



Oregon

Theodore R. Kulongoski, Governor

Department of Fish and Wildlife

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Mark Walker, Director of Public Affairs
Northwest Power and Conservation Council
851 SW Sixth Avenue, Suite 1100
Portland, Oregon 97204

Dear Mr. Walker:

The Oregon Department of Fish and Wildlife appreciates the opportunity to comment on the FY 2007-09 project selection process and draft recommendations circulated for review by the Northwest Power and Conservation Council (Council).

Evaluating the hundreds of proposed fish and wildlife projects across the Columbia Basin was a difficult and complicated task. However, with the support and involvement of local and regional groups, regional fish and wildlife managers, other federal and state natural resource managers, the public, and the Independent Scientific Review Panel (ISRP), the Council was presented with an exhaustive assessment of each individual proposal for their consideration. On balance, the Council's draft list of projects included many that are essential to fish and wildlife conservation and enhancement throughout the Columbia Basin.

These comments address the Department's four main issues regarding the Council's fiscal year 2007-09 project selection process. First, the Council needs to conduct an independent assessment of total project costs in relation to the identified needs of its own Fish and Wildlife Program.

Second, the Council's 2007-09 project selection process needs to fully consider and significantly weigh each project's scientific assessment by regional fish and wildlife managers. To this end beginning on page four (E.), we have listed projects we deem essential to meet Council and agency goals for fish recovery in the region, and for which we seek restoration of funding.

Third, the Council's proposed decision to set aside approximately \$10.1 million for a three-year period (FY 2007-09) as a reserve is unjustified as compared to the many critical projects in the process that will go unfunded. Fourth and most important, this agency's message to the Council is that we believe that the three major process issues above can be avoided if the Council commits to working more closely with regional fish and wildlife managers to define critical needs and priorities and better use available dollars to fund projects that meet those needs.

- A. The list of needs identified in sub-basin plans adopted by the Council as part of its Columbia Basin Fish and Wildlife Program is long, and the costs of efforts to fully address them exceed the level of funds made available by the Bonneville Power Administration (BPA). As such, the Council should conduct and share the results of an independent assessment of the total costs of projects necessary to fully address the needs identified in its Fish and Wildlife Program, and evaluate how funding the overall costs would potentially affect rates BPA would charge the region's electricity customers. The Council laid the groundwork for this assessment during the sub-basin planning effort. If required, as a provision of its Fish and Wildlife Program, the development of a three-year implementation budget and a ten- to fifteen-year long-term budget for each sub-basin. However, these budgets generally were not developed. Doing so would provide a budgetary basis for implementation of the program.
- B. Given the current level of funds available for projects in FY 2007-09, it is critical that the Council's project selection process fully consider and give significant weight to scientific assessments by regional fish and wildlife managers of which projects best ensure that fish and wildlife are protected, mitigated, and enhanced as required by the Northwest Power Act. Without full endorsement by the fish and wildlife managers, the Council, BPA and others in the region cannot confidently conclude that Council-recommended projects address critical needs, including priorities in federal, state and tribal fish and wildlife management plans.

It is from this context that we conclude that the Council's project selection process fell short of the mark, and as such, did not meet expectations of the many people who invested significant time participating in Council-sponsored efforts to evaluate project proposals. The basis of many of the decisions reflected in the draft recommendations is unclear and undocumented, and many decisions are inconsistent with or contrary to priorities of the fish and wildlife managers. These decisions, which in some instances represent extensive changes to the advice given the Council, have clearly frustrated the participatory decision-making process the Council so carefully established. At a minimum, the Council should assume a high burden of proof regarding changes to projects recommended by the fish and wildlife managers. As such, any deviation from those recommendations should be a rare exception, and should be fully vetted and explained.

The decision-making process was further clouded by significant differences among the states on how each evaluated project proposals for work within its boundaries. The Northwest Power Act contemplates the development and implementation of a regionally-based Columbia Basin Fish and Wildlife Program. In practical terms, this means the Council has a responsibility to ensure that measures in the Program address critical needs on a regional-scale and are integrated so they do not work at cross-purposes to each other. By allowing each state to independently and solely evaluate and select projects within its boundaries and by allocating the available budget among the states with little or no consideration of how critical needs are distributed among the sub-basins within the Columbia River drainage, the Council's project selection process is inconsistent with that contemplated by the Act. The Council should provide a detailed explanation of how its

draft recommendations address critical priorities and needs, as related to the regional goals of the Fish and Wildlife Program. It should also ensure that its approach to provincial goal-setting contemplates and addresses the need to define local priorities in a regional context.

- C. We believe the Council's decision to set aside about \$10.1 million for the three-year period (FY 2007-09) as a reserve is unjustified and unnecessarily exacerbates the existing gap between the amount of funds available and the costs of essential projects. The region cannot afford the luxury of setting aside dollars for non-essential purposes, such as soliciting "innovative" new work, when many critical projects recommended by the fish and wildlife managers and endorsed by the ISRP go unfunded. The Council should recommend using a portion of these dollars to fund the project entitled *Data Management for System Operations* (200732100), as recommended by the Mainstem-Systemwide Review Team. And, while it is prudent for the Council to be aware of looming ESA-decisions that may obligate BPA to fund projects not in the draft recommendations, we believe it is reasonable to assume the final list of recommended projects will meet many of BPA's ESA-obligations. For those not included, we expect them to either be funded with additional dollars above that allocated by the Council for FY 2007-09 or by reopening the Council's project selection process and revising the project list to include them.

From our perspective, the shortcomings in the process the Council used to prepare its draft recommendations to BPA for FY 2007-09 project funding resulted in several unacceptable consequences. Several projects we deem essential and of high priority in our management of fish populations negatively affected by the federal hydro-power system were either significantly compromised by reductions in funding levels or were eliminated. The result is a significant weakening of our ability to manage, conserve and enhance these resources. Also, in many instances, the Council has defined certain conditions that must be met before BPA funds specific projects. In general, these conditions were not vetted by the fish and wildlife managers, and in some instances likely cannot be satisfied in the manner or timeframe implied by the Council. Of particular concern to us is the condition that project managers characterize how fish and wildlife populations and/or their environment are responding to habitat protection and enhancement projects. While we agree with the need to complete these evaluations, they will be complicated and expensive. The Council should provide guidance on how to approach these evaluations, given that it directed project managers to spend no more than five percent of their budget on this task, and BPA has indicated an unwillingness to fund these evaluations.

- D. We believe these consequences are avoidable if the Council commits to working more closely with the fish and wildlife managers to define critical needs and priorities and better use available dollars to fund projects that meet those needs. This includes fully allocating the available expense budget, working with BPA to estimate and make available unspent dollars from FY 2006 and earlier years, and working with BPA to aggressively identify opportunities to capitalize costs currently defined as expenses. Toward this end, we ask that the Council immediately schedule a meeting with the fish

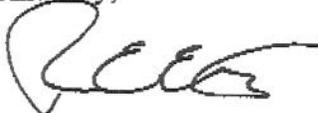
and wildlife managers to go through the draft list of recommended projects and work together to correct critical omissions and errors in funding levels.

- E. To set the stage for the discussion of projects we deem essential, and for which we seek restoration of funding, we have attached to this letter descriptions of how the funding level in the Council's draft recommendation differs from that proposed, or from that recommended as a result of state- or Council-sponsored project evaluation processes. In each instance, we either explain the effect of eliminating the project on our management needs, or of reducing the budget on the project's scope of work. Of particular importance to us are several projects including:
1. **Mainstem, Middle Fork, John Day Rivers Fish Habitat Enhancement Project (198402100).** The Council recommended that this project be discontinued because of funding constraints within the province. The project was initiated in July 1984 to work with private landowners and establish long-term cooperative agreements for anadromous fish habitat protection and enhancement on privately owned lands within the John Day Basin. Discontinuing the project would seriously jeopardize the ability of managers to meet the fish production goals identified in the John Day River Sub-basin Plan. It would severely reduce on-the-ground implementation of habitat enhancement projects in high priority areas, particularly for steelhead, for which degraded habitat has been identified as one of the primary factors limiting their recovery. It would also compromise the collaborative efforts of ODFW and landowners over the last 22 years.
 2. **Evaluation of Juvenile Salmonid Outmigration and Survival in the Lower Umatilla River Basin (198902401).** The Council recommended that this project be discontinued because of funding constraints within the province. Information from this project is used to make informed decisions on hatchery effectiveness, natural production success, passage improvement and flow enhancement strategies. The project also provides the only life cycle survival information for natural origin Mid-Columbia steelhead (which is the cornerstone for BiOp Remand and ICTRT life cycle survival modeling). Discontinuing the project would result in the loss of all status and trend monitoring for spring and fall Chinook salmon, coho salmon and summer steelhead in the Umatilla sub-basin. Without this information, 75% of the "high priority" management objectives identified in the Umatilla Sub-basin Plan will not be completely evaluated, nor will 62% of the "high priority" RM&E objectives in the Umatilla RM&E Plan.
 3. **Migratory Patterns, Structure, Abundance and Status of Bull Trout Populations in Subbasins of the Columbia Gorge, Columbia Plateau and Blue Mountain Provinces (199405400).** The Council recommended this project be discontinued because of questions about whether BPA has a mitigation responsibility for these populations under the Northwest Power Act. The Council and the USFWS have previously acknowledged adverse affects of the federal hydro-power system on bull trout populations in the Basin. This project provides scientific basis that helps guide the recovery of threatened stocks of bull trout in the Columbia River Basin, including an understanding of life history characteristics, population connectivity and an evaluation of threats to their persistence, including information on movements of bull trout into reaches of the Columbia River directly influenced by the hydrosystem. Discontinuing the project would hinder the

- development of a basin-wide and statistically rigorous monitoring program and impair our ability to gauge the effects of recovery efforts
4. **White Sturgeon Mitigation and Restoration in the Columbia and Snake Rivers Upstream from Bonneville Dam (198605000).** The Council reduced the funding for this project below the level recommended by the Mainstem-Systemwide Review Team in an effort to reduce the overall costs of projects in the "Mainstem-on-the-ground/Multi-province" category. Council staff erred in calculating the cost of specific project tasks the Council recommended be eliminated. The Council did not intend to discontinue juvenile sturgeon recruitment monitoring in Bonneville, The Dalles, John Day, Ice Harbor, and Little Goose reservoirs or juvenile sturgeon transplants into The Dalles and John Day reservoirs. However, at the recommended funding level, both of these tasks would not be funded. Project sponsors have made Council staff and Oregon and Washington Council members aware of the error and have provided estimates of the costs to restore these critical sturgeon mitigation tasks.
 5. **CBFWA Collaborative Systemwide Monitoring and Evaluation Program (200303600).** The Council recommended interim funding in FY 2007-08 below the level recommended by the Mainstem-Systemwide Review Team and no funding in FY 2009. This project funds state and tribal scientists to work collaboratively with federal scientists and others to develop and implement regional monitoring and evaluation programs. It is intended as a long-term effort whose initial focus is on developing monitoring and evaluation plans, and long-term focus is on collaborative analyses and reporting. Discontinuing funding for the project in FY 2009 will seriously impair the ability of the states and tribes to scientifically contribute to regional monitoring and evaluation programs.
 6. **Data Management for System Operations (200732100).** The Council moved funding for this project into a placeholder and deferred a decision on the level of funding and the specific providers for fish passage science and analysis. The Columbia Basin Fish and Wildlife Authority developed this proposal to be entirely consistent with the Council's Fish and Wildlife Program, as amended in 2003. As such, it reflects the structure and function of the Fish Passage Center and its associated oversight board and technical committee precisely as outlined in the current Fish and Wildlife Program. It also includes an important role for the regional fish and wildlife managers, as required by the Fish and Wildlife Program. We strongly believe the Northwest Power Act places a high substantive standard on the Council to support its Fish and Wildlife Program.
 7. **Comparative Survival Study (199602000).** The Council reduced the funding to just over half the level recommended by the Mainstem-Systemwide Review Team, and below the FY 2006 level, and designated the funding as interim, pending further Council consideration of regional monitoring and evaluation framework. The study provides life cycle monitoring through the hydro-system including travel time, passage distribution, juvenile survival, delayed mortality and smolt-to-adult returns. Adult and juvenile PIT tag recovery data are analyzed to compare survival estimates for transported fish of known origin, downriver stocks, wild and hatchery transported fish and fish handled and not handled at dams. At the reduced funding level, the information basis for decision making about federal hydro-power operations would be significantly reduced.

We appreciate the opportunity to comment on the Council's FY 2007-09 project selection process and draft recommendations. We look forward to working with the Council to address our concerns and find ways to restore funding for a number of projects that are essential for meeting our shared goal to protect, mitigate and enhance fish and wildlife negatively affected by the construction and operation of the Columbia Basin federal hydro-power system.

Sincerely,



Roy Elicker
Deputy Director
Fish and Wildlife Programs

Attachment

Cc: Ms. Joan Dukes, Northwest Power and Conservation Council
Ms. Melinda Eden, Northwest Power and Conservation Council
Mr. Michael Carrier, Governor's Office
Mr. Virgil Moore

Attachment

List of Essential Projects and Consequences of the Northwest Power and Conservation Council (NPCC) Eliminating or Reducing Funding

Projects Whose Funding Would Be Eliminated

Project Title: Migratory Patterns, Structure, Abundance and Status of Bull Trout Populations in Subbasins of the Columbia Gorge, Columbia Plateau and Blue Mountain Provinces

Project Number: 199405400

FY 2006 Funding: \$373,750

ISRP Recommendation: Fundable (Qualified)

Requested Funding for 2007: \$466,260

MSRT Recommended Funding for 2007: \$367,500

NPCC Recommended Funding for 2007: \$0

Short Project Summary: The goal of this project is to provide scientific information that will help guide the recovery for threatened stocks of bull trout in the Columbia River Basin. An understanding of life history characteristics and connectivity has been identified as information critical to the tools needed for recovery. Additionally, a rigorous and systematic approach to monitor the status bull trout populations and evaluate threats to their persistence is needed to gauge progress towards recovery. Consistent with these needs, we propose objectives to 1) evaluate the seasonal movement patterns of subadults and the influence of water temperatures on those patterns in the Walla Walla subbasin, 2) assess migratory characteristics and population connectivity of Hood River bull trout, and 3) develop a monitoring framework and design for bull trout in natal habitats using the John Day and Grande Ronde subbasins as pilot areas. For this objective we will work cooperatively with the bull trout Recovery Monitoring and Evaluation Group (RMEG) formed by the USFWS to develop a monitoring strategy that is statistically sound and consistent with designs being developed for the basin and range of the listed species. These objectives were designed to complement previous and ongoing work and to support related projects in the region.

Major Accomplishments to Date

- Determine broad-scale genetic structure of bull trout populations throughout Columbia Basin, which has been applied to the distinct population segments listed under the Endangered Species Act.
- Described previously unknown life histories of bull trout in Columbia Plateau and Blue Mountain Provinces including documenting movement of adults into the Lower Snake River.
- Assessed distribution and ecological interactions of bull trout and introduced populations of brook trout.

- Assessed life history of selected migratory bull trout populations using PIT tag technology. Gained insight into life history and population productivity parameters needed to evaluate viability of the species.
- Evaluated the utility of redd counts as a monitoring tool. Determined redd characteristics for both resident and migratory populations, consistency of redd identification among experienced and novice surveyors, and relationship between redd counts and abundance of mature female spawners. We also evaluated the logistics; precision and accuracy of incorporating the EMAP sampling design to conduct redd surveys.
- Determined the temperatures used by adult migratory bull trout in the Grande Ronde basin, including application to the development and implementation of state and federal water quality criteria.

What is the public benefit resulting from the project? Bull trout from the Columbia basin were listed as threatened by the U.S. Fish and Wildlife Service under the Endangered Species Act. Past and current efforts to recover bull trout populations have been limited by the lack of basic information about bull trout ecology, life history, genetics, distribution and abundance. Recovering bull trout provides direct public benefit through restoration of a native fish species that provides distinct cultural, ecological and aesthetic benefits. Recovery of the species and delisting depend on management actions based on a sound scientific understanding of the needs of the species and an ability to monitor recovery that the project will provide.

What management needs does the project address? Direct assessment of migratory characteristics of bull trout including including potential use of the mainstem Columbia River affected by hydrosystem management. This information is critical in understand how to enhance connectivity among populations and recover the species. The 2000 Fish and Wildlife Program acknowledged impacts of the hydrosystem on bull trout: "The development and operation of the hydrosystem has also resulted in losses of numbers and diversity of native resident fish, such as bull trout..." As a result, the Council has to date funded several bull trout projects. Recent subbasin plans developed through the Council likewise affirm support for bull trout management, research, and monitoring projects. The draft bull trout recovery plan (USFWS 2002) contains further details on the impacts of the Columbia hydrosystem on bull trout beyond those identified for the upper Columbia River (Lake Pend Oreille). As discussed in the recovery plan, the mainstem of the Columbia River provides the only potential natural source of connectivity among many of the populations and core areas in the Columbia River DPS, which is considered vital for species persistence. The 2002 USFWS Biological Opinion on the Federal Columbia River Power System contains terms and conditions that include estimating the numbers of bull trout migrating to and from the lower Columbia River reservoirs.

Two objectives in the proposal are directly related to downstream movement of bull trout, including the mainstem Columbia River affected by hydrosystem management. In fact, the Walla Walla subbasin is the only portion of the Columbia Basin where a large number of bull trout have been and would be PIT-tagged under project 199405400 and complementary work by the USFWS and Utah State University to feasibly assess potential use of adjoining portions of the Columbia River.

States in the region are in the process of developing and implementing water quality criteria under the Clean Water Act. Criteria are included for bull trout; however, specific data for migratory bull trout, such as would be provided by the project under the proposal are lacking. Temperature and distribution data generated by the proposal can be used to help managers determine what temperatures encountered by migrating bull trout are, what water quality criteria for bull trout should be, and where they should be applied.

Work proposed by this project for FY 07-09 also includes the development of a technically and statistically rigorous, coordinated monitoring design for bull trout with basinwide and species-wide application. Such an approach avoids piece-meal and inconsistent monitoring with limited application and utility in assessing the status of the species that has plagued past and current status assessments. This objective of the proposal is an outgrowth of efforts of the USFWS' Recovery Monitoring and Evaluation Group (RMEG), which was established with the express purpose to develop a species monitoring approach and includes representation from all of the states in the Basin. RMEG would be an active collaborator in the project. Assessing the status, trend, and distribution of bull trout is fundamental to the management of the species, which is a primary reason this proposal was identified as a core project by the MSRT.

What would the consequences be if the project were not funded? Terminating the project at this point would squander BPA's previous investment through the project and from the USFWS in establishing the PIT-tag detection infrastructure in the Walla Walla subbasin and returns from the past two years of PIT-tagging that would provide the only available survival rates of downstream migrant bull trout available in the basin.

Objective 3 is the only bull trout monitoring proposed that is specifically designed to develop monitoring approaches that can be used across the Columbia Basin. The consequence of not funding this work is to hinder the development of a systematic and statistically rigorous monitoring program; and, thus, force managers to rely on a reduced, patch-work of inconsistent and in many cases incomparable monitoring approaches. Delaying the development of adequate monitoring and assessment interferes with the ability to gauge recovery and prolongs the need to protect this species under the ESA.

Project Title: Investigation of the Relative Reproductive Success of Stray Hatchery and Wild Steelhead and the Influence of Hatchery Strays on Natural Productivity in the Deschutes River Subbasin

Project Number: 200729900

ISRP Recommendation: Fundable (Qualified)

Requested Funding for 2007: \$466,730

MSRT Recommended Funding for 2007: \$0

NPCC Recommended Funding for 2007: \$0

Project Summary: Determine the number of stray hatchery steelhead entering Bakeoven and Buck Hollow creeks, degree of introgression between hatchery and natural fish, relative reproductive success, and the influence of hatchery fish on natural productivity.

Major Accomplishments to Date: None, new project.

What is the public benefit resulting from the project? The lower 100 miles of the Deschutes River supports significant tribal and sport summer steelhead (*Oncorhynchus mykiss*) fisheries. Steelhead numbers have declined to the point that Mid Columbia river steelhead have been listed as ESA Threatened, jeopardizing future population health and fishing opportunities. Large numbers of out of basin stray steelhead are believed to be the largest causative agent for the declining wild population and were instrumental in their ESA listing as threatened. The Middle Columbia River Steelhead Recovery Plan Sounding Board identified a study of the effects of steelhead straying into the Deschutes as a priority action item needed for the recovery of Middle Columbia steelhead.

What management needs does the project address? This project addresses the biological impacts that out of basin strays may have on Deschutes wild steelhead populations. Many BPA funded projects likely contribute to straying in the Deschutes Subbasin. This project will assist in identifying the magnitude of straying and the impacts on wild populations. The investigation of Deschutes steelhead straying is specifically mentioned as a priority action item in several documents including: Deschutes Subbasin Plan, NOAA's FCRPS BIOP, and the hydro REMAND.

What would the consequences be if the project were not funded? Impacts to Deschutes wild steelhead populations from out of basin stray hatchery fish will remain unknown. The magnitude of straying likely poses a serious challenge to the continued genetic health and productivity of wild Deschutes steelhead. Recent analysis conducted for the Mid Columbia Recovery Plan suggest that the proportion of naturally spawning steelhead that were of hatchery origin in the Deschutes River resulted in a high risk rating for the spawner composition metric in the viability assessments. Not funding this project will delay answering questions regarding impacts of the hydroelectric system, of actions needed for population recovery, and required actions needed for sound fisheries management in the Deschutes River.

Project Title: Mainstem, Middle Fork, John Day Rivers Fish Habitat Enhancement Project

Project Number: 198402100

ISRP Final Recommendation: Fundable in part (Qualified)

Requested Funding for 2007: \$486,515

OSPIT Recommended Funding for 2007: \$0, with comment that if capitalization issue was resolved for subbasin and ISRP final review was positive then project should be considered for funding. Both did occur.

NPCC Recommended Funding for 2007: \$0

Short Project Summary: Project initiated in July 1984 to coordinate with private landowners and establish long-term cooperative agreements for anadromous fish habitat enhancement project design and development on privately owned lands within the John Day Basin. The purpose of the John Day Fish Habitat Enhancement Project is to enhance production of indigenous wild

stocks of spring chinook and summer steelhead within the subbasin through habitat protection, enhancement and fish passage improvement.

Major Accomplishments to Date: From 1984-2006 the Fish Habitat Enhancement Project has built 232 miles of fence to protect and enhance 145 miles of anadromous fish bearing streams, encompassing 3,310 acres of high priority fish and wildlife habitat. Additional enhancement techniques have included planting 19,310 tree/shrub cuttings or seedlings within riparian agreement areas; installation of 41 offsite water developments for livestock to eliminate watergap locations in riparian areas; improving fish passage to 109 miles of stream by eliminating partial barriers on three streams; and dredge tail leveling on 4.3 miles of stream to reconnect the floodplain to 350 acres.

What is the public benefit resulting from the project? Fish habitat improvement project has been widely accepted by landowners and has resulted in increased private landowner stewardship of riparian areas. Project has effectively enhanced steelhead and chinook spawning and rearing habitat. Measurable changes in riparian recovery have been documented through annual reports and coordinated RM&E activities. General public benefits include increased vegetative cover in healthy riparian areas which is beneficial to many wildlife species, improved water quality/quantity and cumulative benefits of numerous riparian agreements that improve health of anadromous and resident fish populations for recreational benefits. The local economy also benefits because the project uses local vendors/contractors for supplies and construction.

What management needs does the project address? The project addresses several critical management needs for anadromous fish. Degraded riparian habitat has been identified as one of the major factors limiting fish production by the NWPPC (2005), Bureau of Reclamation (2002), and the current Draft Mid-Columbia Steelhead Recovery Plan. Because the John Day River is managed exclusively for wild salmon and steelhead production, the only practical way to increase anadromous fish production within the basin is through habitat restoration in high priority areas. The project addresses the Northwest Power Act goal of doubling the number of salmon and steelhead by protecting and enhancing riparian habitat and improving fish passage. Other species that benefit from the project include Columbia River bull trout and westslope cutthroat. Bull trout are listed as threatened under the ESA and westslope cutthroat are classified as a vulnerable species by the State.

What would the consequences be if the project were not funded? Lack of funding would seriously jeopardize the ability of managers to meet the fish production goals identified in the John Day River Subbasin Plan by severely reducing on-the-ground implementation of habitat enhancement projects in high priority areas, particularly for steelhead. The fish habitat project establishes positive relationships with landowners, community and local government to educate and reduce the regulatory burden associated with listing, including some protection from the threat of ESA take issues. Eliminating the project would have serious consequences to the trust level that has been built between ODFW and landowners over the last 22 years. Eliminating the project would also affect implementation of other fish enhancement activities within the basin because it has been used as an initial point of contact with landowners for the ODFW screening and fish passage program, the Grant Soil and Water Conservation District, the Greater Wheeler County Watershed Council and the North Fork John Day Watershed Council.

Project Title: Walla Walla River Fish Passage Operations

Project Number: 200003300

ISRP Final Recommendation: Fundable (Qualified)

Requested Funding for 2007: \$122,983

OSPIT Recommended Funding for 2007: \$120,000 (combine with Project 200721700)

NPCC Recommended Funding for 2007: \$0, with comment that if expense category funds were identified in other subbasin projects then project should be considered for funding as one project with 200721700.

Short Project Summary: Increase survival of migrating juvenile and adult salmonids in the Walla Walla Basin by coordinating the overall passage program including monitoring passage conditions, operation of passage facilities, coordination of flow enhancement measures, operation of trapping facilities, and operation of transport equipment for spring Chinook, summer steelhead, and bull trout. Summer steelhead are part of the listed Mid-Columbia ESU and bull trout are part of the listed Columbia River population segment.

Major Accomplishments to Date: From 1998-2006 this project has coordinated the operation and monitoring of passage facilities, operated adult traps and provided adult return data, drafted Walla Walla AOP, and provided technical input on passage and trapping facility designs.

What is the public benefit resulting from the project? Coordination with Irrigation Districts to maintain fish benefits during continued operations at agricultural diversions. Project has effectively enhanced adult and juvenile salmonid passage for the benefit of healthy stream ecosystem for the general public.

What management needs does the project address? The biological objective of the project is to increase survival of migrants by ensuring adequate passage conditions exist for both upstream and downstream migration by monitoring river conditions and passage facility operations. The project also provides technical review and input on passage facilities and coordinates the overall passage program through development of the Annual Operation Plan.

What would the consequences be if the project were not funded? The collection of Walla Walla River projects is aimed at restoring salmon and rehabilitating steelhead populations in the Walla Walla Basin. Fish passage is a prerequisite to developing and maintaining successful runs of anadromous fish. Loss of funding would place significant risk for migrating adult and juvenile salmonids at Nursery Bridge Dam and diversion screens. The direct loss of effective passage would have negative impacts to listed summer steelhead recovery, reintroduction efforts of Spring Chinook and migratory movements of bull trout.

Project Title: Evaluation of Juvenile Salmonid Outmigration and Survival in the Lower Umatilla River Basin

Project Number: 198902401

FY 2006 Funding: \$306,235

ISRP Recommendation: Fundable

Requested Funding for 2007: \$549,550

OSPIT Recommended Funding for 2007: \$306,235

NPCC Recommended Funding for 2007: \$0

Short Project Summary: The Umatilla Juvenile Outmigration & Survival Project was established in 1995 to evaluate the success of management actions and fisheries restoration efforts in the Umatilla River Basin. Information from this project is used to make informed decisions on hatchery effectiveness, natural production success, passage improvement and flow enhancement strategies. Data provided includes annual estimates of smolt abundance, migration timing, and survival, life history characteristics and productivity status and trends for spring and fall Chinook salmon, coho salmon and summer steelhead. Productivity data produced by this project is the key subbasin scale measure of the effectiveness of salmon and steelhead restoration actions in the Umatilla River subbasin. Information is used for regional planning and recovery efforts of Mid-Columbia River (MCR) ESA-listed summer steelhead. The project provides information critical to the Technical Recovery Team (TRT), 2004 Biop Remand Process and viability analysis including estimates of egg-to-smolt survival, smolts/spawner, smolts-per-female, and smolt-to-adult return rate (SAR). Monitoring is conducted at Three Mile Falls Dam via smolt trapping and PIT tag interrogation. Operation & oversight of all in-basin PIT-tag interrogation equipment is provided by this project.

Major Accomplishments to Date: Annual smolt abundance estimates, migration timing and life-stage specific survival of spring and fall Chinook salmon, coho salmon and summer steelhead (1995-2006); Assessment of juvenile life history characteristics and trends in natural production (1995-2006); Performance monitoring (in and out-of basin survival) of comparative hatchery release strategies (1999-2006). Installation and oversight of PIT tag interrogation capabilities at Three Mile Falls Dam (1999-2006); Identification of fish passage problems and routes (1995-1998); Reach-specific survival studies (1998-2002); Evaluation of juvenile fish transport (2001-2004); Lamprey abundance estimates (2000-2002). Evaluation of the effects of river, canal and fishway operations and environmental conditions on smolt migration & survival (1995-2006); Responses of biological communities to flow enhancement strategies (1999-2006). SAR, smolts/spawner, smolts-per-female, and egg-to-smolt survival estimates for ESA-listed summer steelhead (1995-2006).

What is or will be the public benefit resulting from the project? We provide key information needed to assess and adaptively manage efforts to restore salmon and steelhead populations in the Umatilla subbasin. The abundance, survival and productivity information provided by this project is essential for characterizing the status and trends of salmon and steelhead in the Umatilla River basin. Project information is additionally used by NOAA Fisheries to inform recovery action priorities for the MCR. In particular, our status, migration timing and survival information is needed to determine when steelhead populations are recovered to a point that protection under ESA is no longer needed.

What management needs does the project address? We provide status and trend information on the three anadromous salmonid fish species in the Umatilla River subbasin including; smolt abundance, migration timing, productivity, SAR and freshwater survival. Information is

important for MCR recovery planning and as a subbasin scale measure of the effectiveness of restoration actions.

The Umatilla RM&E Plan lays the framework for evaluation of the fisheries restoration program success and effectiveness of subbasin planning strategies in achieving management objectives. This project provides information needed to evaluate 6 out of 8 (75%) of the "**high priority**" management objectives in the Umatilla River subbasin and 8 out of 13 (62%) of the "**high priority**" RM&E objectives.

Data produced by this project is critical to recovery planning and will help determine when steelhead populations in the Mid-Columbia ESU are recovered to a point when protection under the ESA is no longer needed. The Umatilla dataset is one of the only long-term datasets available for summer steelhead in the Mid-Columbia ESU. It is being used in the TRT and Remand Process, for long-term tracking of population responses over time, and in the viability analysis for the Recovery Plan.

What would the consequences be if the project were not funded?

- All status and trend monitoring for spring and fall Chinook salmon, coho salmon and summer steelhead smolts in the Umatilla subbasin will be lost including; freshwater productivity, marine (SAR) and freshwater survival, migration timing and estimates of annual abundance
- 75% of the "**high priority**" management objectives identified in the Umatilla Subbasin Plan will not be completely evaluated. 62% of the "**high priority**" RM&E objectives in the Umatilla RM&E Plan will not be thoroughly addressed.
- This project is one of three intimately-linked RM&E projects (199000500, 199000501 and 198902401) designed to evaluate the outcome of fisheries restoration actions in the Umatilla sub-basin. Failure to fund this project will jeopardize fundamental objectives from the other two projects and prevent thorough evaluation of Fisheries Restoration Program success and the efficacy of Subbasin Plan strategies in achieving management objectives.
- Over 50% of the PIT tags contributed towards performance monitoring of hatchery-released fish in the Umatilla subbasin will be lost. 100% of PIT-tagging for naturally-produced salmon and steelhead will be lost.
- Operation and oversight of PIT-tag interrogation capabilities at Three Mile Falls Dam (juvenile bypass and adult fish ladder) will be discontinued.
- Failure to fund this project would negatively impact MCR Recovery Planning. Data provided by this project is critical to the TRT and Remand Process. Although small (10 yr lifespan) the Umatilla dataset is one of the only long-term datasets available for summer steelhead in the Mid-Columbia ESU that allows us to look at life-stage specific survival. There is currently a large void in PIT tag migration and survival data for the MCR summer steelhead that is hampering recovery needs for these fish. Continuation of outmigration monitoring in the Umatilla is necessary to support SAR estimates and understand the effects of lower Columbia River dams on listed populations.
- Long-term tracking of population responses over time will be hampered. Data from this project provides a means to evaluate in-basin capacity, survival and productivity. Key performance metrics such as smolts/spawner and smolt-to-adult survival cannot be

derived without it. Without the smolt estimates, it will be difficult to track population responses over time and evaluate the success of restoration efforts in the Umatilla subbasin because we will be left evaluating productivity at an adult-to-adult level which is confounded by an out-of-basin component.

- Cooperation with NOAA recovery efforts will be lost. This project produces juvenile steelhead data (abundance and productivity measures) used in the viability analysis for NOAA recovery planning of MCR summer steelhead. The recovery plan is building a model to analyze the effects of tributary habitat actions on steelhead viability. The Umatilla dataset is being used to test the model. The smolt data is essential for modeling to look at how tributary, habitat, hatchery and hydrosystem actions influence productivity.

Cooperation with the Bureau of Reclamation (BOR) to address incidental take of MCR summer steelhead relative to federal diversion structures in the Umatilla River will be hampered. Our cooperative fish monitoring effort (measures of smolt abundance, migration timing & survival) as well as the 6,000 fish PIT-tagged annually by our project for the BOR study will be lost.

Project Title: Data Management for System Operations

Project Number: 200732100

FY 2006 Funding: \$1,302,000

ISRP Recommendation: Fundable (shows \$1,531,414)

Requested Funding for 2007: \$1,531,414

MSRT Recommended Funding for 2007: \$1,500,000

NPCC Recommended Funding for 2007: \$0 with note: A portion of the unallocated balance will be available for the Council to make final project funding recommendations for fish passage science and analysis.

Short Project Summary: This project will collect, analyze, manage, store & disseminate data on the passage characteristics of juvenile & adult salmonids within the FCRPS & provide a central staff analytical group to provide technical support to state & federal fishery managers. This project is specifically designed to meet specific mainstem amendment program language.

Major Accomplishments to Date: The project has been for two decades, the key focal point of the state, federal and tribal fishery agencies coordination, interaction and participation in the operation of the Federal Columbia River Power System. Developed, implemented and maintained data for key regional mainstem monitoring programs that have been the basis of decisions regarding the implementation of fish passage mitigation measures in the hydrosystem. The project has provided extensive analysis of adult and juvenile fish passage monitoring and research data to support their active participation in regional discussions regarding hydrosystem operations.

What is the public benefit resulting from the project? Juvenile and adult fish passage data and analysis are provided to the public in real time, through a web site and through weekly reports, this project receives thousands of web data inquiries, data downloads and requests monthly.

What management needs does the project address? The implementation of specific language and measures in the Northwest Power and Conservation Council's (NPCC) Fish and Wildlife Program (F&W Program) regarding the Fish Passage Center (FPC) is an essential element of fish passage management and monitoring in the region. The long-term coordination of these functions is necessary to ensure that entities throughout the Columbia River Basin, and in particular the state, tribal and federal fish and wildlife agencies, continue to receive technical information and analytical support critical for their effective participation in regional decision-making processes regarding hydrosystem operations and fish passage.

What would the consequences be if the project were not funded? The state, federal and tribal fishery management agencies participation, in the regional discussions regarding maistem hydrosystem juvenile and adult fish passage would be critically impacted.

Projects Whose Funding Would Be Reduced

Project Title: White Sturgeon Mitigation and Restoration in the Columbia and Snake Rivers Upstream from Bonneville Dam

Project Number: 198605000

FY 2006 Funding: \$1,421,548

ISRP Recommendation: Fundable

Requested Funding for 2007: \$1,613,363

MSRT Recommended Funding for 2007: \$1,421,548

NPCC Recommended Funding for 2007: \$1,150,000

What will the consequences be if the project is funded at this level? Key work elements on this project are: sport and tribal white sturgeon fisheries monitoring; periodic stock assessments in Bonneville, The Dalles, John Day, McNary, Ice Harbor, Lower Monumental, and Little Goose reservoirs; juvenile recruitment monitoring in Bonneville, The Dalles, John Day, Ice Harbor, and Little Goose reservoirs; juvenile transplants into The Dalles and John Day reservoirs; development of a regional white sturgeon management plan; and completion of maturation fieldwork to describe population productivity and broodstock needs. NPCC staff recommended substantial cuts to this project in order to balance the overall Fish and Wildlife Program budget. Specifically they recommended curtailing stock assessments in Snake River reservoirs (Ice Harbor, Little Goose, and Lower Monumental); stopping work on regional white sturgeon management planning; and stopping work to describe the white sturgeon maturation cycle. However, the consequences of the recommended budget cuts are more severe than NPCC staff intended. In addition to the deliberate cuts in project work elements, juvenile recruitment monitoring and juvenile white sturgeon transplants cannot be conducted at the reduced funding level.

Removal of these tasks comes at a high price to white sturgeon recovery and management. Specific losses are:

- **Juvenile recruitment sampling** is an essential component to understand the health of these populations. This annual indexing work lets us know annually if there was successful spawning in a reservoir or river reach and the relative magnitude compared to

other reservoirs and among years. Successful spawning is a certain indication that mature adults are present and that spawning and rearing habitat was available. Understanding occurrence and magnitude of recruitment is critical to understanding the influence of hydrosystem operations on white sturgeon and ultimately to recommending hydrosystem operations that will allow sturgeon production. It is our understanding this work was not intended to be cut and we are eager to work with NPCC staff to restore it.

- **Juvenile white sturgeon transplant work** has been conducted since 1995 and over 42,000 juvenile sturgeon have been captured below Bonneville Dam and released into The Dalles and John Day reservoirs. Note that the hydrosystem does not adequately allow for upstream passage of sturgeon and tag recoveries demonstrate a net loss of upstream sturgeon production to downstream reaches. Transplants help to compensate for limited recruitment in these reservoirs as well as the net downstream movement of white sturgeon. Again, it is our understanding this work was not intended to be cut and we are eager to work with NPCC staff to restore it.
- **Regional white sturgeon management planning** was proposed to address a longstanding ISRP recommendation that this project work collaboratively with other regional scientists and managers to prepare a "state of the science." State and tribal fisheries managers embraced this idea and had sought to prepare a guiding document for future research and recovery efforts.
- **Lower Snake River stock assessments** have not been conducted since 1997 and standard annual surveys have not documented any juvenile recruitment in these reservoirs since 1999. Without this information, state fisheries managers will be forced to make sport fisheries decisions based on spotty anecdotal information. It is possible these populations are facing a conservation risk related to habitat loss and operation of the hydrosystem.
- **Maturation work** was designed to describe the periodic spawning cycle for white sturgeon and to develop a means of assessing sex and maturity through blood chemistry. A full understanding of the relationships among age, size, female fecundity, and spawning periodicity is needed to adequately assess the potential productivity of isolated populations and ultimately to understand how many broodstock are needed to maintain or recover population abundance and productive fisheries. This work has been conducted for several years and we anticipated completion by this time, but mature female sturgeon are rare and difficult to capture. Additional samples are needed to adequately describe this key population characteristic.

Project Title: CSMEP – Collaborative Systemwide Monitoring and Evaluation Project

Project Number: 200303600

FY 2006 Funding: \$968,802

ISRP Recommendation: Fundable (qualified)

Requested Funding for 2007: \$1,024,245

MSRT Recommended Funding for 2007: \$997,500

NPCC Recommended Funding for 2007: \$984,500

What will the consequences be if the project is funded at this level? While Collaborative Systemwide Monitoring and Evaluation Project (CSMEP) funding for FY07 and FY08 has been recommended at about 95% of the proposed level for 2 years (07-08), termination after FY08 would eliminate a technical forum and process that has demonstrated value in Regional efforts to recover and improve fisheries management. In a time of limited financial resources to recover valuable fish populations it is essential to prioritize monitoring and maximize benefits from the money spent. The CSMEP provides a process and a forum to inform those decisions using the Region's best technical expertise.

Ultimately, all monitoring and evaluation (M&E) decisions involve tradeoffs and a balancing of risks. Insufficient M&E risks repeated implementation of management actions that are actually ineffective, or else not detecting that certain actions actually are effective. Either outcome wastes money and potentially incurs increased risk to fish populations by not expending limited resources more efficiently. For example, at least \$14 billion has been spent since 1990 on stream and river restoration projects across the Continental United States, yet only a small fraction of these projects have been monitored for their effects. On the other hand, unnecessary or excessive M&E wastes money that could otherwise be spent on implementing actions that are known to be effective in recovering fish populations. Decision analysis has been shown to be a powerful tool for the design of large-scale monitoring and experimental programs. These studies often show that the optimal design, when the tradeoffs between objectives and across alternatives are considered, is not necessarily the design with the highest statistical power for detecting change or trend in important indicators. CSMEP is applying a systematic decision analysis approach to the generation and filtering of their alternative M&E designs based on a suite of criteria which includes: 1) high inferential ability, 2) strong statistical performance, 3) reasonable cost, 4) practical application, and 5) environmental impact.

Project Title: Evaluate Spawning of Fall Chinook and Chum Salmon Just Below the Four Lowermost Mainstem Dams

Project Number: 199900301

FY 2006 Spending: \$779,586

ISRP Recommendation: Fundable

Requested Funding for 2007: \$1,183,925

MSRT Recommended Funding for 2007: \$779,586

NPCC Recommended Funding for 2007: \$779,586

What will the consequences of the recommended funding level be? Funding for this project has decreased from about \$1.0 million in FY 2002 to \$779,856 in FY 2006 (this is the recommended budget for FY 2007-09). While funding has declined, new tasks and critical questions have been defined, and agency costs (personnel, overhead, inflation, fuel) have increased significantly. The cooperators have responded by re-prioritizing tasks and eliminating some altogether. These include coded-wire tagging of fall Chinook salmon below Bonneville Dam, adult chum salmon radio telemetry, egg-to-fry survival of chum salmon, surveying additional areas using new technologies, and investigation redd superimposition.

Ultimately, the reduction or loss of these elements will decrease our ability to monitor the populations, address management goals, and ensure recovery. This may have particularly important consequences for chum salmon, which persist at a small fraction of their historic populations.

Project Title: Development of Systemwide Predator Control for Northern Pikeminnows

Project Number: 199007700

FY 2006 Funding: \$3,700,000

ISRP Final Recommendation: Fundable

Requested Funding for 2007: \$3,884,045

MSRT Recommended Funding for 2007: \$3,000,000

NPCC Recommended Funding for 2007: \$3,000,000

What will the consequences of the recommended funding level be? Under the current funding recommendations, the budget reduction of \$884,045 will come primarily from the sport-reward fund. Site-specific removals by agency personnel at Bonneville and The Dalles dams ("dam angling") will also be eliminated.

The consequences of reducing the sport-reward fund are difficult to predict. Currently, the reward structure is \$4 per fish (first 100 fish caught by an angler), \$5 (101-400 fish), and \$8 (>400 fish). Reducing the reward base will necessitate altering the reward structure (\$3, \$4, and \$5 per fish, for example), which could result in a lower level of angler participation and smaller catches. It is important to note that a large proportion of the annual pikeminnow catch is by a core group of experienced anglers; their response to reduced rewards will be a critical factor.

The program has operated efficiently in recent years, with exploitation of pikeminnow >250 mm FL approaching the high end of the program goal (20%) in 2004 and 2005. Even with a significant reduction in the reward fund, it is unlikely that exploitation will fall below the minimum goal of 10%. If exploitation continues to be maintained at the program average (about 13%), benefits to juvenile salmonids will remain largely unchanged.

In a worst-case scenario, if angler effort decreases dramatically in a year with high river flows (when pikeminnow are more difficult to catch), exploitation could fall below 10%, and benefits to salmonids would decrease. However, it would take a number of years of zero or low exploitation for predation to return to pre-program levels.

The effects of removing the dam angling component will be negligible. In 2006 (to date), dam anglers removed 3,353 northern pikeminnow; the sport reward fishery accounted for 212,372.

Project Title: Fifteenmile Creek Habitat Restoration and Monitoring Project

Project Number: 199304000

FY 2006 Funding: \$374,000

ISRP Recommendation: Fundable (Qualified)

Requested Funding for 2007: \$375,687

MSRT/OSPIT Recommended Funding for 2007: \$323,687

NPCC Recommended Funding for 2007: \$323,687

What will the consequences be if the project is funded at this level?

PIT tagging of juvenile steelhead will be eliminated:

- A. Loss of the ability to monitor the success of the Fifteenmile Habitat Project in terms of juvenile fish being produced within the basin.
- B. No way to monitor the number of juvenile steelhead passing Bonneville Dam or making it to the estuary.

Permanent PIT tag reading station near the mouth of Fifteenmile Creek is eliminated:

- A. No steelhead adult return data collected
- B. No means to monitor steelhead straying into the subbasin.

The fish ladder at Seufert Falls will not be modified to assist with up-stream migration of adult and juvenile steelhead during low and high flow conditions; will affect distribution and survival of steelhead.

A five-foot screw trap that was to be purchased and installed in Eightmile Creek will be eliminated; will eliminate ability to determine which tributaries are contributing the greatest number of fish and why.

A habitat project that was being planned for middle and upper Fifteenmile Creek will be eliminated. Project would have added approximately one-half mile of stream length, reduced the stream gradient considerably, and provided excellent habitat for juvenile and adult steelhead; potential steelhead production will not be realized.

May not complete spawning ground surveys in accordance with current spawning survey protocols; data on numbers and distribution of spawning steelhead will not be obtained.

Project Title: Umatilla Subbasin Fish Habitat Improvement Project

Project Number: 198710002

ISRP Final Recommendation: Not Fundable (Qualified)

Requested Funding for 2007: \$321,767

OSPIT Recommended Funding for 2007: \$316,767

NPCC Recommended Funding for 2007: \$280,264

What would the consequences be if the project were funded at a reduced level? The Draft NPCC proposed funding level will mean that the project is able to maintain existing habitat projects, but not implement any new ones, without first securing additional funding from outside sources. Final Designs and permits are being prepared for possible project implementation (barrier remediation, natural channel design) in FY 07. Without new project implementation the habitat limiting factors identified in the Subbasin Plan will not be addressed. Recovery of federally listed steelhead will not occur and increased natural production of reintroduced spring Chinook will not occur.

Project Title: Umatilla River Fish Passage Operations

Project Number: 198802200

ISRP Final Recommendation: Not Fundable (Qualified)

Requested Funding for 2007: \$380,238

OSPIT Recommended Funding for 2007: \$380,238

NPCC Recommended Funding for 2007: \$362,164

What would the consequences be if the project were funded at a reduced level? The Umatilla is a highly managed system that balances the needs of fish and agriculture to ensure the needs of both are met. The success of the entire Fisheries Restoration Program hinges on restoring and maintaining instream flow and fish passage in the lower Umatilla. Several projects including the Power Repay, Fish Passage O&M, and Fish Passage Operations are necessary to accomplish this. Major components of the fish Passage Operations Project include: fish enumeration at Three Mile Dam which is important for program M&E, broodstock collection, juvenile and adult trap and haul, operation and O & M oversight of fish passage facilities and coordination of flow enhancement projects. The Draft NPCC proposed funding level will allow the project to continue, but at a very "bare bones" level. Thus the project could meet the needs for flow and passage under ideal conditions. Ideal conditions meaning there is no major low flow problems which would require the need for extensive trap and haul, or on the reverse, floods that require more personnel time to ensure that fish passage facilities are operating within criteria. The project would be able to handle enumeration and handling of average fish returns at Three Mile Dam, but not large returns. At the low funding level there will also be times when fish facilities are operating out of criteria. During peak periods of adult fish returns there will be too many fish at the counting facilities for limited personnel to effectively handle and flow restoration actions may not be effectively coordinated to optimize survival. The result is increased fish mortality and reduced adult returns of salmon and steelhead. Steelhead are federally listed under ESA as Threatened.

Project Title: Life History of Spring Chinook Salmon and Summer Steelhead in the Grande Ronde River Subbasin

Project Number: 199202604

FY 2006 Funding: \$949,504

ISRP Recommendation: Fundable

Requested Funding for 2007: \$861,203

MSRT/OSPIT Recommended Funding for 2007: \$820,000

NPCC Recommended Funding for 2007: \$820,000

What will the consequences be if the project is funded at this level? The goal of this project is to investigate the abundance, migration patterns, survival, and life history characteristics exhibited by spring Chinook salmon and steelhead juveniles from distinct populations in the Grande Ronde and Imnaha River subbasins. This study provides a means for long term monitoring of juvenile salmonid production in the Grande Ronde Subbasin that is essential for assessing the success of restoration and enhancement efforts including habitat improvement and hatchery supplementation. The consequence of not funding this project at the requested level is a reduction in the operation of our migrant traps. Reduced trap operations will result in decreased accuracy and precision of our estimates of abundance of spring Chinook salmon and steelhead

smolts and decreased accuracy and precision of our estimates of smolts per redd for spring Chinook salmon in supplemented and non-supplemented populations in the Grande Ronde River subbasin. These data are used to determine the effectiveness of supplementation of spring Chinook salmon populations in the Grande Ronde River subbasin.

Project Title: Umatilla Hatchery Monitoring and Evaluation

Project Number: 199000500

FY 2006 Funding: \$572,848

ISRP Recommendation: Fundable (Qualified)

Requested Funding for 2007: \$684,278

MSRT/OSPIT Recommended Funding for 2007: \$572,848

NPCC Recommended Funding for 2007: \$572,848

What will the consequences be if the project is funded at this level? The focus of the Umatilla Hatchery RM&E Project is an evaluation of release sizes and acclimation and release locations, timing and strategies on juvenile survival and adult production. The Hatchery M&E Project includes monitoring of Umatilla recreational fisheries, out-of-subbasin contributions to commercial, tribal and recreational fisheries, productivity of hatchery fish, outmigration and survival of hatchery juveniles, fish marking and tagging, straying of hatchery adults, pre-season run predictions, and adult production to meet Northwest Power and Conservation Council goals for Columbia River salmonid restoration. The consequences of not funding this project at the requested level are reduction in the number of fall Chinook salmon that are coded-wire tagged (CWT) for estimates of out-of-subbasin contributions to commercial, tribal and recreational fisheries and straying of adult hatchery salmon. We will also reduce our creel survey efforts which will result in a decrease in the accuracy and precision of our estimates of harvest of fall Chinook salmon, coho salmon and steelhead in the Umatilla subbasin. These data are used to determine the effectiveness of our hatchery program.

Project Title: Trout Creek Fish Habitat Restoration Project

Project Number: 199404200

FY 2006 Funding: \$383,662

ISRP Recommendation: Fundable (Qualified)

Requested Funding for 2007: \$475,545

MSRT/OSPIT Recommended Funding for 2007: \$404,213

NPCC Recommended Funding for 2007: \$404,213

What will the consequences be if the project is funded at this level? Development of several off-site water sources will be dropped, which will increase risk of riparian habitat damage due to livestock, and reduce overall habitat effectiveness. Implementation of berm removal work will be delayed, reducing speed of habitat recovery and overall habitat effectiveness. Supplies for fence maintenance will be limited, reducing effectiveness of riparian fences, which may lead to degradation of recovering riparian areas.

Project Title: ODFW Blue Mountain Oregon Fish Habitat Improvement**Project Number: 198402500****ISRP Final Recommendation: Fundable (Qualified)****FY 2006 Funding: \$364,912****Requested Funding for 2007: \$377,900****OSPIT Recommended Funding for 2007: \$365,000****NPCC Recommended Funding for 2007: \$365,000****What would the consequences be if the project were funded at a reduced level?**

The Draft NPCC proposed funding level cuts project to minimum funding given current scope. All project funding will go though Grande Ronde Model Watershed. Funding for this project will only be for design, construction management and maintenance. Inflation will continue to cut into this project without an increase in funding.

The ISRP suggests other projects could conduct the M&E they would like to see with this project. Unfortunately neither BPA nor the Council seem to want to fund the evaluation ISRP wants conducted.

The draft Council recommended funding calls for a report meeting ISRP request March of 2007. This is in the first month of the FY 2007 contract for this project. To provide sufficient time this request should at least be moved back to March of 2008, end of the FY contract period. Some direction on what exactly the Council wants ODFW to provide ISRP would be helpful as well. If acceptable to BPA, ODFW would be willing to prepare the materials requested.

Project Title: Securing Wildlife Mitigation Sites – Oregon Ladd Marsh WMA and Grande Ronde Subbasin Wetlands**Project Number: 200002100****ISRP Final Recommendation: Fundable****FY 2006 Funding: \$51,288****Requested Funding for 2007: \$95,551****OSPIT Recommended Funding for 2007: \$65,000****NPCC Recommended Funding for 2007: \$65,000****What would the consequences be if the project were funded at a reduced level?**

Marsh enhancement off Ladd Marsh WMA would be dropped.

Project Title: Salmonid Productivity, Escapement, Trend, and Habitat Monitoring in the John Day River Subbasin**Project Number: 199801600****FY 2006 Funding: \$900,083****ISRP Recommendation: Fundable, qualified****Requested Funding for 2007: \$997,800****MSRT/OSPIT Recommended Funding for 2007: \$0****NPCC Recommended Funding for 2007: \$800,000**

What will the consequences be if the project is funded at this level? If funded at the \$800,000 level, we would need to eliminate some work elements of the project. The two work elements that encompass the greatest amount of personnel expenses or costs to our two contacts under this project include smolt trapping and steelhead habitat monitoring.

We would need to discontinue the operation of one of our four rotary screw traps which would reduce our ability to PIT tag smolts and thus reduce our ability to estimate smolt production. These losses would also lead to a diminished ability to estimate both freshwater and ocean survival of both Chinook and steelhead population(s). It would also diminish our ability to PIT tag smolts for the Comparative Survival Study (CSS) of Columbia River stocks. We currently have difficulty meeting their tagging request with all traps operating. Any reduction in our tagging abilities would lead to approximately 1,200 fewer PIT-tagged fish for measuring the effects of the FCRPS hydro projects and is therefore tied to the BiOp.

We would also need to significantly reduce our monitoring of steelhead habitat and possibly completely eliminate this effort. We are currently in our third year of monitoring the status and trend of steelhead habitat in the John Day River basin. An important attribute of this monitoring is measuring the trend of habitat conditions through time. If monitoring were discontinued, we would lose our three-year investment in this trend dataset.

Project Title: Annual Stock Assessment – Coded Wire Tag Program

Project Number: 198201302

FY 2006 Funding: \$217,881

ISRP Recommendation: Fundable

Requested Funding for 2007: \$245,680

MSRT/OSPIT Recommended Funding for 2007: \$228,775

NPCC Recommended Funding for 2007: \$228,775

What will the consequences be if the project is funded at this level? If the project is funded at the proposed level, we will not be able to tag approximately 100,000 fish. The amount is nearly identical to the cost of tagging two Tanner Creek releases of fall run Chinook (Upriver Bright production, Bonneville Fish Hatchery) in July and August of 2007. These releases would then not be represented by CWTs, thereby reducing our ability to measure survival.

Project Title: Hood River Production Program – Monitoring and Evaluation

Project Number: 198805304

FY 2006 Funding: \$472,434

ISRP Recommendation: Fundable

Requested Funding for 2007: \$536,935

MSRT/OSPIT Recommended Funding for 2007: \$530,000

NPCC Recommended Funding for 2007: \$530,000

What will the consequences be if the project is funded at this level?

- Eliminate fall migrant trapping, and associated PIT tagging. This primarily affects downstream migrating Chinook juveniles, as this period represents ~80 of juvenile Chinook capture.
- Migrant traps would only be operated in the mainstem (no trapping in the forks), during the March-July period, resulting in a significant decrease in number of steelhead juveniles available for PIT tagging. Fewer PIT tagged wild steelhead smolts will effectively reduce our ability to accurately:
 1. estimate harvest of Hood River wild adult steelhead in the Bonneville Pool
 2. monitor movement of ESA-listed wild adult steelhead through the mainstem Columbia River
- Eliminate 4 months of creel survey, effectively eliminating the ability to estimate subbasin harvest of steelhead and Chinook. Loss of the creel estimates will reduce our ability to evaluate the HRPP relative to the biological fish objectives defined in the Hood River Subbasin Plan.
- Eliminate proposed radio telemetry study of returning adult steelhead, impacting understanding of migration patterns, timing, and distribution of returning adult steelhead.
- Eliminate further scale reading, which will impact understanding of life history patterns of Hood River steelhead and Chinook.

Information that would be gained from the above actions (particularly the creel survey, downstream migrant trapping, and PIT tagging) is considered critical for purposes of subbasin recovery planning.

Project Title: Comparative Survival Study

Project Number: 199602000

FY 2006 Funding: \$828,535

ISRP Recommendation: Fundable qualified

Requested Funding for 2007: \$1,757,000

MSRT Recommended Funding for 2007: \$1,365,000 with the condition that the CBFWA Fish Passage Technical Services #200732100 is funded and goes forward because the budget is reduced to \$1,365,000 on the basis that efficiencies among the projects allow reduction in the budget request.

NPCC Recommended Funding for 2007: \$765,000 with note: Interim funding pending further Council consideration of regional monitoring and evaluation framework. ISRP fundable (qualified): address ISRP concerns during further consideration.

Short Project Summary: Adult and juvenile PIT tag recovery data are analyzed to compare survival estimates for transported fish of known origin, downriver stocks, wild and hatchery transported fish and fish handled and not handled at dams. The study provides life cycle monitoring through the hydro system passage including travel time, passage distribution, juvenile survival, delayed mortality and smolt to adult returns.

Major Accomplishments to Date: The project has provide key life cycle monitoring data which has contributed a basis for long and short term mitigation and hydro system management decisions regarding the federal hydro system.

What is the public benefit resulting from the project? The project provides direct basis for management of stocks of listed anadromous fish which are a key public interest in the region both under the auspices of the Power Act and the Endangered Species Act.

What management needs does the project address? The project is a long term joint effort of the ODFW, CRIFC, IDFG, WDFW and the USFWS. The project provides the collaborative scientific, life cycle monitoring basis for state, tribal and federal management of anadromous fish stocks in the Columbia and Snake River basins.

What would the consequences be if the project were not funded? The state, tribal and federal joint basis for hydro system management decisions would be greatly reduced. The collaborative information basis for collective decision making among the state, tribal and federal fishery managers would be reduced.

Project Title: Coded-Wire Tag Recovery

Project Number: 198201301

FY 2006 Funding: \$2,028,757

ISRP Recommendation: Fundable

Requested Funding for 2007: \$2,783,640

MSRT/OSPIT Recommended Funding for 2007: \$2,130,195

NPCC Recommended Funding for 2007: \$2,130,195

What will the consequences be if the project is funded at this level? The CWT Recovery Project in the Columbia River Basin focuses primarily on fisheries and escapement areas. Fisheries have been modified significantly over the last decade to reduce impacts on listed species, and monitoring programs are necessary to ensure that reduced impacts to listed species are achieved as planned. Due to the listing of most salmonid species in the Columbia River Basin impacts allocated to fisheries are small and require intensive inseason management to ensure that Endangered Species Act (ESA)-associated impact levels, set forth by NOAA Fisheries through the U.S. vs Oregon fishery management process, are not exceeded. This inseason management process requires timely and accurate accounting of fishery impacts which are estimated based on the data produced by the CWT Recovery Project.

In escapement areas the CWT Recovery Project focuses on fish returning to natural spawning locations throughout the entire Columbia River Basin via spawning ground surveys. Data collected in escapement areas includes recovery of CWTs from marked fish returning to natural spawning areas and is used to develop annual abundance estimates for hatchery and wild salmonids alike. Providing escapement estimates is critical for developing accurate annual abundance estimates for all stocks returning to the Columbia River and thereby providing the data necessary to monitor trends in abundance of listed species.

The NPPC recommended funding level for FY 2007 will reduce the project's ability to accomplish the primary goal of sampling 20% of the catch for CWT recovery purposes, will slow the CWT extraction and decoding process, and will not allow for replacement of aging CWT wands. The 20% sampling rate goal was adopted to ensure that data collected by this project is adequate for estimating fishery impacts to listed species and monitoring stock status of listed species. If the 20% goal is not achieved then less abundant stocks will not be adequately represented in the samples, thereby reducing the accuracy of stock compositions and abundance estimates produced by this project.
