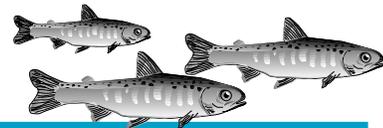
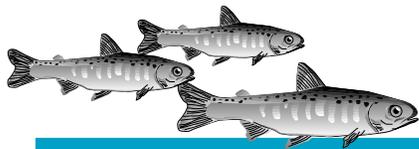




US Army Corps  
of Engineers®  
Walla Walla District

## Lower Snake River

# JUVENILE SALMON MIGRATION Feasibility Study



SEPTEMBER 2002

NEWSLETTER NO. 11

The U.S. Army Corps of Engineers (Corps) has completed a feasibility study of ways to improve juvenile salmon migration through the hydropower system on the lower Snake River. The study focused on how the lower Snake River dams could be changed to improve migration prospects for Snake River salmon stocks listed under the Endangered Species Act.



### STUDY UPDATE

By Lonnie Mettler, Corps  
Project Manager for the  
Study

The Lower Snake River Juvenile Salmon Migration Feasibility Study process has been completed. The publication of the Record of Decision (ROD) for the Feasibility Report and Environmental Impact Statement (FR/EIS) marks the U.S. Army Corps of Engineers (Corps) final action regarding this study process.

The Final FR/EIS is a result of the largest comprehensive study of its kind that the Corps' Walla Walla District has ever undertaken. This enormous effort to evaluate options for improved salmon passage through the Lower Snake River Project has been challenging, yet rewarding.

The Final FR/EIS is the result of cooperation among many parties throughout the Pacific Northwest. The combined effort of individuals representing Federal and State agencies; Tribes; various stakeholder organizations; numerous special interest groups; and the general public has set a new level of public involvement, which future studies will strive to achieve. The FR/EIS not only provides a recommended plan for future action, but also

serves as a comprehensive reference document for future lower Snake River environmental issues.

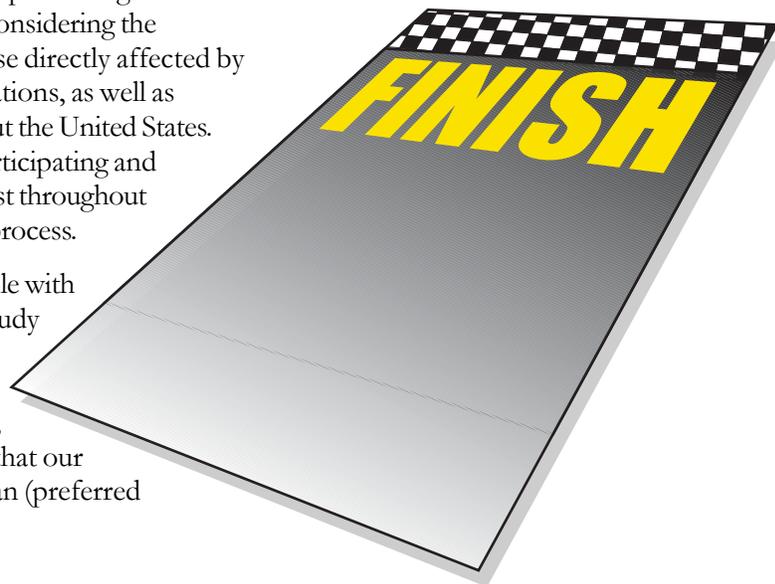
Special thanks are due to staff from the U.S. Bureau of Reclamation, the Bonneville Power Administration, and the U.S. Environmental Protection Agency as cooperating agencies; the National Marine Fisheries Service and U.S. Fish and Wildlife Service; and State agencies and regional Tribes. Individuals within these organizations and the Corps contributed countless hours of dedicated efforts to data collection, analysis, and presentation.

The public was a crucial player in the study process. Although public input into the process was at times overwhelming, the Corps found great value in capturing and considering the comments of those directly affected by Snake River operations, as well as citizens throughout the United States. Thank you for participating and maintaining interest throughout this multifaceted process.

While it is inevitable with such a complex study that not everyone will be pleased with the outcome, we are confident that our recommended plan (preferred

alternative) is based on the best available science. The methodologies, assumptions, and analyses have been put through a very thorough independent review. We also believe the Feasibility Study outcome is in line with the direction of other regional salmon recovery efforts.

The Final FR/EIS is an accomplishment the Corps is proud to share with the region. As we reach the end of this road, we now turn our attention towards implementing Adaptive Migration, the recommended plan (preferred alternative). We will, I'm sure, meet again on this journey towards salmon recovery, as the Corps continues to contribute to ongoing regional processes. 🌊

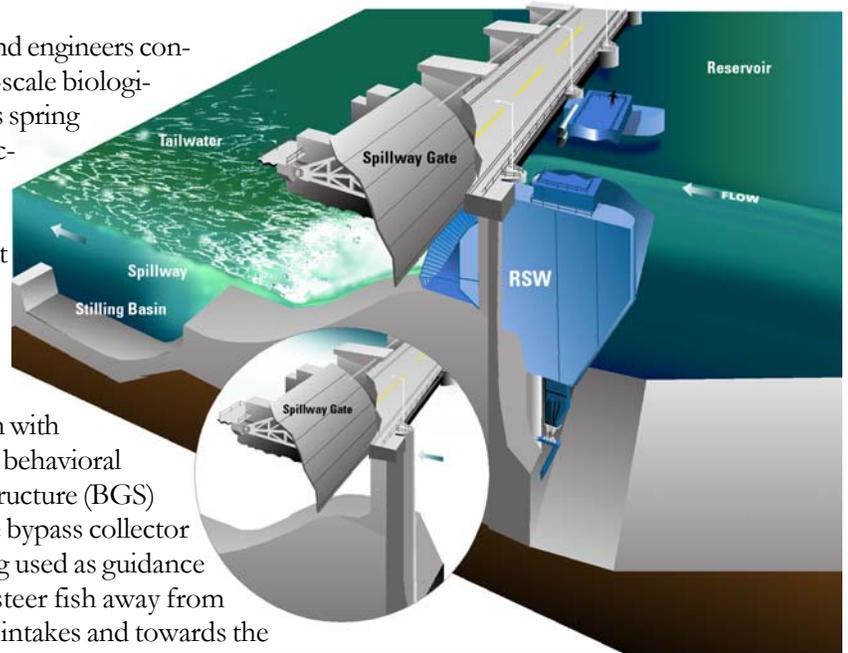


## CORPS COMPLETES TWO REMOVABLE SPILLWAY WEIR TESTS IN SUMMER 2002

The Corps completed biological and engineering testing this spring and summer of the removable spillway weir (RSW) installed last year in spillbay one at the Lower Granite Lock and Dam facility. The testing and analysis results will be used to determine the effects of the weir and to provide a basis for a decision on whether or not to build additional RSWs. RSWs are features of Alternative 3—Major System Improvements (Adaptive Migration), the recommended plan (preferred alternative) described in the Final FR/EIS and endorsed in the ROD.

The RSW weighs over 2 million pounds, and is 115 feet tall, 83 feet wide, and 61 feet deep in the upstream to downstream dimension. The purpose of the RSW is to pass juvenile salmon and steelhead over a “raised” spillbay crest, similar to a waterfall. Existing spillways use gates that are 50 feet below the water surface at the dam face. Fish pass through the deep gates under high pressure and velocities. The RSW allows fish to pass the dam over the weir under lower velocities and lower pressures. This new passage system is designed to provide a more efficient and less stressful passage route for the juvenile fish.

Scientists and engineers conducted full-scale biological tests this spring of the effectiveness of the RSW. For this first round of tests, the RSW was operated in conjunction with the existing behavioral guidance structure (BGS) and surface bypass collector (SBC) being used as guidance devices to steer fish away from the turbine intakes and towards the vicinity of the RSW. Although results are preliminary, it appears that a substantial number of fish did pass over the RSW. The Corps plans to meet with other State, Federal, and Tribal representatives this fall to discuss the final results and to gather input for the monitoring and operational plans for the next round of testing. For that next round of testing, the Corps plans to remove the SBC and BGS and test the RSW as a stand-alone fish passage route.



The Corps also completed a significant engineering test of the RSW this summer. The structure is designed to be “removable” by controlled descent to the bottom of the dam forebay. This allows the capability to return the spillway to original flow capacity during major flood events. The structure can then be raised to operating position after the flood event. Earlier this year, the Corps lowered the RSW to the bottom of the river on to a specially constructed landing pad, and then safely raised it to its original position. 🌐

## CORPS PROVIDES DRAFT FR/EIS COMMENTS/RESPONSES ON THE WEB

In keeping with a commitment to conduct a comprehensive public outreach effort throughout the Feasibility Study process, the Corps has placed a searchable database of comment documents on the Draft FR/EIS on its Web site. Visitors can search for comment documents by name, organization/company, or key resource/economic use category.

“The Web is an effective tool to post the huge volume of comment responses in an orderly and universally accessible manner,” said Dave Dankel, public involvement coordinator for the

Feasibility Study. “We feel that this will be an effective demonstration of our public involvement commitment to address and post public comments that became an effective part of our study.”

More than 230,000 comment documents in the form of e-mails, faxes, letters, comment forms, etc. were received in response to the December 1999 release of the Draft FR/EIS. The Corps also received more than 1,700 oral and taped comments at a series of 15 public meetings conducted throughout the region.

Comments were considered based on the substance or content of the comment. Many comments raised the same concerns. Importance was given to the substance or content of the comment. In addition to Draft FR/EIS comments and responses, the Walla Walla District’s home page also contains study documents and reports (including the Final FR/EIS and appendices), a description of the Corps’ recommended plan, questions and answers, information sheets, photographs, links, and other pertinent information regarding the Feasibility Study. Visit us at <http://www.nww.usace.army.mil/lsr/> 🌐

## FINAL RECORD OF DECISION COMPLETED

The Final Record of Decision was signed on September 9, 2002. This record documents the decision of the Corps on the selected action resulting from the Lower Snake River Juvenile Salmon Migration Feasibility Study process, and includes a response to the Final FR/EIS comments (Attachment A of the ROD). The Record of Decision was signed by Northwestern Division Commander, Brigadier General David A. Fastabend, and contains the following statement:

*I have taken into consideration the environmental consequences, the socioeconomic costs, and the biological data pertinent to the hydropower operations and project improvements, habitat actions, and hatchery reforms discussed in the 2001 ROCASOD (decision documents that implement the 2000 NMFS and USFWS Biological Opinions) and any additional actions relating to the Lower Snake River Project as a result of the FR/EIS. The Corps has determined that adequate authority, NEPA documentation, and biological rationale exist to implement the Lower Snake River Project hydropower operations and investigate*

*future hydropower, habitat, and hatchery actions associated with the lower Snake River.*

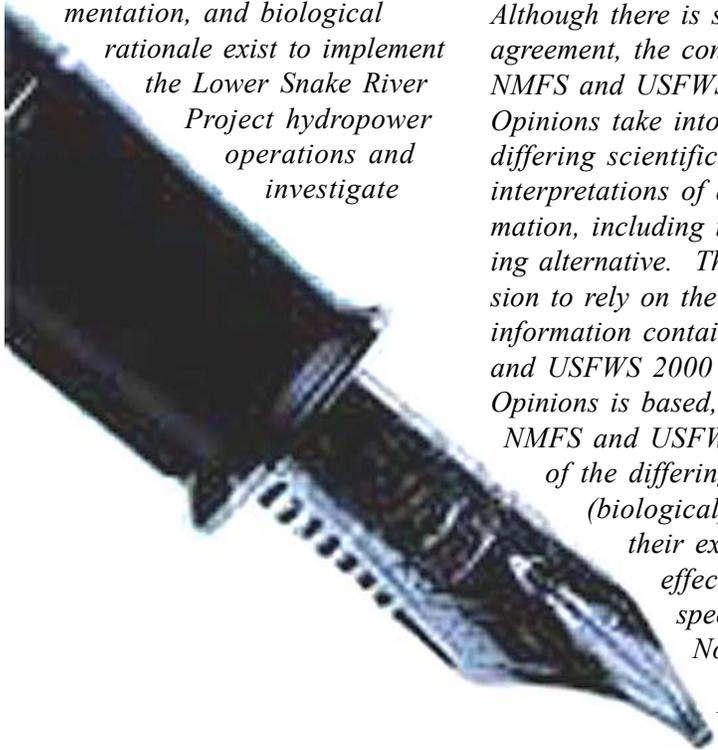
*I have taken into account the effect of current and proposed project operations on compliance with water quality standards. With the information available to date on water quality standards and attainment of those standards, the Corps has determined that the actions set forth in this ROD and the NMFS and USFWS 2000 Biological Opinions are consistent with our legal obligations under the CWA. I have taken into account the Northwest treaty tribes' fishing rights, the United States' trust responsibility to Native American Indian Tribes, and its responsibility to act in a manner consistent with the trust responsibility. The actions the Corps will implement are designed to lead to increased survival and recovery of the listed salmon species with beneficial results to the treaty tribes' fishery and benefits to the Northwest region as a whole.*

*Although there is scientific disagreement, the conclusions in the NMFS and USFWS 2000 Biological Opinions take into account the differing scientific opinions and interpretations of available information, including the dam breaching alternative. The Corps' decision to rely on the biological information contained in the NMFS and USFWS 2000 Biological Opinions is based, in part, on NMFS and USFWS consideration of the differing scientific (biological) information and their expertise on the effects on other species of interest to Northwest tribes.*

*I find that the evaluations and*

*documentation that support the NMFS and USFWS 2000 Biological Opinions, the 2001 ROCASOD, and the FR/EIS are sufficient to support the selection of the recommended plan (preferred alternative): Alternative 3—Major System Improvements (Adaptive Migration). These actions are a coordinated composite of system operations, configuration measures, and continued monitoring activities that are consistent with the reasonable and prudent alternative and incidental take statement in the USFWS and NMFS 2000 Biological Opinions. 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, and sockeye salmon. Also, these actions will not further adversely affect bull trout critical habitat. Further, it will not adversely affect bald eagles, grizzly bears, woodland caribou, Canada lynx, northern Idaho ground squirrel, gray wolves, and four plant species listed under the ESA.*

*I have taken into consideration the specific environmental consequences, the socioeconomic costs, and the biological data pertinent to each alternative and compared each FR/EIS alternative for improving juvenile salmon and steelhead passage survival through the four lower Snake River dams. After careful evaluation of all these issues, those above, and consideration of public concerns, I have decided to implement the recommended plan (preferred alternative), Alternative 3—Major System Improvements (Adaptive Migration), as the selected plan. ☉*



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## STUDY MILESTONES

= Task completed

- Notice of Intent ..... June 1995
- Scoping Meetings ..... July 1995
- Interim Status Report ..... December 1996
- Regional Roundtable Workshops Initiated ..... April 1997
- Public Information Meetings ..... September 1997 and November 1998
- NMFS Release of Draft Anadromous Fish Appendix ..... April 1999
- Complete Technical Analysis ..... June 1999
- Federal Agency/Independent Review Period ..... July 1999
- Distribute Draft FR/EIS ..... December 1999
- Public Review of Draft FR/EIS ..... December 1999 to April 2000
- Public Meetings on the Draft FR/EIS ..... February/March 2000
- Process Comments and Develop Responses/Revisions ..... 2000/2001
- Distribute Final FR/EIS ..... February/March 2002
- Public Review of Final FR/EIS ..... Spring 2002
- Sign Record of Decision ..... September 2002