actively contradicted by the available science." (DEIS Comments at 6).

Some, but not all, of the concerns SOS raised in its comments on the DEIS apply here as well. For example, the Corps relies on its unsupported assumption that fish protected under the ESA will not be in the river when dredging occurs. This assumption ignores studies indicating that many juvenile fish over-winter in the proposed dredging area and thus may be present. The DEIS also does not address the effects of turbidity and water quality in the aftermath of dredging, nor does it consider the effects of sediment plumes potentially affecting fish downstream. Moreover, the DEIS relies on outdated science, ignores current thresholds of risk, and fails to consider ongoing emissions when evaluating whether the proposed dredging could stir up unsafe levels of toxic sediment. Furthermore, the Corps overstates the benefits of the proposed dredging activities. The Corps assumes that instream disposal will create juvenile salmon habitat, while the evidence is far from clear whether this would really occur.[4] **5a**

Finally, as we stated earlier, the Corps cannot rely on the DEIS to satisfy its CWA obligations. Even if the DEIS did adequately analyze the impacts of the DMMP – and it did not—there is a fundamental disconnect between the broad scope of the actions analyzed in the DEIS and scope and specificity of the actions that must be analyzed before the Corps can issue a 404 permit under the CWA. The DEIS contemplates a 20-year dredging management plan, while the 404 permit would cover dredging for the winter 2002-2003 season, only. While many of the issues will certainly be similar, the DEIS for the DMMP lacks details unique to this dredging proposal. Before the proposed dredging is permitted, the Corps must consider independently the factors listed in 33 C.F.R. § 320.4, especially "general environmental concerns,… fish and wildlife values,… and water quality". **5b**

II. THE CORPS HAS NOT SHOWN HOW THE PROPOSED WINTER DREDGING WOULD COMPLY WITH THE 404(b)(1) GUIDELINES.

The Corps' regulations governing the public interest review state that, "for activities involving 404 discharges, a permit will be denied if the discharge that would be authorized by **6**

[3] See DEIS Comments 4-14.

[4] *Id.*

such permit would not comply with the Environmental Protection Agency's 404(b)(1) guidelines."[5] 33 C.F.R. § 320.4(a). Those EPA guidelines provide specific criteria which enable the Corps to determine whether the dredging complies with Section 404(b)(1) of the Clean Water Act. 40 C.F.R. § 230; 33 U.S.C. § 1344(b)(1).

The 404(b)(1) guidelines mandate that a permit be denied under a number of circumstances. The Corps must deny a permit when, for example: (1) there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem; (2) when, based on factual determinations outlined in 230.11, the Corps determines that the discharge will cause or contribute to significant degradation of the waters of the United States; (3) when the proposed discharge does not include all appropriate and practicable measures to minimize potential harm to the aquatic ecosystem; and finally (4) when there is insufficient information to make a reasonable judgment as to whether the discharge will comply with the guidelines. 40 C.F.R. § 230.12. Each of these factors is particularly relevant to the Corps' review here. **6 (con.)**

The Corps gives no indication in its Public Notice for the Winter Dredging proposal as to how it plans to comply with these, and other, 404(b)(1) Guidelines. SOS is concerned that the Corps will issue the permit without conducting the proper analysis or making the appropriate factual determinations as required under section 404(b)(1). As with the public interest review, SOS must assume that the Corps intends to use the contents of its DEIS to satisfy the 404(b)(1) analysis. This would not suffice. The 404(b)(1) Guidelines impose unique substantive requirements, and the Corps must comply with these requirements. Compliance with the 404(b)(1) Guidelines requires the Corps to complete an analysis that includes, but is not limited to, the following criteria.

A. The Corps Cannot Rely On Its Inadequate Analysis Of Alternatives In The DEIS To Comply With 40 C.F.R. § 230.10(a).

Section 230.10(a) of the guidelines mandate that a permit application be denied where there is "a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences." 40 C.F.R. § 230.10(a). If the proposed action is subject to NEPA, the analysis of alternatives in the NEPA document may be sufficient for evaluation of alternatives under the Clean Water Act. However, "on occasion, these NEPA documents…may not have considered the alternatives in sufficient detail to respond to the requirements of these Guidelines" 40 C.F.R. § 230.10(a)(4). That is the case here. As stated in our DEIS comments, the alternatives considered in the DEIS by the Corps will not be sufficient in determining whether any practicable alternatives exist. The DEIS alternatives are not only inadequate under NEPA, but they again fail to consider the specific details of this proposal. **7**

In the DEIS, the Corps failed to consider an adequate array of alternatives for the DMMP in violation of NEPA. The four alternatives the Corps did explore in its DEIS were "virtually identical" and involved "substantial in-river dredging and levee construction with various kinds

4

of sediment disposal." Non-dredging or reduced dredging alternatives, such as dam removal or lighter barge traffic, were completely ignored. (see Comments at 2-3). This failure to look at sufficient alternatives will undermine the Corps' ability to assess whether there are any practicable alternatives to the dredging proposal that would have a lesser impact on the environment. Thus, a permit should not issue until all viable alternatives have been evaluated for their relative impacts. Additionally, the alternatives considered in the DEIS pertained to a 20-year management plan, not a specific dredging activity. If the Corps intends to rely solely on its DEIS to determine whether there are practicable alternatives, it would be in violation of Section 404 of the Clean Water Act.

B. The Corps Has Failed To Show That The Proposed Dredging Activities Will Not Result In Significant Degradation Of The Waters Of The United States .

The EPA guidelines prohibit the issuance of a 404 permit where the discharge of the dredge or fill material, "will cause or contribute to significant degradation of the waters of the United States." 40 C.F.R. § 230.10(b). The Corps must make factual determinations based on criteria included in the guidelines to determine whether significant degradation would occur. The criteria include physical substrate determinations; water circulation, fluctuation, and salinity determinations; suspended particulate-turbidity determinations; contaminant determinations; aquatic ecosystem and organism determinations; proposed disposal site determinations; determination of cumulative effects on the aquatic ecosystem; and determination of secondary effects on the aquatic ecosystem. See 40 C.F.R. § 230.11. Subpart C of the Guidelines describe in detail the potential impacts that correspond with the criteria used for the factual determinations in 230.11 (e.g. impacts to "substrate" from the discharge of dredged material may include change in the complex physical, chemical, and biological characteristics of the substrate). If, based on factual determinations, the project would cause or contribute to significant degradation, the Corps must reject the proposal. The Corps must set forth in writing its factual determinations and finding of compliance or non-compliance. 40 C.F.R. § 230.12(b). 8

The Corps has thus far failed to make the factual determinations under the 404(b)(1) Guidelines to determine whether the proposed dredging would cause significant degradation of the waters of the United States. And again, the Corps gives no indication in its Public Notice as to how or when it intends to conduct this statutorily required analysis.

There are significant questions that remain as to how the dredging will be conducted and the implications associated with the various methods. The Public Notice suggests that dredging may be accomplished by "mechanical methods such as clamshell, dragline, or backhoe," but ultimately the contractor would determine "the exact construction methods that would be used to meet the contract requirements," and that "until the contractor submits their plan, the exact placement method is uncertain." (See Notice at 4). The Corps sets out various "scenarios" that may be employed to meet the objectives of the plan, but again gives discretion to the contractor to decide which method to use. Under these circumstances, it would be nearly impossible to make the necessary factual determinations to determine whether significant degradation would occur before the permit was issued.

C. The Corps has Not Shown How It Will Minimize Adverse Impacts

Finally, the Guidelines require that all appropriate and practicable steps be taken to minimize potential adverse impacts of the discharge on the aquatic system before the Corps may issue a permit. Aside from the overly optimistic hope that habitat will be created by removing sediment from one part of the river and replacing it in another, there is no detailed discussion as to how the Corps plans to mitigate for the impacts of the project. 9

D. Cumulative Effects.

SOS refers the Corps to its DEIS comments at 8-10 for a more complete discussion of the DEIS' deficiencies in analyzing cumulative effects. The Corps cannot rely on that analysis here and must complete an independent, and truly comprehensive, analysis of cumulative effects both as part of the public interest review and as required by the 404(b)(1) Guidelines. 10

SOS urges the Corps to engage in a full public interest review, including details on how it will satisfy the 404(b)(1) Guidelines, before it issues the 404 permit for Winter 2002-03 dredging activities. In contrast to the DEIS, this review must be searching, comprehensive, and substantive to pass muster under the CWA. 11

We appreciate the opportunity to comment on this public notice. If you have any questions about these comments, or would like to discuss any matter discussed in these comments, please contact Jan Hasselman, staff counsel with National Wildlife Federation, at (206) 285-8707 ext. 105.

Sincerely,

Pat Ford

Pat Ford, Save Our Wild Salmon
Jan Hasselman, National Wildlife Federation
Bill Sedivy, Idaho Rivers United
Rob Masonis, American Rivers
Jeff Curtis, Trout Unlimited
Bill Arthur, Sierra Club
Lovenia Warren, Salmon for All
Glen Spain, Pacific Coast Federation of Fishermen's Associations
and Institute for Fisheries Resources
Shawn Cantrell, Friends of the Earth

RESPONSES to SOS comments

1. The Corps responded to comments submitted on the Draft DMMP/EIS in the Final DMMP/EIS. The Corps considered each of the comments, responded to them, and, where appropriate, revisited the analysis and/or revised the EIS. See Appendix 0 of the Final DMMP/EIS. The additional comments were also considered and responses follow as appropriate.

2. The Corps supplied the appropriate details in the DMMP/EIS and the public notice with regard to the 2002-2003 dredging. Updated information can be found on the Corps website http://www.nww.usace.army.mil/dmmp/monitor.htm. This includes details on monitoring water quality.

3. Agree. For activities such as those documented in the DMMP, the Corps of Engineers complies with all applicable requirements of Section 404 of the Clean Water Act. The Corps evaluates its activities in accordance with the procedures and requirements of Section 404.

4. Appendix N of the Final DMMP/EIS presents in-depth documentation of the proposed 'Winter 2002-2003 dredging, including a specific 404(b)(1) evaluation of the proposed activities (Appendix N, Attachment 1). While the DMMP/EIS presents comprehensive documentation of the "broad scope of actions" considered therein, Appendix N adequately analyses and documents the anticipated impacts of the proposed 2002-2003 dredging, in accordance with the 404(b)(1) guidelines.

5. The subject public notice provides summary information on the dredging and anticipated impacts as per 33 CFR 337. 1. As noted above in the response to Comment 4, Appendix N of the Final DMMP/EIS provides detailed documentation of the proposed 2002-2003 dredging. In addition, the comments received from the Corps public notice are considered and responded to, including Save Our Wild Salmon's comments.

5a. With respect to the "concerns SOS raised in its comments on the DEIS," those comments were considered by the Corps. Appendix 0 of the Final DMMP/EIS documents the responses to those comments.

Response to comment I 2: It is also acknowledge that the proposed dredging could harm some individuals of the Endangered Species Act-listed fish stocks.

Response to comment 13: DMMP/EIS states that the U.S. Fish and Wildlife Service indicates there is little evidence that dredging operations actually cause on of the problems for fish attributed to high turbidity. It is also stated that moderate levels of turbidity accelerate foraging rates among juvenile chinook salmon.

Response to comment 15: DMMP/EIS states that the proposed habitat creation is supported by established research. NMFS stated in their 2002 DMMP Biological Opinion, NMFS concurred that the proposed creation of salmon habitat shows promise. The Crops will monitor the success of any habitat creation.

Responses to comments 16 and 17: The sampling and analysis plan and the monitoring plan are to address water quality effects. It also states that monitoring during dredging will assess whether unacceptable amounts of sediment movement may occur during dredging operations and that based on the monitoring, modify the dredging operation to limit the extent of sediment plumes in the river.

5b. The DMMP/EIS provides a more general programmatic analysis (see Appendix I of the Final DMMP/EIS, Section 404(b)(1) Evaluation). However, the Final DMMP/EIS states in Section 5.1.7 that separate 404(b)(1) evaluations will be prepared for each dredging and in-water disposal activity and submitted to the appropriate state(s) along with a request for water quality certification. Indeed, for the proposed 2002-2003 dredging, the Corps prepared a 404(b)(1) evaluation specifically for that dredging and disposal activity (see Final DMMP/EIS Appendix N, Attachment 1) and submitted it to Washington Department of Ecology along with a request for Section 401 Water Quality Certification.

6. Attachment I of Appendix N of the Final DMMP/EIS is the 404(b)(1) evaluation for the proposed winter 2002-2003 dredging. This evaluation documents how the proposed 2002-2003 in-water disposal would comply with the 404(b)(1) guidelines. In that evaluation, the Corps addresses alternatives, determines that discharge of the dredged material will not cause significant degradation of waters of the U.S., and includes measures to minimize harm to the aquatic ecosystem

7. As noted in responses to SOS comments 2, 3, and 5 on the DEIS, the Corps developed and evaluated a wide range of alternatives that were responsive to the purpose and need, consistent with the requirements of NEPA. The DMMP/EIS evaluated the alternatives in sufficient detail to meet the Clean Water Act requirement of identifying practicable alternatives that would have a lesser impact on the aquatic environment.

The Corps evaluated a range of non-dredging and reduced dredging measures that would meet the project purpose and need. Non-dredging and reduced dredging alternatives were considered. The Corps was unable to identify any non-dredging alternatives that would preclude the need for dredging. Reducing sediment generated by land use practices was considered, but would not eliminate the need for dredging. Although the Corps has no authority to change land use practices on non-Corps property, the Corps plans to use the Local Sediment Management Group discuss possible modifications to land use practices to reduce the future need for dredging.

Non-dredging and reduced dredging alternatives were considered in the planning process and are documented in Sections 2.2.1 - 2.2.3. The text in these sections has been revised to include an expanded discussion of why these measures would not adequately address the sedimentation problem in the five reservoirs. The alternatives evaluated in the DMMP/EIS meet the purpose and need stated in Section 1.2.The alternatives also comply with the Corps' *Planning Guidance Notebook,* Engineering Regulation I 1 05-2- 1 00, which states that "It is the Corps of Engineers policy to accomplish the disposal of

dredged material associated with the construction or maintenance dredging of navigation projects in the least costly manner. Disposal is to be consistent with sound engineering practice and meet all Federal environmental standards...". The Corps also considered and, wherever possible, integrated components of alternatives that would minimize impacts to or even benefit aquatic resources. Section 1.8 has been expanded to discuss the role of the Local Sediment Management Group in addressing changes in upstream land management to reduce erosion and sedimentation, as well as their role in identifying and evaluating opportunities for beneficial uses of dredged material. Based on its own analysis and comments received from the regulatory agencies, the Corps believes the four action alternatives that were analyzed are cost-effective and are in compliance with environmental laws.

Breaching any of the dams would not meet the purpose of maintaining the authorized navigation channel within the five reservoirs. Therefore, dam breaching was not considered as an alternative. However, this does not mean that possible dam breaching was not considered in the preparation of the DMMP/EIS. Section 1.6 of the DMMP/EIS addresses the relationship of the DMMP/EIS to the Lower Snake River Juvenile Salmon Migration Feasibility Study (Feasibility Study). The Feasibility Study analyzed the impacts of breaching the four lower Snake River dams as one of the alternatives. Therefore the DMMP/EIS did not repeat this analysis.

The purpose of this DMMP/EIS is, in part "to develop and evaluate alternative programs to maintain the authorized navigation channel and certain publicly-owned facilities in the lower Snake River and McNary reservoirs for the next 20 years". The Draft DMMP/EIS performed a benefit analysis on the authorized Federal navigation project to ensure that the project remained economically feasible. For this analysis two shallower Federal navigation channels, with controlling depths of 13 feet and 12 feet, were assumed to result from termination of maintenance dredging. Grain shipments, representing 78.8% of the commerce on the Snake River for the period of 1987 to 1996, were selected to represent the impacted commerce. Grain barge costs for shipments from the various ports on the Snake River system were developed to reflect light loading to accommodate the shallower channels. Reduced cargo capacity of the standard 3,600-ton grain barge (274 feet long, 42 feet wide, and 13.5 feet draft) with drafts of 12.5 feet and 1 1.5 feet were determined to be 3,270 tons and 2,950 tons, respectively. The impact of this reduced capacity would be to raise per ton barge costs by 10% and 22%, respectively. The resultant increase in transportation costs for moving the forecast grain shipments from the Snake River in the 20-year period from 2004 to 2024 was compared to the avoided annual cost of maintenance dredging. The result of this analysis, based on 1999 costs, indicated that dredging costs were equal to the estimated increase in barge costs when the channel capacity was reduced by only one foot. However, where channel depths were reduced by two feet, the cost of dredging was about half of the increased cost to barge transportation. In essence, shoaling that reduces the channel depth by one foot represents the "break even" point where maintenance dredging is feasible and cost-effective.

8. Appendix N of the Final DMMP/EIS documents the anticipated environmental effects

of the proposed 2002-2003 dredging, consistent with the 404(b)(1) guidelines. The proposed dredging would not result in significant degradation of the waters of the United States. Factual determinations under the 404(b)(1) guidelines are presented in Appendix N. With respect to dredging methods, mechanical methods have been historically used for dredging, and the Corps has monitored dredging and, pertinent to the 404(b)(1) evaluation, disposal of dredged material. Disposal of dredged materials primarily comprised of sand and gravel, as is the case for the proposed dredging, would not cause significant degradation of the waters of the Untied States.

9. Final DMMP/EIS, Appendix N Section 7 describes the impacts expected from the Winter 2002-2003 dredging and in-water disposal. It also describes measures that will be taken to minimize potential adverse effects on the aquatic ecosystem. These measures include using mechanical dredging to avoid entraining fish, evaluating sediments for contaminants prior to dredging and in-water disposal, and monitoring dredging and disposal activities to ensure water quality standards are being met outside of the mixing zone.

10. The Final DMMP/EIS, Section 4.15, provides an assessment of the cumulative effects of the DMMP. In response to public comments on the Draft DMMP/EIS from Save Our Wild Salmon and other commentors, the Corps revised and expanded its initial cumulative effects analysis. Appendix 0 of the Final DMMP/EIS presents responses to Save Our Wild Salmon's comments (comments 25 and 27) regarding cumulative effects analysis.

11. The Corps believes that the subject public notice, and supporting documentation provided in the Final DMMP/E-IS - in particular Appendix N - provide for the full public interest review of the proposed Winter 2002-2003 dredging. Further, Attachment I to Appendix N provides documentation of the Corps 404(b)(1) evaluation. Updated information can be found on the Corps website.