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April 1, 2010

## **DECISION MEMORANDUM**

**TO:** Council members

**FROM:** Council staff

**SUBJECT:** Approval of nine BiOp fast-track proposals

### **PROPOSED ACTION**

Staff asks Council to review and approve a subset of nine fast-track proposals.

### **SIGNIFICANCE**

These nine projects are part of a larger set of 19 fast-track projects addressing the highest priority gaps as identified by the Bonneville/Action Agency/Council workgroups. Implementation of the nine projects will begin as soon as necessary permits are received.

All of the fast-track projects are considered a small subset of the RM&E category review. If funded now, the projects will not need to complete a new proposal form for review during the RM&E categorical review scheduled to begin in June. The projects will still be included in the categorical review, however, in order to provide the reviewers with a complete picture of RM&E actions currently being funded, or being proposed for funding, under the Council's program.

### **BUDGETARY/ECONOMIC IMPACTS**

The planning budget associated with the nine fast-track proposals represents a not-to-exceed budget for each project from Fiscal Year 2010 through 2013. The recommended planning budget for each project does not include specific annual amounts; the recommended not-to-exceed budgets are based on four years of proposed funding (FY 2010, and FY 2011-2013). All proposals represent expense funding, with the exception of one proposal that has a total capital component not to exceed \$1,300,000 for Fiscal Years 2010 and 2011. The staff recommendations for these nine projects are summarized in Table 1 (below).

The budgets do not assume any cost savings achieved by Bonneville in contracting for each project. Adjustments during the four year planning budget period can and should be made as necessary during contracting. Actual spending by Bonneville for each project, whether higher or

lower than the recommended planning budget, must be sufficient to maintain project integrity. In recommending the work and the planning budget, the Council has the following expectations:

1. This set of projects will be reviewed in context in the larger RM&E/Artificial Production Category Review.2. If the ISRP finds that, in the context of the larger RM&E/Artificial Production Category Review, any of the nine projects recommended are no longer relevant, are duplicative or are in need of modification based on the contextual review, the Council will consider revising the recommendation to BPA.
2. The sponsor and Bonneville will work to integrate the Independent Scientific Review Panel's (ISRP) suggestions and staff recommendations into the contracts and reporting requirements.
3. Bonneville will inform the Council of final contract decisions.

**Table 1. Summary of Staff Recommendations for nine Fast Track Proposals (Set 1) for FY 2011-2013**

Project #	Title	Proponent	ISRP Rec.	SOY 2010 Budget	FY 2010 (estimated Fast-Track Elements)	Annual Average Expense Budget for FY 2011 - 2013	Not-to-exceed Staff Budget Recommendation for 2010-2013	Programmatic issues, comments and funding conditions
1993-056-00	Research to advance hatchery reform	NOAA	Meets Criteria	\$510,000		\$598,287	\$2,304,861	
1997-030-00	Chinook Salmon Adult Abundance Monitoring	NPT	Meets Criteria	\$312,698	\$135,363	\$449,379	\$1,796,198	Prior to contracting, sponsor and BPA to consider ISRP comments to create a second project or integrate this project into ISEMP.
2010-035-00	Abundance, productivity and life history of Fifteenmile Creek Steelhead	ODFW	Meets Criteria		\$403,200	\$395,450	\$1,589,550	Prior to contracting BPA will determine if PIT tag array should be integrated with ISEMP and if so, make appropriate budget adjustments to other projects in the subbasin.
2010-042-00	Tucannon Expanded PIT Tagging	WDFW	Meets Criteria		\$15,010	\$16,044	\$63,142	
1998-016-00	Salmonid Productivity, Escapement, Trend, and Habitat Monitoring in the John Day River Subbasin	ODFW	Meets Criteria (Qualified)	\$615,000	\$200,571	\$1,212,575	\$4,453,296	Prior to contracting, sponsors to address ISRP Qualifications on procedures for site selection, analysis of habitat data and snorkeling counts.
2010-026-00	Chinook and Steelhead Genotyping for Genetic Stock Identification (GSI) at Lower Granite Dam	IDFG	Meets Criteria (Qualified)		\$865,858	\$669,448	\$2,874,202	Prior to contracting, BPA and sponsors to address ISRP qualification on analytical framework. In addition, BPA and Council will consider integration and coordination of similar genetic projects through the larger RM&E/Artificial production Categorical Review.
2010-031-00	Snake River Chinook and Steelhead Parental Based Tagging	IDFG	Meets Criteria (Qualified)		\$1,702,206	\$1,272,364	\$5,519,298	Prior to contracting, BPA and sponsors to address ISRP qualifications. In addition, BPA and Council will consider integration and coordination of similar genetic projects through the larger RM&E/Artificial production Categorical Review.
2010-034-00	Upper Columbia Spring Chinook and Steelhead Juvenile and Adult Abundance, Productivity, and Spatial Structure Monitoring.	WDFW	Meets Criteria (Qualified)		\$702,643	\$737,788	\$2,916,007	Prior to contracting sponsors to consider ISRP suggestion to have a statistician review the study design.
2010-038-00	Lolo Creek Permanent Weir Construction	NPT	Meets Criteria (Qualified)		\$200,000	\$1,100,000	\$1,300,000	Capital-type project for a one-time weir construction. Budget request is for 2010 and 2011 only. Anything outside of final design & construction will be expense. O&M of the weir will be part of the NPT Hatchery M&E project.
<b>Total for first set of Fast-Track Projects</b>							<b>\$22,816,554</b>	<b>(Up to \$1,300,000 may be capital)</b>

## **BACKGROUND**

In the summer and fall of 2009, the Bonneville/Action Agency/Council workgroups identified 27 projects needed to meet high priority FCRPS reasonable and prudent alternative (RPA) gaps. The fast-track review process began on December 14, 2009. The Council received 19 complete [proposals](#) by the January 25, 2010 deadline for submission. Eight on-going projects were found to be within scope and therefore did not need to complete a new proposal form. The 19 remaining projects were sent to the ISRP for science review and the ISRP's preliminary review issued on February 24, 2010 ([ISRP document 2010-7](#)).

The ISRP found that nine of the 19 proposals met scientific review criteria (Table 2). Five of the 19 were conditioned by a "qualification" from the ISRP for issues that could be dealt with as part of contracting. The ISRP found that two additional proposals justified the fast-track component of their project but the overall project proposal required a response. These two proposals received an "in part/response requested" recommendation. Staff will make recommendations on these two proposals in May when the other eight fast-track proposals requiring a full-response will come before the Council for funding consideration.

## **ANALYSIS**

One of the purposes of categorical review is to highlight any obvious duplication in work and to understand the relationships between projects in that category. Thus, as the ISRP and the Council review these fast-track projects in context with the larger RM&E/Artificial Production Category Review, we will be looking for ways to streamline and strengthen the actions in the category to ensure a more effective program.

The ISRP, in their preliminary report, identified five programmatic issues (see Attachment 1) that should be considered by sponsors in proposals submitted for categorical review. In addition, Council staff is identifying other issues for sponsors and Council to consider the categorical review (i.e., assessing and addressing coordination of similar projects and activities in the basin).

The following nine projects met science review criteria and are being recommended for funding.

### **Project #1993-056-00, *Research to advance hatchery reform***

This project proposes to evaluate genetic, physiological, and life history impacts of rearing 1 and 2-year-old steelhead smolts in an integrated steelhead hatchery program in the Upper Columbia River (i.e., Methow River) on ESA recovery efforts. The study aims to provide guidance to minimize fitness loss and alleviate maladaptive traits of hatchery-reared steelhead.<sup>1</sup>

This project implements the RPA 63.2 of the 2008 FCRPS Biological Opinion. Implemented by NOAA, the project is currently operating at a \$510,000 Fiscal Year 2010

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<sup>1</sup> On February 10, 2009 the Council recommended a budget adjustment to maintain the current project scope - conditioned on changes to the current scope of the project being directed through a future review of a regional approach to monitoring, evaluation, and research.

budget. The annual average project expense budget for Fiscal Years 2011 through 2013 is \$598,287.

The ISRP found that this project met science review criteria and acknowledged that previous project work has had considerable positive influence on hatchery management in the region.

Staff Recommendation: The Council staff recommends that the Council recommend this project from implementation.

**Project #1997-030-00, Chinook Salmon Adult Abundance Monitoring**

The project proposes to continue monitoring natural origin (wild) adult Chinook salmon abundance and productivity monitoring in the Secesh River to maintain an accurate long-term data set. Salmon escapement monitoring will be accomplished using dual frequency identification sonar (DIDSON). The fast-track element of this project addresses steelhead escapement monitoring in Joseph Creek in the lower Grande Ronde River. This project will use a floating weir to collect escapement data, determine hatchery:natural composition, age structure, progeny-to-parent productivity data, and validate/correlate existing index redd survey data to actual escapement via regression analysis.

This project implements RPA's 50.6, 51.1, 62.5, 63.1 and 64.2 of the 2008 FCRPS Biological Opinion. The project would be conducted by the NPT and is currently operating at a \$312,698 Fiscal Year 2010 budget. The proposal shows an additional \$135,363 as an adjustment to the current budget. The annual average expense budget for Fiscal Year 2011 through 2013 associated with the project is \$449,379.

Though the ISRP provided a favorable review and mentioned the project's "good science", they questioned the reasoning of not creating a new project or addressing the fast-track element through the Project #2003-017-00, *Integrated Status and Effectiveness Monitoring*.

Staff Recommendation: The Council staff recommends that the Council recommend this project for implementation conditioned on the questions raised by the ISRP be addressed prior to contracting.

**Project #2010-035-00, Abundance, Productivity and Life History of Fifteenmile Creek Winter Steelhead**

This new start project intends to designed and establish a comprehensive monitoring and evaluation program for abundance, productivity, and life history of steelhead in the Fifteenmile Creek population, which is ESA listed as a component of the Mid-C steelhead. Fifteenmile Creek supports the easternmost run of wild winter steelhead in the Columbia River Basin. This system has been managed exclusively for wild fish and has never received any hatchery supplementation. This work is critical to gaining a better understanding of the status of the population, monitoring and adapting recovery actions,

and improving the knowledge of steelhead critical habitat. The work proposed includes: 1) installation and operation a weir, adult trap, and underwater video cameras to: assess adult escapement; estimate productivity as adult recruits per spawner; determine the proportion of returns that are hatchery origin strays; determine adult life history patterns; 2) operate a screw trap to: estimate juvenile (smolts and presmolts) abundance: mark smolts for survival and migration characteristics assessment; 3) conduct spawning surveys to determine spawner distribution and for redd based escapement estimates; 4) install and operate PIT tag interrogation sites to monitor movement.

This project implements RPA 50.6 of the 2008 FCRPS Biological Opinion. The ODFW will implement the new project. The proposed Fiscal Year 2010 budget is \$403,200. The project's annual average expense budget for Fiscal Years 2011 through 2013 is \$395,450.

The ISRP stated that this project is essential for stock management and provides suggestions intended to improve the proposed monitoring plan (e.g., alternative sampling techniques and modeling).

Staff Recommendation: The Council staff recommends that the Council recommend this project for implementation.

#### **Project #2010-042-00, Tucannon Expanded Pit Tagging**

The Tucannon River summer steelhead (Snake River ESU) is considered depressed based on the estimated number of redd counts by natural origin spawners. However, redd count data is limited in scope and effectiveness due to survey conditions which limit the ability to accurately estimate natural origin spawners. Limited PIT tagging of natural origin steelhead was initiated under Lower Snake River Compensation Plan (LSRCP) funded hatchery evaluations several years ago to evaluate its utility in improving the Washington Department of Fish and Wildlife's (WDFW) understanding of behavior and survival.

Recent estimates from PIT tagged natural origin adults confirm that the population is critically depressed. The PIT tag data has also shown that a high proportion of returning Tucannon River natural origin summer steelhead migrate to, and remain above, Lower Granite Dam through spawning season. LSRCP- funded PIT tagging focuses on hatchery fish performance and abundance as they relate to mitigation and ESA/Biological Opinion issues. This proposal would expand PIT tagging to natural origin steelhead smolts in the Tucannon River and assist in WDFW's operation and maintenance of the Tucannon River PIT tag array.

This project implements RPAs 50.6, 63.2, and 64.2 of the 2008 FCRPS Biological Opinion. The WDFW will implement this new project. The proposed Fiscal Year 2010 budget is \$15,010. The project's annual average expense budget for Fiscal Years 2011 through 2013 is \$16,044.

The ISRP found this project to be well justified and necessary for filling data gaps for the natural origin steelhead in the Tucannon River, but raised concerns that the analysis

of straying and migration data may be difficult due to the natural straying behavior and effects of the hydrosystem on migration.

Staff Recommendation: The Council staff recommends that the Council recommend this project for implementation.

**Project #1998-016-00, Salmonid Productivity, Escapement, Trend, and Habitat Monitoring in the John Day River Subbasin**

This ongoing research and monitoring project, implemented by the Oregon Department of Fish and Wildlife (ODFW), proposes to continue and enhance the rigorous status and trend monitoring for the two anadromous focal species - steelhead and Chinook in the John Day River subbasin. This project addresses the entire John Day Subbasin and focuses on trends in life-stage abundance, survival, and distribution, and habitat status and trend.

This project implements RPA's 50.4, 50.6, 62.5, and 63.1 of the 2008 FCRPS Biological Opinion. The BiOp identifies the John Day River Basin as a priority/pilot watershed for habitat and species recovery efforts for the Mid-Columbia distinct population segment (DPS). Information derived from this project will quantify the current status and future trends in fish populations and their associated habitats in this important basin. The primary focus of the fast-track elements addresses needs associated with steelhead.

The project is currently operating at a \$615,000 Fiscal Year 2010 budget. The proposal shows an additional \$200,571 as an adjustment to the current budget. The annual average expense budget for Fiscal Years 2011 through 2013 is \$1,212,575.

The ISRP stated that the project has a good performance record and will contribute useful information in the management of the John Day subbasin. The ISRP found the project met science review criteria, but provided a qualification. The ISRP had questions pertaining to the procedure for sample site selection, and whether analyses of habitat data will distinguish between sites where habitat enhancement has occurred from those where it has not. In addition, the ISRP had concerns regarding possible bias resulting from snorkeling counts of juveniles as it relates to the pool visibility ranking being used in the study design. The ISRP raised these questions so that the proponents can address them as they develop their statement of work.

Staff Recommendation: The Council staff recommends that the Council recommend this project for implementation conditioned on the questions raised by the ISRP being addressed prior to contracting.

**Project #2010-026-00, Chinook and Steelhead Genotyping for Genetic Stock Identification (GSI) at Lower Granite Dam**

This new start project intends to implement Genetic Stock Identification (GSI) methodologies within the Snake River basin for wild Chinook salmon and steelhead passing Lower Granite Dam. This effort will provide a more detailed stock abundance

estimation requested by managers in the Snake River basin. The proponents, the Idaho Department of Fish and Game (IDFG), plan to closely collaborate with the Columbia River Intertribal Fish Commission (Project #2008-907-00<sup>2</sup>) and others to identify single nucleotide polymorphism (SNP) marker sets that will afford sufficient resolution to address broad Columbia River basin GSI needs at Bonneville Dam, as well as finer levels of Snake River stock discrimination at Lower Granite Dam.

This project implements RPA's 50.5, and 62.5 of the 2008 FCRPS Biological Opinion. The IDFG will implement this new project. The proposed Fiscal Year 2010 budget is \$865,858. The project's annual average expense budget for Fiscal Years 2011 through 2013 is \$669,448.

The ISRP found that the project met science review criteria, but provided a qualification that they wanted addressed in contracting and future proposals. The ISRP had questions pertaining to the analytical framework for information reporting. In addition, due to the increasing number of projects estimating populations using genetic methodologies, the ISRP suggests that the Council and Bonneville consider a way to integrate and coordinate these projects.

Staff Recommendation: The Council staff recommends that the Council recommend this project for implementation conditioned on the questions raised by the ISRP being addressed prior to contracting. The ISRP qualification regarding the integration and coordination of similar genetic projects will be addressed during the RM&E/Artificial Production Category Review when all the similar projects are available for review and a recommendation.

### **Project #2010-031-00, Snake River Chinook and Steelhead Parental Based Tagging**

This new start project proposes to evaluate a new, dynamic genetic technology associated with Parentage Based Tagging (PBT). It is hoped that this new technique will provide a cheaper and more efficient marker than coded-wire tags for mass marking hatchery steelhead and Chinook salmon in the Snake River basin. This project will genotype approximately 16,500 samples annually to create the first parental genetic baselines for hatchery steelhead and Chinook salmon in the Snake River basin. Parentage Based Tagging should provide a better tool than coded-wire tags to meet specific objectives associated with marking hatchery stocks, conducting hatchery effectiveness evaluations and hatchery reform, and estimating harvest contributions of specific stocks to various fisheries.

This project implements RPA's 50.5, and 62.5 of the 2008 FCRPS Biological Opinion. The IDFG will implement this new project. The proposed Fiscal Year 2010 budget is \$1,702,206. The project's annual average expense budget for Fiscal Years 2011 through 2013 is \$1,272,364.

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<sup>2</sup> The Council approved Project #2008-907-00, *Genetic Assessment of Columbia River Stock* on January 15, 2009. That project entailed performing GSI of fish passing Bonneville Dam to determine the composition of stocks throughout the Columbia River Basin.

The ISRP found that the project met science review criteria, but provided 3 qualifications to their review that they intend to be addressed in contracting. The first qualification reflects the concern for integration and coordination of genetic type projects (see above Project # 2010-026-00). The second qualification suggests that, as part of Objective 4 (i.e., parental broodstock database), non-hatchery juveniles from major population groups be tested to the parents that established the baseline. The final qualification expresses the concern that the ISRP has regarding the capacity of the genetic laboratory.

Staff Recommendation: Based on the ISRP review the Council staff recommends that the Council recommend this project for implementation conditioned on the questions raised by the ISRP being addressed prior to contracting. As with Project #2010-026-00, this project also will be included in the discussion associated with the coordination of genetic projects.

**Project #2010-034-00, Upper Columbia Spring Chinook and Steelhead Juvenile and Adult Abundance, Productivity, and Spatial Structure Monitoring**

The primary goal of this new project is to increase the accuracy and precision of juvenile and adult abundance estimates for spring Chinook salmon and steelhead for all populations in the Upper Columbia River. Currently, there is a well-coordinated standardized monitoring and evaluation program(s) in the Upper Columbia River Basin funded by a combination of federal (BPA, BOR, USFWS), state, Tribal (YN), and regional (PUDs) entities. While all the programs contribute data to estimate VSP parameters for steelhead and spring Chinook salmon, the programs also share common deficiencies related to precision and accuracy of abundance estimates. The overall objectives of the project are to: 1) evaluate precision and accuracy of the smolt monitoring methodology for both steelhead and spring Chinook; 2) estimate the proportion of hatchery steelhead in each primary population; 3) estimate the precision of redd counts for both steelhead and spring Chinook; and 4) evaluate the accuracy of the steelhead spawning ground survey design.

This project implements RPAs 50.1, 50.2, 50.3, 50.4, and 50.6 of the 2008 FCRPS Biological Opinion. The WDFW will implement this new project. The proposed Fiscal Year 2010 budget is \$702,643. The project's annual average expense budget for Fiscal Years 2011 through 2013 is \$737,788.

The ISRP found that the project met science review criteria, but qualified their review by requesting that the proponents have a statistician evaluate past studies and assist in development of the study design. The ISRP also commented on the project's utility in characterizing the population status of the Upper Columbia Chinook and steelhead.

Staff Recommendation: Based on the ISRP review the Council staff recommends that the Council recommend this project for implementation. This recommendation is conditioned on the proponents having a statistician review the project to address the

ISRP's concern. This need could be addressed through Project #1991-051-00, *M&E Statistical Support for Life-Cycle Studies*<sup>3</sup>.

**Project #2010-038-00, Lolo Creek Permanent Weir Construction**

The purpose of this project is to construct a permanent adult weir on Lolo Creek (Clearwater River) to replace a temporary weir that is currently operated through the program<sup>4</sup> associated with the Nez Perce Tribal Hatchery. The permanent weir will be used as a monitoring and evaluation tool to collect adult return information on steelhead and spring Chinook salmon. The existing temporary weir can only be installed after spring runoff and has been, on average, 8.3% efficient at collecting spring Chinook. Steelhead trapping with the existing weir is not possible due to icy conditions and high flows.

Lolo Creek steelhead and Chinook salmon have been established as priority populations for high precision status and trend monitoring in the Clearwater under RPA 50.6. The NPT are the proponents of this new project. The expense budget associated with permitting this project in Fiscal Year 2010 has not been determined. The capital budget associated with the design and construction of the weir has not been finalized. Total cost for this project will not exceed \$1,300,000 in Fiscal Year 2010 and 2011.

The ISRP found that the project met science review criteria. It qualified the review due to concerns regarding the capacity of the weir to operate in a manner such that adequate portion of the Chinook and steelhead runs can be sampled.

**Staff Recommendation:** The Council staff recommends that the Council recommend this project for implementation.

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<sup>3</sup> This project develops statistical methods for monitoring and evaluating salmonid recovery plans and provides added-value analyses and statistical support on regional fisheries issues in the Fish and Wildlife Program.

<sup>4</sup> Project 1983-350-03, *Nez Perce Tribal Hatchery Monitoring and Evaluation (M&E)*.

**Table 2. Fast-track projects received and reviewed by the ISRP (ISRP document 2010-7).**

Project #	Title	Proponent	ISRP Initial Review
1989-098-00	Idaho Supplementation Studies	IDFG / NPT / SBT	In Part / Response requested
1990-055-00	Idaho Steelhead Monitoring and Evaluation Studies	IDFG	Response requested
1991-073-00	Idaho Natural Production Monitoring	IDFG	Response requested
1993-056-00	Research to advance hatchery reform	NOAA	Yes
1997-030-00	Chinook Salmon Adult Abundance Monitoring	NPT	Yes
1998-007-02	Grand Ronde Supplementation: Lostine River Operation and Maintenance and Monitoring and Evaluation	NPT	In Part / Response requested
1998-016-00	Salmonid Productivity, Escapement, Trend, and Habitat Monitoring in the John Day River Subbasin	ODFW	Yes (Qualified)
2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP): The design and evaluation of monitoring tools for salmon populations and habitat in the Interior Columbia River Basin.	NOAA	Response requested
2010-026-00	Chinook and Steelhead Genotyping for Genetic Stock Identification (GSI) at Lower Granite Dam	IDFG	Yes (Qualified)
2010-028-00	Implement a Rotating Panel Sampling Adult Steelhead in Small Tributaries of the Tucannon and Snake rivers	WDFW, NOAA	Response requested
2010-030-00	Estimate viable salmon population (VSP) parameters for Yakima steelhead major population group (MPG)	YN, WDFW	Response requested
2010-031-00	Snake River Chinook and Steelhead Parental Based Tagging	IDFG	Yes (Qualified)
2010-032-00	Imnaha River Steelhead Status Monitoring (was 200205600)	NPT	Response requested
2010-033-00	Estimate the Relative Reproductive Success of Hatchery and Natural Origin Steelhead in the Methow River Basin	WDFW	Response requested
2010-034-00	Upper Columbia Spring Chinook and Steelhead Juvenile and Adult Abundance, Productivity, and Spatial Structure Monitoring.	WDFW	Yes (Qualified)
2010-035-00	Abundance, productivity and life history of Fifteenmile Creek Steelhead	ODFW	Yes
2010-036-00	Expansion of Washington's Tag Recovery Program in the Lower Columbia Region to Improve Fisheries and Viable Salmonid Population Monitoring	WDFW	Response requested
2010-038-00	Lolo Creek Permanent Weir Construction	NPT	Yes (Qualified)
2010-042-00	Tucannon Expanded PIT Tagging	WDFW	Yes

**Attachment 1. Programmatic comments from ISRP's initial review of BiOp fast-track research, monitoring, and evaluation proposals (ISRP document 2010-7).**

**A. Need for independent peer review of the coordinated monitoring strategy.** These fast-track proposals are intended to fill critical “gaps” in the collection of data for estimating Viable Salmonid Population parameters for Evolutionarily Significant Units of salmon (abundance, productivity, spatial distribution, and diversity) to meet requirements of the 2008 Biological Opinion for the Federal Columbia River Power System. In 2009 there was an effort to match the requirements for collecting and analyzing population data with existing Fish and Wildlife Program projects. This initial effort was followed by workshops attended by most project proponents to “ground truth” the preliminary analyses and develop a coordinated M&E program for anadromous salmon in the Columbia River Basin. The fast-track projects and many other projects that will be reviewed during the summer of 2010 are intended to serve as essential components of the comprehensive M&E strategy. Many proposals provided a link to the current draft of the comprehensive strategy, but that draft has not yet been independently peer reviewed. Moreover, the timeframe for the fast track review did not permit thorough inspection of the linked document. Finally, without adequate review and linkage it is not possible to verify that the new tasks and work elements will provide the information desired. Before the Fish and Wildlife Program RME review is initiated the coordinated RME strategy should be peer reviewed by the ISRP (and perhaps ISAB).

**B. Data precision and bias requirements for VSP parameter estimates.** The ISRP understands that the initial screening of projects collecting data to fulfill RPA obligations primarily involved identifying which projects included PISCES work elements appropriate for estimating VSP parameters. This initial screening apparently did not involve confirmation of data quality. The 2009 fall workshops with project proponents were, in part, intended to confirm that the projects were collecting the appropriate data, and that data were gathered with sufficient precision. The methods for making this evaluation and the outcome have not yet been explicitly presented to the ISRP. This should be addressed by the completion of the Fish and Wildlife Program RME review during the summer/fall 2010. If deficiencies exist, it would be beneficial and timely to identify them before initiating another three to five year commitment for funding.

**C. Data precision presentations in proposals.** Many of the proposals identified the goal of estimating abundance with a 15% coefficient of variation (CV – the ratio of the standard deviation to the mean of a data set) basing that goal on ESA monitoring guidance for anadromous salmon and steelhead (Crawford and Rumsey 2009). The reference to a CV of 15% (Crawford and Rumsey 2009) has not been established as a reasonable data standard. The statistical and biological basis for the recommendation in Carlile et al. (2008) as cited by Crawford and Rumsey (2009) has not been reviewed. The justification that the standard represents a realistic goal for planning because it corresponds to an acceptable risk (one year of one stock in six) of failing to label a stock of concern when warranted appears to be arbitrary. The observation that the standard has proven to be attainable for many escapement estimation studies does not mean that this is the appropriate data standard. Further justification for sample size targets is required. None of the proposals provided evidence that past data collection efforts met this standard, nor was any explicit evidence provided to demonstrate that this degree of precision could be achieved with the proposed level of sampling.

**D. Comprehensive description of projects in proposals.** Many of the projects have been ongoing for twenty or more years. The proposals for most of the long-standing projects did not provide a concise description of the project in terms of its purpose and objectives for the subbasin, province, and basin. For those reviewers unfamiliar with the projects, the proposals were sometimes overwhelming. The ISRP believes that clear but brief summaries of the purpose, goals, and history of the projects, in the technical background and project history sections of the proposal should document the evolution and value of these projects. As members of project staff, Council, and reviewers change, maintaining the continuity of the project is important.

**E. Identify Fast Track tasks and work elements.** With notable exceptions, most projects were not explicit about which actions (and associated tasks and work elements) actually were the fast track components. Very few of the proposals indicated how past activities were insufficient and what additional tasks were included to remedy those deficiencies. The ISRP recommends that in fast-track responses and in the summer 2010 RME review project proponents explicitly address tasks and work elements that are being expanded to address findings and recommendations from the comprehensive RME strategy.