

**Findings Regarding Adequacy
of the FCRPS Action Agencies'
2003 Annual Implementation Plan**

**National Marine Fisheries Service
Northwest Region**

April 24, 2003

Acronyms and Abbreviations

AA	Action Agencies (Corps, BPA, and USBR)
AFEP	Anadromous Fish Evaluation Program
AWS	auxiliary water system
BA	biological assessment
BGS	behavioral guidance structure
BLM	Bureau of Land Management
BOR	U.S. Bureau of Reclamation (see also USBR)
BPA	Bonneville Power Administration
CBFWA	Columbia Basin Fish and Wildlife Authority
CFD	computational fluid dynamics
cfs	cubic feet per second
Corps	U.S. Army Corps of Engineers
Council	Northwest Power and Conservation Council (formerly Northwest Power Planning Council)
CR	Columbia River
CREP	Conservation Reserve Enhancement Program
CRFM	Columbia River Fish Mitigation
CRITFC	Columbia River Inter-Tribal Fish Commission
CWT	coded-wire tag
D	post-Bonneville transport: in-river survival ratio; also referred to as “differential post-Bonneville mortality”
DEIS	draft environmental impact statement
DGAS	Dissolved Gas Abatement Study
EA	environmental assessment
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
ERDC	Engineering Research and Development Center
ESA	Endangered Species Act
ESBS	extended submerged bar screens
ESU	evolutionarily significant unit
FCRPS	Federal Columbia River Power System
FGE	fish guidance efficiency
FHT	Federal Habitat Team
FMEP	fisheries management and evaluation plan
FPOM	Fish Passage Operations and Maintenance Coordination Team
FSA	Farm Services Administration
ft/s	feet per second
FY	fiscal year
GIS	geographical information system
GRR	general reevaluation report
HCP	Habitat Conservation Plan
HGMP	hatchery and genetic management plan

IP	Implementation Plan
IPC	Idaho Power Company
ISRP	Independent Scientific Review Panel
IT	Regional Forum Implementation Team
JBS	juvenile bypass system
kaf	thousand acre-feet
kcfs	thousand cubic feet per second
ksfd	thousand second-foot days (approx. 1980 acre-ft per day)
kV	thousand volts (kilovolt)
LCREP	Lower Columbia River Estuary Partnership
Maf	million acre-feet
MASS1,2	dissolved gas models
MGRs	minimum gap runners
MOA	Memorandum of Agreement
MOP	minimum operating pool
NAWQA	National Water Quality Assessment Program
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service (see also NOAA Fisheries)
NOAA Fisheries	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
NWPA	Northwest Power Act
NWPPC	Northwest Power Planning Council
O&M	operations and maintenance
ODEQ	Oregon Department of Environmental Quality
ODFW	Oregon Department of Fish and Wildlife
OPE	orifice passage efficiency
Oregon Plan	Oregon Plan for Salmon and Watersheds
PCSRP	Pacific Coastal Salmon Recovery Program
PFMC	Pacific Fishery Management Council
PIT	passive integrated transponder
PSC	Pacific Salmon Commission
PSMFC	Pacific States Marine Fisheries Commission
PUD	Public Utility District
RM&E	research, monitoring, and evaluation
RMP	Joint Resource Management Plan
RPA	Reasonable and Prudent Alternative
RSW	removable spillway weir
SAR	smolt-to-adult return rate
SCT	System Configuration Team
SNAPP	Safety Net Artificial Propagation Program
SOI	southern oscillation index
SR	Snake River
SRWG	Studies Review Work Group
SYSTDG	a dissolved gas model

TBL	BPA's Transmission Business Line
TDG	total dissolved gas
TMDL	total maximum daily load
TMT	Technical Management Team
TRP	Tribal Restoration Plan for the Columbia River Basin
TRT	Technical Recovery Team
TSP	Turbine Survival Program
UCR	Upper Columbia River
USBR	U.S. Bureau of Reclamation
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VARQ	variable (VAR) outflow (Q)
WDFW	Washington Department of Fish and Wildlife
WDOE	Washington Department of Ecology
WMP	Water Management Plan
WQT	Water Quality Team
WRI	Willamette Restoration Initiative

1.0 Introduction

1.1 Background

The National Marine Fisheries Service (NOAA Fisheries) issued a biological opinion addressing operation of the Federal Columbia River Power System (FCRPS) and 19 Bureau of Reclamation (USBR) projects on December 21, 2000 (hereafter, “the Opinion”). This consultation was conducted with the Corps of Engineers (Corps), Bonneville Power Administration (BPA), and USBR, collectively referred to as the FCRPS Action Agencies. The Opinion defines a reasonable and prudent alternative (RPA) consisting of 199 Actions, which are intended to improve survival and the likelihood of recovery for listed salmon and steelhead evolutionarily significant units (ESUs) in the Columbia River basin. The RPA consists of one suite of Actions that defines hydro improvements within the FCRPS. Another suite of Actions specifies offsite mitigation in the form of improvements to tributary, mainstem, and estuary habitat; improvements in operation of hatcheries and development of an artificial propagation safety-net program; development of more selective fishing techniques to reduce harvest impacts on listed ESUs and other harvest management improvements; and development of a research, monitoring, and evaluation (RM&E) program.

The RPA defines programmatic and biological performance standards for both the hydro and offsite mitigation RPA Actions. These performance standards will be evaluated through comprehensive 2003, 2005, and 2008 reviews. The 2003 evaluation is based on a programmatic performance standard: RPA Actions with products or activities that must be completed by certain dates, as summarized in Appendix F of the Opinion, or as modified by NOAA Fisheries after evaluation of the Implementation Plan, should be underway and on schedule by September 2003. Actions without implementation dates (Category 3 of the Opinion’s Appendix F, discussed below) should be underway or scheduled for implementation by 2010. The 2005 and 2008 evaluations are based on a combination of biological and programmatic performance standards. Some of the RPA Actions that will be evaluated programmatically in 2003 are planning and monitoring activities that need to be in place by 2003 if progress towards meeting biological performance standards is to be evaluated in 2005.

The Opinion anticipated that many of the RPA Actions will need to be refined and adjusted as new study results and other relevant information become available. The RPA defined a rolling annual and five-year planning process to implement the RPA. The FCRPS Action Agencies produce annual and five-year implementation plans (IP) that describe progress to date, lay out details of the short- and long-term plans for achieving performance standards, propose adjustments to the RPA Actions, and describe the rationale for those adjustments. The Opinion (section 9.4.2) defines 13 major elements of the IPs, which include a hydrosystem plan, water management plan, offsite mitigation plan, and an annual progress report.

NOAA Fisheries is required to review each year’s annual IP. Within 45 days of receipt of each annual plan, NOAA Fisheries must issue a Findings letter to the FCRPS Action Agencies regarding the adequacy of the plan. The letter will address the consistency of the proposed

annual plan with the RPA and, if appropriate, recommend needed changes. If NOAA Fisheries finds the plan to be inadequate, the FCRPS Action Agencies may proceed with those elements of the plan not identified by NOAA Fisheries as at issue, while discussions continue regarding how to align the plan with the Opinion. To the extent that the annual and five-year IPs propose changes in the schedule or scope of RPA Actions, NOAA Fisheries must explicitly define and approve all such amendments in its written findings.

The FCRPS Action Agencies issued a draft 2002-2006 Five-Year IP in July 2001, a 2002 Annual IP in November 2001, and a 2001 Progress Report in May 2002. NOAA Fisheries had stated that all three pieces of information were needed before the Findings letter could be produced. NOAA Fisheries' rationale was that evaluation of the activities planned for 2002 was dependent upon knowing the success of activities implemented to date and, to the extent that some were deferred for future implementation, the long-term plan for their implementation.

NOAA Fisheries issued its 2002 Finding Report in July 2002. NOAA Fisheries found that most of the 199 RPA Actions were being implemented, or were proposed to be implemented, as expected. Thirty RPA Actions had required a modification to the schedule or approach, based on new information or unanticipated problems. Sixteen of these modifications were determined not to be a concern for meeting the 2003 check-in criteria. However, modifications to 14 RPA Actions originally defined by the Opinion were a cause of concern for NOAA Fisheries. NOAA Fisheries determined that further resolution during 2002 was required to ensure that these 14 RPA Actions would be implemented as expected by the September 2003 evaluation. NOAA Fisheries proposed recommendations for resolving the issues associated with implementing these RPA Actions.

On November 6, 2002, the Action Agencies issued a combined 2003/2003-2007 Implementation Plan. The Action Agencies did not submit a 2002 Progress Report because experience in 2002 showed that it is unrealistic to obtain and process the information necessary for a comprehensive annual Progress Report until late spring of the following year. NOAA Fisheries agreed to produce a Findings Report based on the combined one- and five-year IP, without the benefit of a comprehensive 2002 Progress Report, in order to expedite a Finding on the 2003 IP as close as possible to the start of the fiscal year. NOAA Fisheries will update this 2003 Findings Report if necessary after reviewing the 2002 Progress Report in the spring of 2003.

NOAA Fisheries informed the Action Agencies that the organization of the 2003/2003-2007 IP made it extremely difficult to evaluate the Action Agencies' plans for implementing each RPA Action. In response, the Action Agencies produced a draft "RPA Implementation Summary Table" and submitted it to NOAA Fisheries on December 5, 2002. NOAA Fisheries issued a draft "2003 Findings Report" to the Action Agencies on January 14, 2003. However, shortly after the draft Findings report was issued, BPA initiated a "re-prioritization process," which resulted in a modification of the original 2003/2003-2007 IP. A revised summary table was submitted to NOAA Fisheries as an addendum to the 2003/2003-2007 IP on March 11, 2003. This addendum reflected "revisions or clarifications due to BPA's reprioritization process with the Northwest Power Planning Council, revised Congressional appropriations, continued

planning with various technical work groups, National Environmental Policy Act [NEPA] processes, or other reasons” (April 11, 2003 letter from W. Anderson [Corps] to B. Brown [NOAA Fisheries]). The addendum was further updated to reflect subsequent events and a final version was submitted on April 22, 2003 (e-mail and attachment from K. Fisher [BPA] to C. Toole and B. Brown [NOAA Fisheries]). Information from the April 22, 2003, addendum was included in Appendix A of this report for each RPA Action, under the header “AA Implementation.”

In addition to reviewing the implementation of each RPA Action, the 2003 Findings Report also reviews the status of each Incidental Take term and condition (Section 10.5 of the Opinion). Most of these overlap with RPA Actions, but a few require additional actions, which NOAA Fisheries evaluated to ensure compliance.

2.0 Approach to Determining Adequacy

The Opinion included 124 RPA Actions, of 199 total RPA Actions, that require definition, implementation, or completion by or before 2003 (Biological Opinion Appendix F, “Category 1” and “Category 2” actions¹). The annual IP, in the context of the five-year IP, must demonstrate that these RPA Actions are being implemented on a schedule consistent with that in the Opinion; or the annual IP, in the context of the five-year IP, must describe alternative actions or schedules and explain why they will accomplish the same goals.

The Opinion also included 75 RPA Actions that did not require definition, initiation, or completion within a specific time period (e.g., Biological Opinion Appendix F, “Category 3” actions¹). Essentially, NOAA Fisheries determined that these Actions could be implemented according to the Action Agencies’ implementation schedule, so long as that schedule results in meeting performance standards. For the 2002 Findings Report, NOAA Fisheries looked at these actions only to determine if a significant proportion were underway or planned to start in 2002. For this 2003 Findings Report, NOAA Fisheries looked for these actions to either be underway, or for a clear implementation schedule to be included in the 2003-2007 five-year plan. The reason for this change is because many Actions are unlikely to be successfully implemented before 2010 if implementation is delayed until 2008 or later.

NOAA Fisheries considered five Findings, which were based on current status of each Action and plans for implementation in 2003:

“Implementation As Expected”: RPA Actions with specific expectations by 2003 that NOAA Fisheries finds have been completed, are being implemented as expected, or have been changed to improve implementation.

¹ Appendix Table A of the 2002 Findings Report corrected a few designations in the Opinion’s Appendix F (Actions 99, 130, and 133).

“Modification Not A Concern”: RPA Actions with specific expectations by 2003 that have modified schedule or scope, which are not a concern for meeting the Opinion’s objectives for the 2003, 2005, and 2008 mid-point evaluations.

“Modification Requires Resolution”: RPA Actions with specific expectations by 2003 that have modified schedule or scope, which require resolution to meet the Opinion’s objectives for the 2003, 2005, and 2008 mid-point evaluations. This Finding may be based on delays in survival improvements anticipated in the Opinion, delays in monitoring and evaluation needs related to performance standards, and other delays or changes in scope that could affect substantive implementation.

“No Schedule, Implementation Underway”: RPA Actions without a defined schedule in the Opinion, which are already underway or proposed for implementation in 2003.

“No Schedule, Implementation Not Underway”: RPA Actions without a defined schedule in the Opinion, which are not yet underway or proposed for implementation in 2003.

In reviewing the Incidental Take terms and conditions, NOAA Fisheries applied only two possible Findings:

“Implementation As Expected”: Incidental Take terms and conditions that NOAA Fisheries finds have been completed, or are being implemented as expected.

“Implementation Not As Expected”: Incidental Take terms and conditions that NOAA Fisheries finds are not being implemented as expected.

3. Review of 2003 Annual Plan Measures To Implement the RPA

NOAA Fisheries reviewed the 2003 IP's proposed activities with respect to the requirements of the Opinion's RPA. Results are displayed in Appendix A. One of the five Findings described in Section 1.2 was assigned to each RPA Action. To the extent that NOAA Fisheries found potential problems with implementation of some of the RPA Actions, recommendations to the Action Agencies were included in Appendix A, as prescribed on page 9-34 of the Opinion.

NOAA Fisheries finds that the Action Agencies' 2003 IP is likely to meet the schedule and scope anticipated by the 2003 mid-point evaluation for the majority of RPA Actions (Figure 1). However, some significant implementation problems remain and resolution before September, 2003, will be challenging, if not impossible, for certain RPA Actions.

3.1 Actions That Require Definition, Implementation, or Completion by 2003

“Implementation As Expected”: Of the 124 Actions that require definition, implementation, or completion by or before 2003, NOAA Fisheries finds that 97 are being implemented as expected.

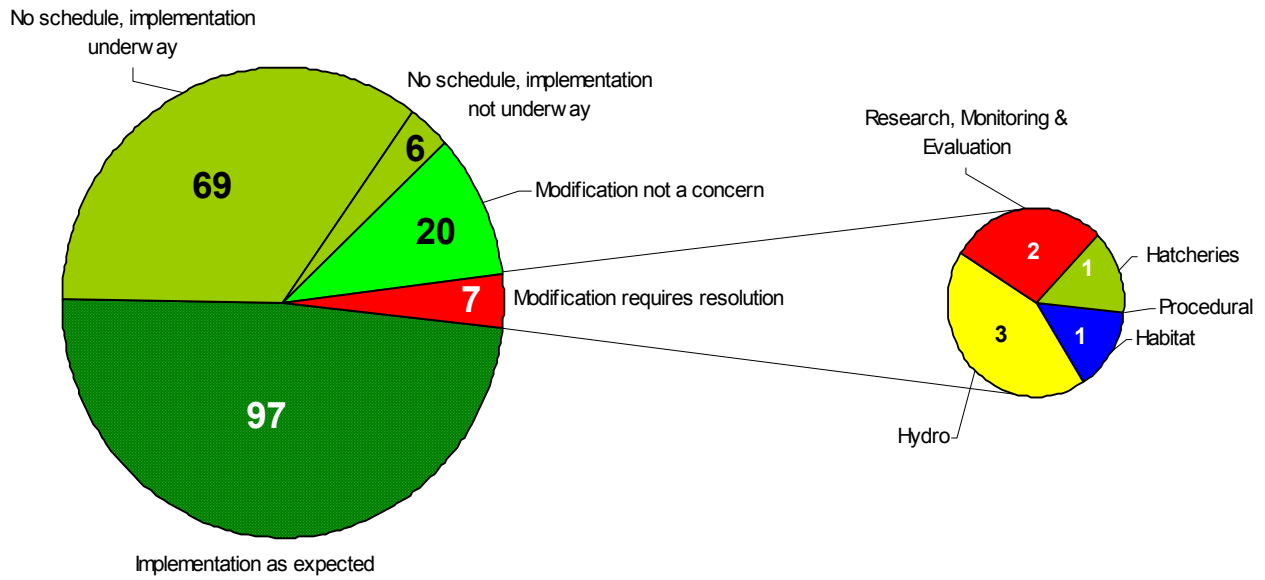
“Modification Not A Concern”: The remaining 27 Actions with expectations for 2003 are being implemented according to a modified schedule or scope. For 20 of these Actions, the modification is not a concern for meeting the Opinion's objectives for the 2003, 2005, and 2008 mid-point evaluations. This is because either: (1) the modification represents a minor change; or (2) an intermediate scheduling benchmark has been, or is likely to be, delayed but the IP contains measures that will meet the full expectation by 2003.

“Implementation As Expected” and “Modification Not A Concern” Contingencies: Two of the “Modification Not A Concern” determinations are contingent on the success of targeted solicitations that were recently issued by BPA. NOAA Fisheries expects that proposals responsive to the Action Agencies' Requests For Studies for necessary activities related to RPA Actions 182 and 184 will be presented, selected, funded, and initiated in 2003. Alternatively, if responsive proposals are not presented, NOAA Fisheries expects that an alternative approach will be identified and implemented, beginning in 2003.

The “Modification Not A Concern” determination for Action 180 is contingent upon provision of database support for the pilot status monitoring program. See Appendix A “Comments” for Actions 180 and 198.

A number of determinations for Actions considered to be “Implemented As Expected” or “Modification Not A Concern” are contingent upon BPA's intent to implement Fish and Wildlife Program projects that are critical to implementing the RPA, which were listed as “Non-Discretionary” or “Strongly Suggested” in the February 12, 2003, letter from S. McNary (BPA) and B. Brown (NOAA Fisheries) to D. Marker (Council). This set of projects is referred to in Appendix A as the “Critical Elements” list. To the extent that any of these projects are not implemented in 2003, or are implemented too late for significant elements of proposed field

Figure 1. Summary of NOAA Fisheries' findings for RPA Actions.



work to occur in 2003, NOAA Fisheries may have to reconsider some of its Findings.

“Modification Requires Resolution”: The remaining seven Actions that require definition, implementation, or completion before 2003 have a modified schedule or scope that will require adjustments and resolution in order to meet the 2003 and future mid-point evaluations. Three hydrosystem Actions require resolution:

RPA Action 31: delay in completing NEPA compliance work on Banks Lake drawdown below 1565 feet prior to the 2003 fish passage season.

RPA Action 36: delay developing new Libby Dam forecasting methods and flood control studies to attempt to make more summer flow augmentation water available for juvenile migrations

RPA Action 136: delay in installing dissolved gas control structures (“flip-lips”) at Chief Joseph Dam

One of the Actions requiring resolution involves habitat:

RPA Action 154: delay in completing subbasin plans for priority subbasins

One of the Actions requiring resolution involves hatcheries:

RPA Action 174: delay in developing and implementing the comprehensive marking plan to enable differentiation between hatchery and naturally-produced salmon and ensure that appropriate tagging and sampling rates are being implemented

Two of the Actions requiring resolution involve research, monitoring, and evaluation:

RPA Action 183: delay in implementing components of a pilot tributary action effectiveness study expected in 2003

RPA Action 198: delay in implementing a pilot database program expected in 2003

3.2 Actions Without A Defined Schedule

“No Schedule, Implementation Underway”: For 75 Actions, the Opinion provides no schedule, other than completion by 2010. Of these 75 actions, 69 are currently underway or proposed for initiation in 2003.

“No Schedule, Implementation Not Underway”: The remaining six Actions, all of which are hydro-related, have not been scheduled to begin in 2003 by the Action Agencies. Two of these (Actions 147 and 148) are contingencies that will only be implemented if there is a failure determination in 2003, 2005, or 2008 that cannot be corrected within existing authorities of the

Action Agencies. Two of the Actions (75 and 78) are contingencies that will only be implemented if a decision analysis based on results of ongoing studies indicates that the Action represents the best way to achieve performance standards. Each of the other two Actions (81 and 124) is planned for implementation in 2004, as described in Appendix A.

3.3 Tribal Coordination on Hydro and Offsite Mitigation Actions

The Opinion states that the Action Agencies, in keeping with their Federal trust responsibilities, will coordinate with and seek input of appropriate Tribes during their development of the 1- and 5-year IPs.

When the Action Agencies released the draft 2002-2006 Five-Year Implementation Plan in July 2001, they asked for input from states, tribes, and others. Informal and formal comments were received through the NOAA Fisheries Regional Forum, Regional Executive meetings, staff discussions, written letters and other opportunities. They also held a series of meetings with state, tribal, and other interest groups to discuss the 2003/2003-2007 IP. The Action Agencies state that many of the comments were reflected in the 2002 IP or the 2003/2003-2007 IP. A summary of the main comments and the Action Agencies' response to those comments is included in Section 1.4 of the 2003/2003-2007 IP.

3.4 Recovery Planning

The Opinion states that: "As portions of recovery plans become final, NOAA Fisheries and the other Action Agencies will incorporate applicable elements into the progress reviews and 1- and 5-year plans." [p. 9-32] No Columbia basin recovery planning products became final prior to development of the 2003 IP. The Appendix A entry for RPA Action 179 describes preliminary recovery planning products that were released to the public in 2002 and that should be utilized until final products are available.

4. Review of 2003 Annual Plan Measures To Implement the Incidental Take Terms and Conditions

NOAA Fisheries' reviewed each of the Incidental Take Statement's (ITS) terms and conditions. NOAA Fisheries found that all ITS terms and conditions are being implemented as expected.

5. Conclusions

5.1 Reasonable and Prudent Alternative

NOAA Fisheries finds that the 2003/2003-2007 Implementation Plan represents a considerable effort and is generally consistent with the Opinion. Of the 124 Actions that require definition, implementation, or completion by or before 2003, 117 are either being implemented as expected or have been modified in ways that are not of concern. Of the 75 Actions for which the Opinion provides no schedule, 68 are currently underway or proposed for initiation in 2003.

This leaves only seven RPA Actions (about 5%) of those with implementation schedules that have been modified in ways that represent a concern. This is good. However not all actions are of equal importance. In particular, these schedule changes are significant in two areas: development of subbasin assessments and plans for priority subbasins (Action 154) and effectiveness monitoring for offsite mitigation actions (Action 183 and RM&E database development identified in Action 198). Details regarding the specific delays for these actions are included in Appendix A.

The reasons for subbasin planning and effectiveness monitoring slippage are understandable because these actions are very complex. They require close, extensive coordination with regional and local interests and with related activities being carried out by these other entities. That process, relying on the Northwest Power and Conservation Council, has not progressed as NOAA Fisheries had anticipated. Nevertheless, NOAA Fisheries still believes that habitat improvements achieved through a collaborative regional process will result in more sustainable benefits for listed salmon and steelhead. NOAA Fisheries appreciates the difficulties, is a full participant in the process, and offers, in Appendix A, some recommendations to reduce the impacts of the schedule changes and to minimize the potential for further slippage. NOAA Fisheries also recognizes that habitat improvements continue to be made on schedule in several Columbia River subbasins. Nonetheless, schedule slippage in subbasin planning and action effectiveness monitoring will likely impact the Action Agencies' ability to demonstrate "that proposed actions can increase life stage survivals," and that they are "being implemented at a scale sufficient to avoid jeopardy" (see Opinion section 9.5.3.2.4) – as called for as part of the 2005 and 2008 check-ins. NOAA Fisheries' ability to assess the effects of ongoing and future offsite improvements on fish population growth rates, abundance, distribution and resulting extinction risks for the check-ins in 2005 and 2008 (see Opinion section 9.5.3.3) will also be affected. As a result, unless we can quickly develop alternative means of assessment, at the 2003 check-in NOAA Fisheries will need to evaluate whether there will be greater uncertainty associated with the Opinion's reliance on offsite mitigation that will remain beyond the 2005 check-in and any significance for avoiding jeopardy.

NOAA Fisheries is also concerned about schedule modifications related to hydro actions (Banks Lake operations environmental analysis [Action 31], Libby Reservoir operations [Action 36], and Chief Joseph spillway deflectors [Action 136]) and comprehensive marking of hatchery fish (Action 174). Some of these delays may be partially mitigated by operational changes (e.g.,

Action 136) or by making immediate modifications to the current schedule (Action 174), as described in Appendix A. In general, NOAA Fisheries considers these schedule changes a cause for concern, but the impact on implementation of the RPA is not as significant as that associated with the subbasin planning and RM&E schedule changes.

5.2 Incidental Take Statement

NOAA Fisheries found that all ITS terms and conditions are being implemented as expected.