

APPENDIX 8

DRAFT MRGRIP PROGRAM DOCUMENTS, ACTION PLAN, AND COOPERATIVE AGREEMENTS



Draft
Middle Rio Grande
Collaborative Recovery
Implementation Program
(RIP) Document

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I. Statement of Purpose and Goals

This Program Document provides the framework for the Middle Rio Grande Collaborative Recovery Implementation Program (RIP). It describes, among other things, the RIP's purpose and goals, its scope, the organizational structure and governance protocols (Appendix __) for RIP implementation, the substantive RIP Action Plan (Appendix __) elements, criteria for measuring progress, and principles for compliance under the Endangered Species Act (ESA) of 1973 as amended.

A. Purpose

The general purpose of the RIP is:

To protect and improve the status of species listed pursuant to the ESA within the Middle Rio Grande (MRG) by implementing certain recovery activities to benefit those species and their associated habitats, with special emphasis on the Rio Grande silvery minnow (*Hybognathus amarus*; silvery minnow) and the Southwestern Willow Flycatcher (*Empidonax traillii extimus*; flycatcher);

and, simultaneously,

To protect existing and future water uses while complying with applicable state and federal laws, rules and regulations, and to serve as the ESA coverage vehicle for water uses and management actions in the MRG Program area (see area map on page 7).

B. Goals

The goals of the RIP are to:

1. Alleviate jeopardy to the listed species and adverse modification of their designated critical habitats in the MRG Program area
 - Avoid actions that preclude survival or recovery of the listed species
 - Continually identify the critical scientific questions and uncertainties that will be addressed through adaptive management (AM) in support of a hydrologically and biologically sustainable MRG water operations Biological Opinion¹ (BO)
2. Conserve and contribute to the recovery of the listed species within the constraints of the RIP
 - Stabilize existing populations through ongoing and future management activities

¹ The U.S. Army Corps of Engineers submitted a Biological Assessment and has requested a separate BO.

- Support the development of self-sustaining populations
3. Protect existing and future water uses
- Provide a mechanism for ESA compliance for identified federal and non-federal actions that do not create additional net depletions to the MRG
 - Provide a process for streamlined Section 7 consultation for future water uses needing compliance with the ESA

C. Principles

The RIP may not impair state water rights of individuals and entities or federal reserved water rights of individuals and entities; federal or other water rights of Indian nations and Indian individuals, or Indian trust assets; San Juan-Chama Project contractual rights; or the State of New Mexico's ability to comply with Rio Grande Compact delivery obligations. Water to be acquired or otherwise made available for endangered species benefits must be from a willing donor, seller or lessor and be used in compliance with applicable federal law and the laws of the State of New Mexico including, but not limited to, permitting requirements.

The RIP will use adaptive management processes pursuant to Section VII.

The RIP will be implemented in a manner that is transparent to stakeholders, the public, and other interested parties.

II. History of Program

A. Species Listings, Critical Habitat Designations, and Resulting Actions

The silvery minnow was listed as endangered by the U.S. Fish and Wildlife Service (Service) in 1994 and the flycatcher was listed in 1995. Critical habitat was designated for the silvery minnow in 2003 and revised for the flycatcher in 2005; both areas include the MRG (excluding Pueblo lands).

Drought conditions in 1996 and the realization that the needs of the endangered species could conflict with the needs of MRG water users served as impetus for increased cooperation among affected entities to develop proactive solutions. Supplemental water management to support ESA compliance and MRG water operations began in 1996.

In 1997, federal agencies joined to outline alternatives to satisfy the water needs of the silvery minnow and accommodate the needs of the MRG water users. The alternatives were presented in a white paper and included water acquisition, water management, and water-use efficiencies. The white paper also recommended the development of a plan of action. In 1998, certain environmental community members formed the Alliance for the Rio Grande Heritage and worked to develop a green paper because they felt the white paper lacked specific recommendations. The green paper stated that the long-term solution: 1) needed to include all the key players and interested participants; 2) must assure adequate river flows; and 3) had shared responsibility among all who benefit from the river. The green paper proposed acquisition and storage of water for conservation purposes. In 1998, the two groups began meeting and exchanging information to evaluate and prioritize potential solutions and define future collaborative actions. Participating organizations included American Rivers, Defenders of Wildlife, Forest Guardians, Land and Water Fund, National Audubon Society-New Mexico, New Mexico Sportsmen, Rio Grande Restoration, Sierra Club, City of Albuquerque, City of Santa Fe, Middle Rio Grande Conservancy District (MRGCD), New Mexico Interstate Stream Commission (NMISC), New Mexico Office of the State Engineer (OSE), the Service, U.S. Army Corps of Engineers (Corps), and Bureau of Reclamation (Reclamation).

Despite their efforts, in 1999 a complaint was filed, on behalf of the silvery minnow, against Reclamation and the Corps for alleged ESA and National Environmental Policy Act violations. However, all parties remained active in the collaborative process.

Court-ordered mediation in 2000 led to an Agreed Order² that provided additional supplemental water for both ESA and irrigation purposes. Subsequent efforts involved pumping from the Low Flow Conveyance Channel, the development of the City of Albuquerque's silvery minnow naturalized refugium, and support for improved metering and water transport efficiency of the MRGCD.

B. History of the Collaborative Program, MRG Water Management ESA Section 7 Consultations, and Related Legislation

In 2001, the Collaborative Program first received congressional appropriations for implementing projects beneficial to federally listed species, and Reclamation and the Corps (the action agencies) began consultations with the Service over their MRG water operations and maintenance. The Service issued a three-year BO that provided ESA compliance for continued water deliveries and for implementation of Collaborative Program activities.

In April 2002, a Memorandum of Understanding was signed to recommit the parties and formalize the Collaborative Program's governance.

²[Cite to the Agreed Order.]

In 2003, Reclamation and the Corps again consulted with the Service and the Service issued a 10-year BO in March. This 2003 BO had a significant number of required flow and non-flow activities and offered broad ESA coverage utilizing a broad water depletions-based analysis.

As directed by Congress (P.L. 108-199), the Secretary of the Interior established an Executive Committee (EC) in 2004 to increase the efficiency of the Collaborative Program and implement a 75/25 federal/non-federal cost sharing provision. The EC consists of designated representatives of signatory members of the Collaborative Program and has operated to assist in making priority decisions and meeting specific goals. The Collaborative Program approved Program By-laws in October 2006 and approved a Long Term Plan (LTP) in November 2006.

In 2008, the EC adopted a Memorandum of Agreement (MOA) establishing the Collaborative Program in accordance with the 2006 By-laws. The Consolidated Appropriations Act, 2008 (Appendix ___) determined that the acquisition of water necessary to comply with the 2003 BO or in furtherance of objectives set forth in the Collaborative Program LTP shall be at full federal expense, and established that the non-federal share of activities shall be 25 percent.

The Omnibus Appropriations Act, 2009 (Appendix ___) authorized the Secretary of the Army to carry out and fund planning studies, watershed surveys and assessments, or technical studies at 100 percent federal expense to accomplish purposes of the 2003 BO, any related subsequent BO, and the Collaborative Program LTP. It also authorized the Secretary of Interior (acting through the Commissioner of Reclamation), in collaboration with the EC, to enter into any grants, contracts, cooperative agreements, interagency agreements, or other agreements that the Secretary determines to be necessary to comply with the 2003 BO or any related subsequent BO or in furtherance of the objectives set forth in the Collaborative Program LTP. This recognized a 25% non-federal cost share in cash or in-kind contributions; specified that the acquisition of water and any administrative costs shall be at full federal expense; and provided that not more than 15% of amounts appropriated shall be made available for administrative expenses.

In 2009, the EC directed efforts to pursue the transition of the Collaborative Program to a RIP to enhance the focus on recovery activities and serve as an ESA compliance vehicle using a new LTP (Appendix ___) as a mechanism for advancing the Program based on the framework of the silvery minnow and flycatcher recovery plans.

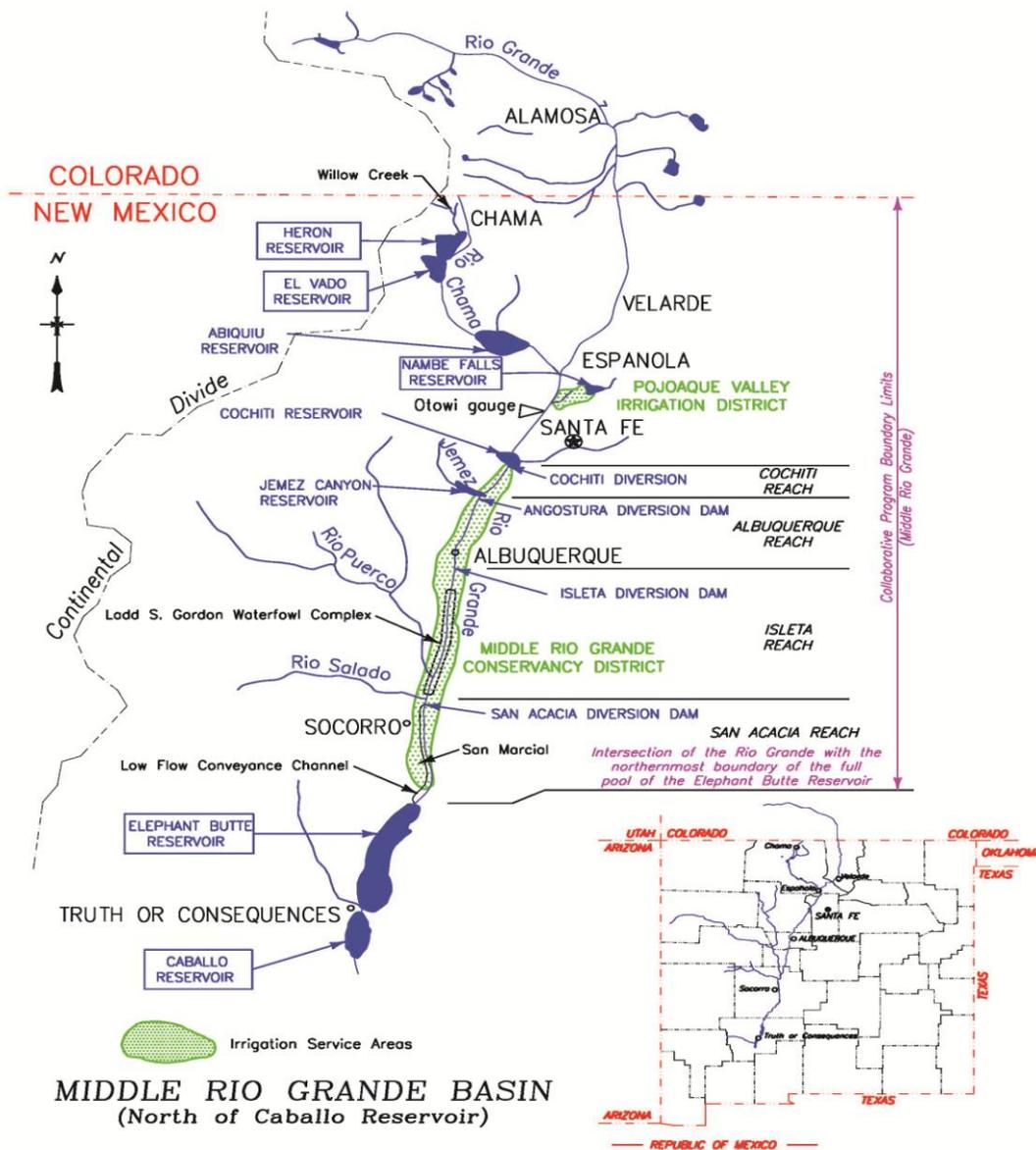
C. RIP Documents

Formal documents establishing the RIP are defined as this Program Document, an Action Plan, [the LTP], and a Cooperative Agreement (Appendix ___). The EC decided to develop these documents in 2011 for inclusion in the ESA Section 7 consultation for proposed federal and non-federal MRG water use and management actions. Also in 2011, the EC agreed to follow an AM approach throughout the recovery implementation process and an AM guidance document (Adaptive Management Plan Version 1 (AMP-1)) (Appendix ___) was produced.

III. Program Scope

A. Middle Rio Grande Program Area

The RIP geographic area consists of the headwaters of the Rio Chama watershed and the Rio Grande, including tributaries, from the New Mexico-Colorado state line downstream to the intersection of the Rio Grande with the northernmost boundary of the full pool of the Elephant Butte Reservoir as illustrated in the MRG Basin map. Indian Pueblo and Tribal lands and resources within the RIP area will not be included in the RIP without the express written consent of the affected Indian Pueblo or Tribe. This definition does not preclude the Program from funding activities outside of this geographic area pursuant to the RIP Governance Procedures.³



³ It is anticipated that certain contributions by ISC under this RIP will also contribute toward ESA compliance for the Elephant Butte temporary channel which will be addressed in a separate consultation.

B. Listed Species and Critical Habitat

The RIP is currently scoped to address two species listed under the ESA: the silvery minnow and the flycatcher. The EC may decide to include other listed species or candidate species at any time in the future.

Silvery Minnow

On July 20, 1994, the Service published a final rule to list the silvery minnow as an endangered species with proposed critical habitat (59 Fed. Reg. 36988-36995)⁴. The Service initiated a five-year review of the status of the species in 2010 (75 Fed. Reg. 15454-15456). A five-year review considers all new information available at the time of the review. There is no regulatory timeframe for completing the review; however, the Service currently has a target date of December 2012.

Critical habitat was designated for silvery minnow in 1999 (64 Fed. Reg. 36274-36290), with revisions published on February 19, 2003 (68 Fed. Reg. 8088-8135). Designated critical habitat in the Rio Grande extends through Sandoval, Bernalillo, Valencia, and Socorro Counties, New Mexico generally beginning at Cochiti Reservoir downstream to the utility line crossing the Rio Grande at the upstream end of the Elephant Butte Reservoir pool. The utility line marks the northern boundary of Reclamation's Rio Grande Project. The lateral extent of critical habitat includes those areas bounded by existing levees. In areas without levees, the lateral extent of critical habitat is defined as 300 feet (91.4 meters) of riparian zone adjacent to each side of the river.

The designation also includes a five mile segment of the Jemez River from Jemez Canyon Dam to the upstream boundary of Santa Ana Pueblo, Sandoval County. Pueblo lands in Santo Domingo, Santa Ana, Sandia, and Isleta Pueblos are excluded from critical habitat. The Service considered the Rio Grande around Big Bend National Park in Texas and the Pecos River between Ft. Sumner Dam and Brantley Reservoir in New Mexico as essential to conservation but did not designate as critical habitat.

Flycatcher

A final rule was published in the February 27, 1995 Federal Register to list the southwestern U.S. population of the flycatcher as an endangered species under the ESA with proposed critical habitat. However, the final rule designating critical habitat for the species range-wide (published on July 22, 1997) did not include the Rio Grande (62 Fed. Reg. 39129) at that time. A proposal to re-designate critical habitat was published October 12, 2004 (69 Fed. Reg. 60706), with a final designation published October 19, 2005 (70 Fed. Reg. 60886). The 2005 final designation of critical habitat defines two units located along the Rio Grande: the Upper Rio Grande Management Unit which includes 664 hectares (ha) (1,640 acres), encompassing 66 kilometers

⁴ The silvery minnow is currently listed as endangered on the New Mexico state list of endangered species, having first been listed on May 25, 1979 as an endangered endemic population of the Mississippi silvery minnow (*Hybognathus nuchalis*).

(km) (41 miles), and the MRG Management Unit which includes 13,410 ha (33,137 acres) along 135 km (84 miles). The Service released a new proposal for critical habitat on August 15, 2011 (76 Fed. Reg. 50542).

C. Water Uses and Management Operations (Covered Actions)

Water uses and management operations as proposed by federal and non-federal agencies include the following:

1. Reclamation proposes the following water management operations:
 - a. Operation of Heron Dam and Reservoir as part of the SJC Project to store and deliver water to downstream users;
 - b. Operation of El Vado Dam and Reservoir as part of the MRG Project; and
 - c. River maintenance.
2. The Corps proposes the following action:
 - a. Operation and maintenance of Abiquiu Dam and Reservoir, Cochiti Dam and Lake, Galisteo Dam, and Jemez Canyon Dam and Reservoir for flood control, water storage, and sediment control.
3. Non-federal entities propose the following actions:
 - a. The MRGCD proposes the following actions:
 - i. Operation of the MRG Project Diversion Dams for the purpose of delivering water to district lands to meet agricultural demand of lands with appurtenant water rights, including the lands of the Six MRG Pueblos; and
 - ii. Operation of irrigation drains and wasteways to return water to the river.
 - b. The State of New Mexico proposes to take actions through its representative agencies to fulfill their respective missions; and
 - c. [Other categories of non-federal actions to be updated and included with final BA information]

D. RIP Activities

The RIP activities are intended to minimize the effects of the actions in Section III.C above for purposes of ESA coverage and will contribute to the recovery of the species.

The RIP activities will address elements such as species reproduction and survival, minnow captive propagation and augmentation, and research and monitoring, as described in Section V of this document and detailed in the RIP Action Plan.

IV. RIP Organizational Structure and Governance Procedures

A. Organizational Structure and Membership

The following describes the roles and responsibilities of committees/groups and staff associated with the RIP, and the membership composition of each group.

1. Executive Committee

The EC, as the governing committee of the RIP, is responsible for all decision-making related to the RIP and for ensuring that the goals of the RIP are achieved in a timely manner. The EC sets policy and directs the work of the RIP including the activities of the Executive Director, Program staff, and advisory committees, and makes assignments to the Independent Science Panel. Primary responsibilities for the EC are detailed in the By-laws (to be revised) (Appendix _). The EC, through the Executive Director, serves as the primary point of contact for all requests to the RIP. The EC may coordinate with local or regional conservation initiatives and other interests, consistent with the goals of the RIP. The EC will have a reasonable opportunity to address any conflict resolution within the RIP as needed.

The initial EC for the RIP shall be comprised of all members serving on the EC for the Collaborative Program who execute the RIP Cooperative Agreement with the Service. If an EC member chooses to withdraw from the RIP, a letter shall be submitted to the EC which describes its reason(s) and the EC will attempt to resolve any problem(s). If an EC member's participation in the RIP is essential to implementing a Reasonable and Prudent Alternative (RPA), a Reasonable and Prudent Measure (RPM), or maintaining the existing BO coverage, the withdrawal of such an entity may result in reinitiation of consultation under the ESA related to the concern(s) at issue.

An entity may apply to become a member of the EC provided there are membership openings available on the EC and such entity submits a letter of interest and signs the Cooperative

Agreement⁵. The EC may consider the following criteria in determining whether to accept an application from another entity to become a member of the EC. An applicant need not meet all criteria, and meeting the criteria does not guarantee an applicant's acceptance as a member of the EC. These criteria shall apply to any entity that reapplies to the EC following a cessation of membership on the RIP. These criteria include, but are not limited to:

- a. Representation of a sizable constituency, for example through public outreach or membership;
- b. Contribution to the non-federal cost share, reported annually including in-kind services;
- c. Ownership of an interest affected by the Program, such as land, water, or other property rights;
- d. Jurisdictional or regulatory responsibility, including sovereignty; and
- e. Commitment to participation.

Decisions whether to accept an application for EC membership shall be made by the EC pursuant to the voting procedures described in the By-laws. Within one week following EC action on an application, the co-chairs will notify the applicant in writing of the EC's decision.

EC members shall designate one primary and one alternate member to the EC; this shall be provided in writing to the Executive Director upon an entity's approved membership on the EC. Primary and alternate members of the EC and applicable staff are allowed attendance during closed sessions. All meetings shall allow for public comments and be open to the public with the exception of closed sessions.

On *[insert date]*, the following entities executed a Cooperative Agreement with the Service committing their participation as members of the RIP's EC:

[Insert entities]

2. RIP Participants

The execution of the Cooperative Agreement commits an entity to participate in the RIP as described in the Program Document. Participation in the RIP is voluntary, and in no way alters the Secretary of Interior's ultimate responsibility for administering the ESA, nor shall it affect the authorities and responsibilities of the State, districts and Tribes to manage and administer

⁵ The EC shall maintain a wait list of such applicants in the event no membership openings are available, and shall consider applications in the order in which they appear in the list.

their water and fish and wildlife resources. RIP participants must make independent judgments to determine their ability to perform RIP activities, and each is responsible for assessing how the goals of the RIP are being accomplished.

If a RIP participant chooses to withdraw from the RIP, a letter shall be submitted to the EC which describes its reason(s) and the EC will attempt to resolve any problem(s). If a RIP participant's activities in the RIP are essential to implementing a RPA or RPM, or maintaining the existing BO coverage, the withdrawal of such entity may result in reinitiation of consultation under the ESA related to the concern(s) at issue.

3. Executive Director & Staff [\[EC needs to decide\]](#)

The EC will hire an Executive Director to carry out the directions of and to serve at the pleasure of the EC. The Executive Director will hire and supervise Program staff consisting of at least a Science Coordinator and an Administrative Assistant. Additional staff positions could include scientist(s), engineer(s), contract specialist(s), public affairs specialist, etc. In addition to the reporting requirements described in Section V below, the Executive Director will prepare quarterly expenditure reports and progress reports, decision papers, and white papers, as needed. Fundamental to the Executive Director position is to coordinate and provide staff for activities of EC advisory committees; communicate with local governments, Pueblos, the public, media, and federal and state agencies; and establish and maintain an independent science panel. The Executive Director and staff will also prepare solicitation packages for EC approval, execute contracts and agreements with successful bidders, and review and approve invoices for payment.

The Science Coordinator and other Program staff will provide technical support to the RIP at the direction of the Executive Director. Primary responsibility of the Science Coordinator is to provide guidance on scientific issues, as well as assign tasks to and oversee the work of the RIP. Other responsibilities include being the scientific lead for adaptive management planning and implementation, conducting technical reviews of Program projects including research objectives, monitoring implementation and oversight, data syntheses, and other technical duties as assigned. The Science Coordinator will assist the Executive Director in preparing and updating the Long Term Plan, RIP Action Plan, and Annual Work Plan described below. All products produced by or under the direction of the Science Coordinator are subject to approval by the Executive Director or EC, as determined by the EC.

4. EC Advisory Committees

The EC may establish technical, stakeholder, or policy advisory committees or sub-committees as needed to provide recommendations on issues or interests consistent with the goals of the RIP. The EC will provide clear direction on the goals, objectives, and activities of any advisory committees including expectations, responsibilities, processes and reporting requirements. Advisory committees will establish charters for approval by the EC. Technical advisory

committees will be described in RIP Action Plan and may change over time. Committee membership may consist of EC members, Program staff, staff from EC members/RIP participants, or individual(s) obtained through contracts or financial assistance agreements.

5. Independent Science Panel [EC needs to decide.]

The Independent Science Panel (ISP) will, at the direction of the EC and independent of the Science Coordinator and advisory committees, provide the EC with feedback on technical/scientific issues, input to adaptive management and peer reviews, priority recommendations for recovery activities, and perform other review-based duties as assigned by the EC. As directed by the EC, the ISP will perform annual reviews on selected aspects of the RIP, such as habitat construction and monitoring, species management, adaptive management assessments, and flow augmentation and comprehensive programmatic reviews as needed.

B. U. S. Fish and Wildlife Service Roles and Responsibilities

The Service will:

- Serve regulatory role and partnership role in the RIP
 - Conduct Section 7 consultations as needed on new RIP activities or new actions coming in for coverage under the RIP
 - Conduct ESA permitting as needed for new RIP activities
 - Provide advice and recommendations during implementation of the RIP to facilitate meeting the goals of the RIP
- Assess annual sufficient progress
- Assist in developing annual work plan [and approve the plan – see question below]
- Assist in developing annual water operations plan [to be updated for consistency with RIP Action Plan]

C. Governance Procedures

The EC makes decisions regarding Program policy and management, including budgets, annual work plans, procedures, organizational structure, and membership. Decisions may be made only when a quorum of EC members is present, meaning that ___% or greater of EC members are present. EC meeting agendas will specify decision items, and EC members and their alternates will be provided with appropriate background material related to each voting decision identified on the agenda. Meeting procedures applicable to the EC are set forth in the By-laws. All designated members of the EC are allowed a single vote during decision-making procedures. The EC shall seek consensus in reaching decisions. In lieu of consensus, a decision may be deferred to the next scheduled EC meeting. At such meeting the decision may be approved by a super majority of the EC (75%) pursuant to the By-laws. If a non-consensus decision is made, the minority may submit a report to the EC for its administrative record. Certain decisions require unanimous consent, as noted in Section IX of the Program Document.

The federal action agencies reserve the right to ensure appropriate use of federal funds consistent with applicable laws and regulations. The other EC members reserve the right to ensure appropriate use of their respective funding contributions consistent with applicable laws, regulations, and authorities.

[Should certain decision items require the affirmative vote of the regulatory and funding agencies?]

V. Implementation of the RIP

A. Long Term Plan

[The nature and role of the LTP is to be described for purposes of this consultation; draft LTP to be revised pursuant to an initial task under the Action Plan].

The Long-Term Plan (LTP) is a background guidance document that provides an inventory describing beneficial activities that may be implemented by the RIP to meet its purposes and goals.

The RIP's LTP will be based on the framework of the silvery minnow and flycatcher recovery plans approved by the Service in 2010 and 2002, respectively. Addition of future activities into the LTP will incorporate new information on the hydrology of the MRG and on the life history of the species and will consider any revised recovery plan actions. The LTP will also incorporate principles of adaptive management pursuant to Section VII.

The RIP's LTP will consist of categories of RIP activities including: physical habitat restoration and management; water management; predator/non-native control; population augmentation/propagation (silvery minnow only); water quality management (silvery minnow only); research, monitoring, and adaptive management; policies and laws; public information and outreach; and Program management. Goals, actions, and tasks will be identified under each of the categories. The goals will specify desired outcomes for particular activities, and the tasks will describe specific activities that may be undertaken. The RIP's LTP will present a long-term schedule that will provide general guidance as a roadmap for the sequence and approximate timing of activities over an extended period of time. While the RIP participants do not currently agree upon the criteria in the Service's current species recovery plans, nor upon all activities and tasks in the draft LTP, the participants will seek to come to agreement on these activities and tasks so that the LTP can be viewed as a guidance document for the RIP Action Plan with confidence, recognizing that both the LTP and RIP Action Plan will undergo routine reviews and updates to ensure that implemented activities advance the accomplishment of the RIP's goals.

B. RIP Action Plan

The RIP's LTP will be used as a foundational document from which necessary beneficial activities will be drawn for the ongoing 5-year RIP Action Plan. The RIP Action Plan will identify the specific activities and tasks that will be implemented by the RIP on an ongoing basis.

The RIP Action Plan will be updated on an annual basis in a manner consistent with the RIP's purposes and goals. The annual update shall be completed each year so as to assist in annual work plan development, budget decisions, and activity implementation. The annual update of the RIP Action Plan shall consider new information from the adaptive management process, input from the Service regarding adjustments to the RIP Action Plan activities or metrics, and input from other RIP evaluations concerning improvements to or modification of the management activities. All updates or revisions to the RIP Action Plan shall be approved by the EC.

C. Annual Work Plan

The RIP Executive Director will develop an annual work plan for EC approval that tiers from the RIP Action Plan and reflects the specific activities and tasks to be implemented by the RIP during the year.

Thus, the RIP will implement activities identified in an Annual Work Plan that tiers from the RIP Action Plan. Those documents will draw from the LTP, which is based on the framework of the species recovery plans. The EC will update RIP documents in a manner consistent with the RIP's purposes and goals and in consideration of new information from the adaptive management process, input from the Service, and other RIP evaluations. These linkages are designed to assure that the RIP provides meaningful benefits to the species and continues to serve as the ESA compliance vehicle under the 2013 BO.

D. Annual Water Management Planning

[Under development: RIP water management plan; entity-specific Water Management Agreements?]

VI. Principles for ESA Compliance

A. Regulatory Certainty under the RIP

The signatories to the Cooperative Agreement intend that the inclusion of the RIP as the conservation measure in the new BO provides regulatory certainty under the ESA for the actions

referenced in Section III.C of this Program Document (covered actions). ESA compliance⁶ will be afforded through the [contemplated] programmatic BO which relies on implementation of the RIP. The RIP Action Plan includes activities from the LTP inventory for which there is commitment from the responsible entities and which are based on recovery actions from the silvery minnow and flycatcher recovery plans. Through implementation of the RIP Action Plan there are linkages to recovery actions that are expected to achieve progress toward recovery of the species.

Nothing herein shall limit the Service in fulfilling its independent statutory obligations under the ESA. Nor shall anything herein change the legal standards under Section 7 of the ESA applicable to the covered actions.

B. Sufficient Progress Determination

The Service will make an annual determination [in January?] of each year of whether the RIP is making sufficient progress towards recovery of listed species. This determination of sufficient progress [provided the RIP serves to minimize effects of the proposed water use and management actions] ensures continued ESA compliance for covered actions. The Service's annual assessment will consider sufficient progress factors⁷ that address the reduction of threats to the species and the status of the species and their habitats. These factors are broad categories that will be identified in the [contemplated] BO, and are intended to remain consistent as long as the [contemplated] BO remains in effect.

The RIP will adopt criteria (metrics) by which these factors are assessed. The metrics will address (1) implementation of tasks under the RIP designed to reduce threats to the species and improve their status, and (2) measurements of the status of the species. These metrics will be used by the Service as its criteria for sufficient progress determination. These metrics may change from year to year, though they remain supportive of the broad sufficient progress factors per the [contemplated] BO.

RIP activities tier from species recovery plans. Because the RIP will implement recovery activities identified in an annual work plan [approved by the Service] and reduction of threats to

⁶ "ESA compliance" will include: (1) the RIP serving as the conservation measure minimizing effects of actions evaluated in the [contemplated] programmatic BO to the listed species and critical habitat; (2) a finding that such actions are not likely to jeopardize listed species or destroy or adversely modify their critical habitat under Section 7 of the ESA [note: if the Service concludes that the Proposed Action including the conservation measure will cause jeopardy or adverse modification, then a reasonable and prudent alternative would be developed or the Proposed Action modified such that jeopardy and adverse modification are avoided]; and (3) the Incidental Take Statement supporting the [contemplated] programmatic BO providing the reasonable and prudent measures exempting those actions from ESA Section 9 take prohibitions. The composition of the measures will be identified during the [contemplated] formal Section 7 consultation.

⁷ These factors relate to the implementation of recovery activities and species status, population responses, captive population, threat reduction, flow, and habitat.

species recovery will be addressed, the RIP expects to achieve sufficient progress towards recovery.

If there are circumstances that undermine the RIP's ability to implement priority recovery activities on schedule, it may not be possible to fully meet all sufficient progress factors and metrics considered. A deficiency that is temporary or is limited to a single or few metrics may not result in a lack of overall progress toward recovery. If the metrics are not being met and the Service makes an initial determination that the RIP is not making sufficient progress, the Service will notify the EC and request its assistance in resolving the situation. If such attempts at resolution are unsuccessful, the Service may document the situation regarding the lack of sufficient progress and make a written request of the EC to take corrective action. It is fully intended that it will be feasible for the EC to take whatever corrective actions are needed to achieve sufficient progress and that resolution will occur. If the potential deficiency towards achieving progress to recovery is not resolved by the EC, it is recognized that the Service may conclude that sufficient progress toward recovery has not been maintained. Lack of sufficient progress may or may not trigger re-initiation of consultation. Failure of the RIP to continue to minimize the effects of the covered actions may trigger reinitiation of consultation related to the concerns at issue. The Service and federal action agencies agree to work expeditiously on any such re-initiation. The Service further agrees to consider the benefits from the potential continuation of contributions by RIP entities during any reinitiated consultations, including in the development of new reasonable and prudent alternatives or other measures in new or revised BO(s).

1. Reduction of Threats

The Service has identified threats to the species in its species listing rules and in the recovery plan for each species. Each recovery plan includes recovery actions that are intended to reduce or eliminate the threats. The RIP Action Plan draws from the LTP inventory which is based on the framework of the Service's silvery minnow and flycatcher recovery plans. The RIP Action Plan activities are designed, in part, to reduce the threats to the species identified in those documents. The Action Plan activities and associated metrics⁸ will be approved by the EC, and will be updated on an annual basis pursuant to the procedures in Section VI.D below. It is anticipated that reduction of threats will be accomplished based upon timely implementation of the recovery activities in the RIP Action Plan that link to addressing threats specified in Section IV. F of the flycatcher recovery plan and Chapter 5.0 of the silvery minnow recovery plan as validated by monitoring and modified through adaptive management.

2. Status of Species

a. Silvery Minnow

⁸ The metrics may be defined quantitatively or qualitatively. They will be defined in quantitative terms to the extent possible.

A priority activity under the RIP Action Plan is to develop a RIP monitoring program by the end of the second year of the RIP that builds upon existing population and genetics monitoring efforts. This priority activity recognizes that the current monitoring protocols are not sufficiently precise and sensitive to be endorsed by the RIP for purposes of measuring species response to specific management activities and progress toward recovery, given year-to-year population variability. Based upon the RIP monitoring program, the RIP will work to develop demographic metric(s) to assess population trends and progress toward recovery under the RIP. During the first two years of RIP implementation, the RIP will consider the results of ongoing monitoring in its implementation of activities and annual update of the RIP Action Plan, but will not use such data in a sufficient progress metric. Rather, the EC will work together during this period to determine an appropriate and scientifically supportable metric to assess the status of the species. Sufficient progress will be assessed during this interim period by reference to implementation of RIP activities including procedures to develop the metrics to assess species' status. It is recognized that annual sufficient progress toward recovery may be maintained notwithstanding a failure to meet one or more of the demographic metrics.

b. Flycatcher

[To be completed]

C. Annual RIP Report

The Executive Director will prepare a RIP Annual Progress Report by [December 1?] of each year summarizing the status of the metrics and implementation efforts under the RIP Action Plan, for approval by the EC. The Service will consider that report in its annual evaluation of sufficient progress towards recovery and will, as a member of the EC, identify changes, if any, it believes necessary as part of the annual updating process.

D. RIP Action Plan Updates

The RIP Action Plan will be updated on an annual basis in a manner consistent with the RIP's purposes and goals. The annual update shall be completed by [March 1?] of each year so as to assist in the annual work plan and budget decision and execution process for the RIP. The annual update of the RIP Action Plan shall consider new information from the adaptive management process, input from the Service regarding adjustments to the RIP Action Plan activities or metrics, and input from other RIP evaluations. All updates or revisions to the RIP Action Plan shall be approved by the EC. Subsequent annual work plans will tier off those Action Plans (see Section V.C).

E. Linkage to Programmatic Biological Opinion

The signatories intend that this RIP be implemented, following its evaluation during the programmatic ESA Section 7 consultation(s) on water operations, river maintenance, flood control, and related non-federal activities in the MRG, to avoid jeopardy to the listed species, to avoid adverse modification of their designated critical habitats, and to contribute to their conservation and ultimate recovery. It is anticipated that implementation of this RIP will be identified in the [contemplated] 2013 programmatic BO(s) and any subsequent opinions as a means to minimize the effects of the actions described in Section III.C for purposes of ESA compliance.

F. Reliance on the RIP for ESA Compliance

Section 7(a)(2) of the ESA requires federal agencies to ensure their actions are not likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat (see 50 C.F.R. 402.01). Jeopardy occurs when an action is reasonably expected, directly or indirectly, to diminish a species' numbers, reproduction, or distribution so that the likelihood of survival and recovery in the wild is appreciably reduced. This ESA requirement also includes any non-federal actions that have a federal nexus, where a federal agency funds, authorizes, or carries out the action in whole or in part. Section 9 of the ESA prohibits federal and non-federal parties subject to the jurisdiction of the United States from "taking" endangered species. In the MRG Basin, a variety of federal and non-federal activities related to water operations, water management and use, river maintenance, and flood control are subject to the ESA. The term "ESA Coverage" as used in this Program Document includes obtaining both an exemption from prohibitions for incidental take as well as assurance that actions proposed in the biological assessments are not likely to jeopardize listed species or destroy or adversely modify critical habitat under the [contemplated] BO.

Compliance with the [contemplated] BO will convey ESA coverage for included actions identified in the Proposed Actions put forth in separate biological assessments by the Corps and Reclamation. For any federal or non-federal party to receive ESA coverage through the BO(s), that party's actions must be assessed in the effects analysis of the biological assessments. For non-federal actions, there must also be a link to the appropriate responsible federal agency for providing that coverage (through a federal nexus such as participation in the RIP or as an activity interrelated or interdependent to the Proposed Action). [\[Note: Still need to reach agreement on the scope of activities/actions/operations that may affect the listed species/habitats and are to be included in the Proposed Action and evaluated in the consultation.\]](#)

Signatories may withdraw from the RIP upon a 90 day written notice to the other signatories and seek ESA compliance through other avenues. Signatories undertaking or proposing to undertake any activity that may affect MRG endangered species are not required to rely on the RIP for purposes of ESA compliance. Non-federal signatories' reliance on the RIP shall be voluntary. In

the event an entity chooses not to so rely, or chooses to discontinue reliance on the RIP in the future, the Service will not consider the RIP as the means for ESA compliance for such entity. An entity withdrawing from the RIP may trigger reinitiation of ESA Section 7(a)(2) consultation.

G. ESA Compliance Protocols for Individual Actions

1. Section 7 Consultation documentation procedures for covered actions

Actions described in the Reclamation and Corps biological assessments and addressed in the programmatic BO effects analysis and described in Section III.C of this Program Document will have been consulted on as part of that Section 7 consultation and may rely on the RIP as the means for ESA compliance, provided that the RIP as addressed in the BO adequately minimizes the effects of the actions, the proponent of the action signs the Cooperative Agreement with the Service if not already a signatory to the Cooperative Agreement, and the RIP is maintaining sufficient progress toward recovery as determined by the Service pursuant to the procedures in Section VI.A above

Federal action agencies may choose to request confirmation from the Service of coverage for such individual actions upon submission of documentation establishing that the action is within the scope of actions covered by the programmatic BO and that the proponent is a signatory to the Cooperative Agreement.

2. MRG Section 7 Consultation procedures for other actions

Actions not covered by the analysis in the programmatic BO may benefit from the action-specific consultation procedures described in Appendix__ [\[to be developed in concert with the Service's draft MRG Section 7 Guidelines for Consultation\]](#). These guidelines have been adopted by the EC and have been found by the Service to be consistent with the ESA and its implementing regulations at 50 C.F.R. Part 402 [\[pending\]](#). It is recognized that the determination of whether RIP activities provide RPAs and RPMs for such actions is solely the responsibility of the Service.

VII. Adaptive Management

A. Role of Adaptive Management

1. The RIP intends to use adaptive management as a structured and systematic approach for designing, implementing, monitoring and evaluating management actions to maximize learning about critical scientific questions and uncertainties that affect management decisions regarding the use of Program resources to achieve the RIP goals of (1) alleviating jeopardy to listed species and adverse modification of their critical habitats in

the MRG Program area, (2) conserving and contributing to the recovery of the listed species, and (3) protecting existing and future water uses.

2. Learning resulting from adaptive management activities and monitoring will be used as a tool to improve management decisions in order to more quickly and cost-effectively attain RIP objectives.

B. Science and Management Coordination Meeting

[frequency and purpose to be determined]

C. AMP-1 and Next Steps in Refining Adaptive Management

1. AMP-1 (Appendix __) provides a potential framework for the development of a scientifically defensible adaptive management design specific to the RIP. It also includes a set of principles for designing adaptive management actions and examples of management actions and appropriate monitoring plans. As an important priority, the RIP will use guidance in AMP-1 and the adaptive management experience of this and other programs to develop a formal Adaptive Management Plan, ideally within the first year of the RIP's existence. The RIP will identify specific management activities, monitoring, and research that will be used to evaluate and improve management decisions and will identify the decision-making framework for flexible water management and non-flow related activities that provide for meeting the RIP goals.
2. Adaptive management is not intended as a broad-based research program. In keeping with the purpose of adaptive management, only learning relevant to management decision-making will be sought through the adaptive management process.
3. Adaptive management will be implemented within the existing financial and hydrological resources available to the RIP.

VIII. Data and Peer Review

A. Transparency for Data and Science Used by the RIP

1. In order for the RIP to achieve its goals, it is imperative that best available scientific information be considered in management decision-making.
2. All RIP participants, including but not limited to Cooperative Agreement signatories and their representatives and contractors and their representatives, will abide by the Scientific Code of Conduct for the Middle Rio Grande Endangered Species Collaborative Program, which has been approved by the EC (Appendix __).

3. All contracts, grants, or other vehicles pursuant to which scientific activities may be conducted on behalf of the RIP shall require that all data collected in carrying out the scientific activities be made available to the RIP in a form accessible and usable by the RIP concurrent with the submission of the deliverables.
4. All data used in management or sufficient progress decisions shall be made available to the RIP upon request in a form accessible and usable by the RIP.
5. The RIP will develop policies and procedures by which data is collected, stored, and made available for the RIP.

B. Peer Review Process

1. The RIP recognizes the importance of peer review to a scientifically-based resource management program. The EC may submit any RIP activity or management decision option for peer review.
2. The EC will adopt formal written Internal Review Procedures (Appendix __) [place holder].
3. The EC will also adopt a formal External Peer Review Process for the RIP (Appendix __) [placeholder]. In the interim, the RIP will follow the Interim External Peer Review Process set forth in Appendix__.

IX. Program Modification

A. Amendment of the RIP Program Document

1. The RIP Program Document has been approved and adopted by all of the signatories to the Cooperative Agreement [pending]. Modifications to the RIP Program Document may be made by following the RIP governance and decision-making protocol, as referenced in section IV.C, without requiring modification of the Cooperative Agreement.
2. Notwithstanding subsection (1) above, the following changes to the RIP Program Document will require unanimous consent of the EC members:
 - a. A change to provisions which recognize that the RIP may not impair state water rights of individuals or entities or federal reserved water rights of individuals and entities; federal or other water rights of Indian nations and Indian individuals, or Indian trust assets; San Juan-Chama Project contractual rights; or the State of New Mexico's ability to comply with Rio Grande Compact delivery obligations.

Also a change to the provision of the RIP recognizing that water to be acquired or otherwise made available must be from a willing donor, seller or lessor.

- b. A change to Section VI of the Program Document regarding the principles governing ESA compliance and regulatory predictability under the RIP.

XI. RIP Budget Guiding Principles

It is anticipated that funding to the RIP will be provided by entities to address ESA covered actions. Funding provided can be in the form of cash or in-kind contributions. Reclamation’s authorizing language requires non-federal entities to provide a 25 percent cost share, which can be in the form of in-kind contributions on all Collaborative Program activities, except Reclamation’s water acquisitions and administrative expenses. Historical funding levels from the federal and non-federal entities are found in Table 1. In support of proposed budget categories and levels of funding in Table 3, a breakdown of Reclamation’s historical funding by category is found in Table 2.

Table 1 – Historical MRG Program Funding Levels

Year	AMOUNT		
	Reclamation	USACE	Non-Fed
2001	\$ 5,688,000	NA	\$ 588,965.02
2002	\$ 16,000,000	NA	\$ 676,315.23
2003	\$ 13,467,000	NA	\$ 2,119,560.27
2004	\$ 10,070,671	NA	\$ 1,112,419.25
2005	\$ 10,185,020	NA	\$ 1,361,120.11
2006	\$ 12,619,000	NA	\$ 1,662,484.28
2007	\$ 14,189,580	NA	\$ 2,133,267.22
2008	\$ 16,010,000	NA	\$ 2,353,754.38
2009	\$ 12,769,000	\$ 196,000.00	\$ 1,451,655.77
2010	\$ 10,687,000	\$ 2,981,686.28	\$ 1,292,156.34
2011	\$ 11,252,000	\$ 2,469,979.04	\$ 111,605.00
Total	\$ 132,937,271	\$ 5,647,665	\$ 14,863,303
Average	\$ 12,085,206	\$ 1,882,555	\$ 1,351,209

Table 2 – Reclamation’s Collaborative Program Funding Categories and Levels

Historical Budget Categories	Percent of Total Budget				Average
	2008	2009	2010	2011	
Program Management, Assessment and Outreach	16%	13%	13%	11%	13%
Activities Supporting Development of a new BA/BiOp	0%	11%	7%	8%	9%
Captive Propagation	8%	15%	16%	10%	12%
Habitat Improvement (Construction, Planning and Fish Passage)	22%	12%	14%	13%	15%
Other Monitoring and Research and Rescue/Salvage	16%	12%	6%	11%	11%
Program Technical Support	0%	0%	2%	2%	1%
Water Operations and Management	37%	35%	41%	45%	40%
Water Quality	1%	2%	1%	0%	1%

The following budget categories and spending percentages are intended to assist the Executive Director in preparing the annual work plan and budget. The approximate breakdown of funding by historical Collaborative Program activity is provided as a starting point for budget development based on the foreseeable needs of the RIP and not as hard targets for spending. It is anticipated that additional RIP participants may or may not affect these budget categories and levels of funding.

Table 3 – RIP Budget Categories and Funding

Budget Category	Percent of Total Budget	Range of Historical Funding
Program Administration and Outreach ^{a*}		
Adaptive Management Assessments		
Species Management, surveys, monitoring, augmentation, captive propagation & genetic integrity		
Flow protection, management, augmentation, and monitoring		
Habitat Construction and Monitoring		
Independent Science Panel & Peer Review		

^{a*} Program Administration includes: Executive Director, Science Coordinator, other administrative staff, technical staff, website, public outreach, contracting support, facilitation, note taking, annual report preparation, etc.

Potential Appendices (in no particular order)

- RIP Action Plan (under development)
- MRG Section 7 Guidelines for Consultation (under development)
- Procedure for other actions to be included in the RIP (to be developed if necessary)
- Scientific Code of Conduct for the Middle Rio Grande Endangered Species Collaborative Program
- RIP External Peer Review Process [place holder]
- RIP Internal Review Procedures [place holder]
- Adaptive Management Plan Version 1 (AMP-1)
- Cooperative Agreement (under development)
- Governance Protocols (RIP By-laws [place holder]; RIP Advisory Committee Charters [place holder])
- New MOA [place holder, if needed for funding]
- Federal Authorizations

DRAFT

**ESA Section 7 Guidelines for Consultation
on Water Management Actions Affecting Federally Listed Species in the
Middle Rio Grande, New Mexico**

Introduction

The Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*) includes responsibilities in section 7 for interagency consultation on actions that may affect ESA-listed species and their designated critical habitat. The roles and responsibilities of Federal agencies and other parties during section 7 consultation are also contained in the implementing regulations at 50 CFR 402. This document – *ESA Section 7 Guidelines for Consultation on Water Management Actions Affecting Federally Listed Species in the Middle Rio Grande, New Mexico* (Guidelines) – is provided to articulate the approach to ESA section 7 consultation in the Middle Rio Grande basin (MRG) using a recovery implementation program (RIP). These Guidelines do not alter any of the requirements, responsibilities, and procedures found in the existing statute and regulations; rather, this document is intended to explain how ESA section 7 will be implemented consistent with those existing requirements, responsibilities, and procedures. The biological opinion issued for covered water use and management operations and river maintenance actions (water management biological opinion) will define the conditions of ESA compliance. These guidelines are intended to lay out processes and information to establish a common understanding of how ESA compliance and RIP participation are related but it is important to note that these guidelines are not legally enforceable.

Applicability

The U.S. Bureau of Reclamation and the U.S. Army Corps of Engineers (together, the Federal action agencies) are reinitiating formal ESA consultation on Federal water operations, river maintenance, flood control, and related non-Federal activities in the MRG basin¹. In conjunction with this formal consultation, the Middle Rio Grande Endangered Species Collaborative Program (Collaborative Program) is intending to establish and implement a RIP that would identify and implement recovery actions or activities (RIP activities) that assist in the recovery of ESA-listed species and facilitate compliance with the ESA for existing and new water management² actions subject to section 7 consultation in the Collaborative Program area. These Guidelines are provided to articulate the approach to ESA section 7 consultation in the MRG using a RIP (see *RIP Approach to ESA Compliance in the MRG* below). Accordingly, once agreed upon, these Guidelines apply to those parties involved with the programmatic³ ESA section 7 consultation on

¹ This refers to reinitiation of the 2003 *Biological and Conference Opinions on the Effects of the Bureau's Water and River Maintenance Operations, Army Corps of Engineers' Flood Control Operation, and Related Non-Federal Actions on the Middle Rio Grande* (2003 BO).

² The phrase "water management" in these Guidelines is intended to encompass those activities described in the Biological Assessments provided by the Federal action agencies in connection with reinitiation of the 2003 BO. This includes water operations, diversion, storage, and use; and management projects; flood control; river maintenance; and other activities affecting flow quantity or timing.

³ The biological opinion may be referred to as a programmatic biological opinion because the river maintenance

water management in the MRG and the RIP effort, including the Federal action agencies, signatories of the RIP Cooperative Agreement, any Applicants⁴ involved, and the U.S. Fish and Wildlife Service (Service). These Guidelines articulate (1) the RIP approach to ESA compliance in the MRG that applies to the new water management biological opinion, (2) procedures for any reinitiation of that new biological opinion (50 CFR 402.16), and (3) procedures for future biological opinions and coverage of any additional future actions through the RIP approach once the programmatic water management biological opinion is in place.

Recovery Implementation Program (RIP) Approach to ESA Compliance in the MRG for actions covered by the Water Management Biological Opinion

ESA compliance in the MRG through section 7 consultation with the application of these Guidelines provides for a unified approach to species recovery contributions and facilitates compliance with the ESA for water management actions in the basin. This is achieved through a RIP that implements activities to support progress toward recovery of the species. The water management biological opinion provides ESA compliance for actions described in the biological assessments including RIP actions. The RIP may be relied upon to provide ESA coverage for those water management actions provided the RIP adequately minimize the effects of such water management actions. The RIP includes development of the following components by the Federal action agencies and the Executive Committee:

- 1) A Cooperative Agreement to establish and implement a RIP,
- 2) a RIP Document that describes implementation of the RIP,
- 3) a Long Term Plan (LTP), which is based on the framework of the Service's species recovery plans and contains activities to benefit ESA-listed species and their habitat,
- 4) a RIP Action Plan that further focuses and prioritizes near term RIP activities,
- 5) Annual Work Plans identifying specific activities from the LTP to be implemented each year,
- 6) annual water operations plans,
- 7) an Adaptive Management Plan to guide scientific hypothesis-testing and provide a framework for appropriate adjustments to future management.

The ability of the Executive Committee to facilitate ESA compliance through a RIP approach is contingent on: 1) including activities in the Long Term Plan (LTP), RIP Action Plan, Annual Work Plans, and annual water operations plans that assist in the recovery of the species, 2) funding the implementation of these activities, 3) implementing activities in accordance with the schedule in the LTP and RIP Action Plan, as periodically amended, 4) monitoring implementation and performance of all RIP activities pursuant to criteria specified in the RIP documents and water management biological opinion, and 5) reporting results to the Service on an annual basis.

The Service will consider the adequacy of RIP activities in avoiding jeopardy to listed species, avoiding destruction or adverse modification of designated critical habitat, and contributing to

program and the recovery implementation program are currently expected to be within the scope of actions proposed by one or more of the action agencies.

⁴ The term 'Applicant' may refer to any non-Federal party with an action covered through this process.

Comment [DF1]: References to LTP, Action Plan, etc. may need to be adjusted depending on what documents and terminology are ultimately used.

species recovery. The determination of whether the RIP activities minimize effects of water management actions covered in the water management biological opinion is solely the responsibility of the Service.

Additional Options for ESA Section 7 Consultation in the MRG

It is recognized that Federal agencies and Applicant(s) may wish enter into section 7 consultation for various actions independent of the water management biological opinion and not rely on RIP activities to facilitate their ESA coverage. In addition, Federal agencies and Applicant(s) may be able to modify their actions to eliminate or minimize adverse effects, avoid jeopardy, avoid destruction or adverse modification of critical habitat, and avoid incidental take and by so doing, remove the need for the RIP activities to facilitate ESA coverage. Other water management and river maintenance activities that were proposed in the past and may be ongoing already have ESA compliance through previously-issued biological opinions for those activities independent of the current reinitiation and are part of the environmental baseline. It is also recognized that additional, future actions may occur in the MRG that are not covered by the current reinitiation of consultation on MRG water management. These future actions may involve subsequent section 7 consultation for ESA compliance and could be eligible or appropriate for coverage through the approach described in these Guidelines (see *ESA Coverage of Additional Future Actions through the Program* below).

Section 7 Consultation Process

As part of the water management consultation, the Service considers the effects of the actions, including conservation measures, described in the Federal action agencies' Biological Assessments on ESA-listed species and their designated critical habitats. The Service works with the Federal action agency(-ies) and Applicant(s) during consultation to attempt to identify mutually agreeable opportunities to minimize impacts. It is recognized that (1) it is the responsibility of the Federal action agency(-ies) to define the action(s) subject to consultation and to determine their effects on listed species and critical habitat; and (2) it is the Service's responsibility to evaluate these effects of the action(s) and make the determination as to whether the action(s) are likely to jeopardize listed species, destroy or adversely modify critical habitat, and whether incidental take will occur.

If the Service concludes these actions, including any conservation measures, will not likely jeopardize listed species, or destroy or adversely modify critical habitat, then development of an RPA is not necessary. If the Service concludes these actions are likely to jeopardize listed species, or destroy or adversely modify critical habitat, then development of an RPA is necessary to be able to provide coverage for those actions under the water management biological opinion⁵. RPMs are also developed to minimize any incidental take that results from the actions included in the consultation, and Conservation Recommendations are provided to facilitate compliance by Federal agencies with ESA section 7(a)(1). Conservation measures, the RPA, RPMs, and Conservation Recommendations are defined below and described in terms of their connection to the RIP approach.

⁵ Please note that the Service recommends that the RIP and any other conservation measures be included in the Proposed Action to minimize effects of water management actions.

Conservation Measures

Conservation measures are actions to benefit or promote the recovery of listed species that are included by the Federal agency as an integral part of the proposed action. These actions will be taken by the Federal agency or applicant, and serve to minimize or compensate for project effects on the species under review. It is anticipated that the RIP will serve as a conservation measure.

RPAs

As defined in 50 CFR 402.02, RPAs are alternative actions that:

- 1) the Service believes will avoid the likelihood of jeopardy or adverse modification;
- 2) can be implemented in a manner consistent with the intended purpose of the action;
- 3) can be implemented in a manner consistent with the scope of the action agency's legal authority and jurisdiction; and
- 4) are economically and technologically feasible.

If an RPA is necessary to avoid jeopardy to listed species and destruction or adverse modification of designated critical habitat, the Federal action agencies and Applicant(s) will develop options for an RPA with technical assistance from the Service. In reviewing the RPA, the Service will consider the proposed RIP activities. If the RPA is adopted by the Federal action agencies, and if any incidental take due to an RPA is addressed in the water management biological opinion, then there is no further section 7 consultation required prior to implementation of the RPA. If there will be incidental take due to elements of an RPA and that take is not addressed in the water management biological opinion, those actions would undergo subsequent section 7 consultation to exempt that take.

Incidental Take and RPMs

Section 9 of the ESA and Federal regulation pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the ESA provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

RPMs will be included in the water management biological opinion as measures the Service believes are necessary or appropriate to minimize the impacts of incidental take resulting from the actions included in the consultation (50 CFR 402.02).

The Service will make the final determinations in the water management biological opinion on (1) adequacy of an RPA to alleviate jeopardy to listed species and destruction or adverse modification to critical habitat, as well as on (2) adequacy of the RPMs that minimize incidental take. This determination is based on the following factors:

- Environmental baseline
- Status of species, their populations, and critical habitat in the Middle Rio Grande Program area
- Adequacy of flows
- Magnitude of the impact of the action(s) under consultation
- Implementation of Program activities that will result in a measurable positive population response over time, a measurable improvement in habitat quantity and quality for the listed species, and provision of and legal protection of flows needed to meet life history requirements or provide for recovery

During the programmatic consultation, the Service will determine if implementation of the RIP (including activities in the LTP, RIP action plan, annual work plan framework, annual water operations framework, Adaptive Management plan, and any other associated documentation) will be adequate to minimize impacts of the water management actions covered in the programmatic consultation and/or to serve as the RPA and RPMs. In this determination, RIP activities that are underway or planned may be included. The Service has the ultimate responsibility for determining whether the RIP activities minimize and continue to minimize impacts of the covered actions and/or whether the RIP activities provide the necessary content of the RPA and RPMs. If the Service finds they do not, the Service will identify activity(-ies) that it believes must also be included and implemented to maintain ESA compliance and/or to provide the RPA and RPMs. This occurs during the programmatic consultation as well as during subsequent years as part of the Service's annual review and assessment of the RIP (see *Annual Service Review and Assessment of Program* below).

Conservation Recommendations

Section 7(a)(1) of the ESA directs Federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of listed species. Conservation Recommendations are provided by the Service in the biological opinion as discretionary agency activities that would help Federal agencies meet their 7(a)(1) requirements, and can include activities that would further minimize or avoid adverse effects of an action on listed species or their designated critical habitat, help implement recovery plans, or obtain scientific or operational information. In identifying Conservation Recommendations, the Service will consider other ongoing or future activities that benefit the listed species in the action area.

Annual Service Review and Assessment of Program

As part of the RIP approach to ESA coverage for MRG water management actions, the Service will conduct a yearly assessment and determine whether RIP implementation is making sufficient progress toward recovery of the species. This provides for the use of adaptive management, where hypothesis-testing and learning over time can allow for adjustment of RIP and water management activities as appropriate and without automatically requiring reinitiation of consultation.

Comment [UF&WS2]: This section still needs updating and will be revisited following further EC discussions.

The evaluation will consider, in the aggregate, many different factors and dozens of different measures. However, if there are circumstances that undermine the RIPs ability to implement priority activities on schedule, it may not be possible to fully meet all factors and measures considered. In fact, success surrounding the various measures is expected to vary from year to year but the trend over time will be upward. In any given year as soon as the Service has any concern about the RIP or indication of a deficiency in any area, the Service will notify the EC and request its assistance in resolving the situation. If such attempts at resolution are unsuccessful, the Service may document the situation and make a written request of the EC. If the situation remains unresolved, it is recognized that progress towards recovery may fall short and the Service may ultimately conclude that sufficient progress has not been achieved.

In its annual assessment, the Service will identify any concerns and areas in need of adjustment for implementing the RIP to maintain ESA compliance. The Service will provide an annual written “Sufficient Progress Report” to the Federal action agencies and the Executive Committee that provides the annual assessment and recommended adjustments.

The annual Service assessment will consider the status of the listed species and critical habitat, changes in the environmental baseline, and RIP accomplishments and shortcomings with respect to activities identified and scheduled for implementation in the RIP Action Plan and annual work plan, and the effectiveness of those activities. The assessment will include review of the prior year’s implementation of the annual work plan (tiered from the LTP and RIP Action Plan); review of the prior year’s annual water operations; and review of the end-of-year results including implementation, monitoring, and scientific research. Factors that the Service will consider during the annual assessment include the following:

Comment [DF3]: This section and the bulleted factors need further discussion to identify specific agreed upon metrics by which the Service will evaluate sufficient progress. This is needed for the RIP to afford a reasonable degree of predictability of ESA compliance for covered actions.

Factors Related to Species Status

- Species status – including genetic status – in the geographic area considered within the scope of the Collaborative Program. [Includes consideration of declining, stable, increasing trends, progress toward meeting recovery plan targets, and for RGSM, achievements towards self-sustaining populations]
- Measurable positive population responses over time that meet some threshold.
 - Positive population responses – taking into account (1) the annual ability of the RGSM population to fluctuate but still maintain a positive upward trend, (2) the effects of the augmentation program on RGSM population response, and (3) the distribution of the flycatcher population.
 - Meeting some threshold – taking into account (1) the thresholds identified in the species recovery plans, (2) the need for some interim thresholds, and (3) the recognition that the Collaborative Program takes actions that will prevent extinction and contribute to recovery but the composite of those actions will not culminate in down-listing or de-listing of either species (note that this could change if the Collaborative Program includes actions to achieve a self-sustaining population of RGSM in Big Bend and/or an additional reach).
- Appropriate number of RGSM in captive facilities.
- Threats to species reduced or eliminated. [The threats are identified in the listing rule (50 CFR Part 17), recovery plans, and new threats are identified in the Service database.]

Factors Related to Habitat and River Flows

- Measurable improvement in habitat quantity and quality for both species, taking into account:
 - the net additional habitat that recognizes the phases of planning, design, construction, and maintenance.
 - the dynamic nature of flycatcher habitat.
- Adequacy of flows provided for both species and/or legal protection of those flows needed to meet life history requirements and provide for recovery of the species.

Additional detail on the factors or specific measures by which the Service will evaluate progress of the RIP will be developed with input by RIP signatories prior to establishment of the RIP. It is expected that the Executive Committee will work with the Service to identify the specific factors and measures by which the Service's progress determination is made. Final decisions regarding sufficient progress factors will be made by the Service. For any concerns during the annual assessment that may affect continued ESA coverage, the Service will describe adjustments needed to address these concerns, including any needed changes to the LTP or RIP Action Plan, the next year's annual work plan, and the next year's water operations plan. In the event the Service concludes some new, beneficial activity not listed in the existing LTP or associated documents is necessary to have the RIP maintain ESA coverage for the covered actions, the Service will notify the Federal action agency(-ies) and Applicant(s), and with their consent, will inform the Executive Committee in writing to identify the additional activity(-ies) needed. The Executive Committee will have an opportunity to review the additional activity(-ies) needed and incorporate them into the LTP and associated documents (see *Annual Update of the LTP* below). Conversely, in the event the Service annual assessment determines that an existing activity listed in the LTP or associated documents is no longer necessary or is not contributing to the RIP and ESA compliance, this will be identified in writing to the Federal action agency(-ies), Applicant(s), and the Executive Committee for consideration. For example, in certain situations, recovery activities that were included in the LTP or RIP Action Plan may no longer be effective or appropriate. These situations would be evaluated by the Service during the annual assessment and may include, but are not limited to: (a) critical deadlines for specified RIP activities are missed, (b) specified RIP activities are determined to be infeasible; (c) significant new information about the needs or population status of the species becomes available; or (d) no positive response by the species to Program activities is observed.

In addition to the annual assessment, the Service would notify the Federal action agencies, Applicant(s), and the Executive Committee if at any time the Service concludes the following: (a) that the RIP is not implementing Program activities needed for recovery progress, (b) that the RIP is not implementing those activities on schedule, or (c) that a significant change has occurred in the status of the species that may impact the ability of the RIP to provide ESA coverage. In this notification, the Service would identify the corrective action needed to minimize adverse effects of covered actions.

Annual Update of the LTP and RIP Action Plan

Revisions to the LTP, the RIP Action Plan and preparation of the annual work plans (tiered off the LTP) may include the insertion of new RIP activities and modification of existing or planned

activities needed to assist recovery, as well as updates to the scheduled implementation of those activities. These revisions will be conducted by the RIP and occur following the Service's annual review (see *Annual Service Review and Assessment of Program* above). RIP signatories will make recommendations on updates to the LTP, RIP Action Plan and annual work plan. The Executive Committee will approve these updates annually. The updates will consider activities and other modifications identified by the Service. The Federal action agencies in conjunction with the Executive Committee will modify timing, funding, and priorities in the LTP and RIP Action Plan to remain in compliance with the water management biological opinion.

Reinitiation of Consultation

The preceding section addressed the programmatic section 7 consultation using a RIP approach for ESA coverage of water management actions in the MRG. The process of adaptive management with annual assessment by the Service allows for modification of RIP activities and water operations over time and confirmation by the Service that the RIP is maintaining ESA compliance, without automatically requiring reinitiation of consultation. However, once this consultation on MRG water management is concluded and the water management biological opinion is issued, reinitiation may become necessary in the future if certain triggers are met. All biological opinions issued by the Service contain reinitiation triggers that define when the applicable Federal agency(-ies) will reinitiate consultation. This section describes the process of reinitiation of consultation on water management actions for which the RIP is serving to minimize impacts to listed species.

As provided in 50 CFR 402.16, reinitiation of consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and one or more of the following occur:

- 1) The amount or extent of taking specified in the incidental take statement is exceeded.
- 2) New information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered.
- 3) The identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion.
- 4) A new species is listed or critical habitat designated that may be affected by the identified action.

Additional reinitiation triggers may apply as appropriate, and would be developed by the Service in consultation with the Federal action agencies and any applicants and described in the water management biological opinion. The biological opinion will also describe adaptive management procedures for which reinitiation will not be required, upon concurrence by the Service that ESA compliance is maintained. These include revisions to the RIP Document, the LTP, the RIP Action Plan, the Annual Work Plan, and other components of the RIP.

If it is determined that reinitiation of consultation over the water management biological opinion may be necessary, the Service or the Federal action agency(-ies) would provide such information to the Executive Committee. The Executive Committee will attempt to identify RIP activities that can be implemented to avoid the need for reinitiation.

If reinitiation becomes necessary because of any of the triggers listed below, the following courses of action would be taken while reinitiation of consultation is occurring, as long as they do not slow or delay reinitiation of consultation:

1) If the amount or extent of taking specified in the incidental take statement is exceeded:

The assessment and determination of whether incidental take has been exceeded is the responsibility of the Service in discussion with the Federal action agency(-ies). If additional actions are needed, the Service will identify those actions and provide the Executive Committee with the opportunity to incorporate them into the LTP, RIP Action Plan, and/or Annual Work Plan and implement those actions.

2) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered:

The Service will notify the Federal action agency(-ies) and the RIP's Executive Committee when such a situation is foreseeable or actually occurs. If the Federal action agency(-ies) or the Executive Committee becomes aware of such a situation before the Service, the Federal action agency(-ies) or Executive Committee will notify the Service. Outside interests may also notify the Service of this new information. The Federal action agency(-ies) will assess potential impacts to the species and critical habitat; however, the final conclusion regarding the extent of any impacts to endangered species lies with the Service. The action agency(-ies) and Executive Committee will work with the Service to evaluate the situation and develop the most appropriate response to revise or restore the RIP activities such as adjusting long-term and short-term implementation plans, developing a supplemental recovery action for incorporation into the LTP, shortening the timeframe on other RIP activities, etc, so that the action remains in compliance.

If RIP activities can no longer serve to minimize effects of the action, during reinitiation the Federal action agencies and Applicant(s), with technical assistance from the Service, will develop options outside the RIP for ESA compliance needs.

3) If the identified action that has been consulted on is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion:

If an action is modified in such a manner so as to require reinitiation of consultation, the Service, with assistance from the Federal action agencies and Applicant(s), will identify additional or different items from the LTP to serve as the minimization measure for the action where possible.

4) If a new species is listed or critical habitat designated that may be affected by the identified action:

The Service will make recommendations to the Federal action agencies and the Executive Committee for amendments to the LTP to avoid the likelihood of jeopardy and destruction or adverse modification of critical habitat, as well as recommendations to minimize take for any new species listed as threatened or endangered. The Executive Committee will then decide

whether to make the amendments to the LTP. If the amendments are made, the Service will consider the adequacy of the amended LTP to serve as the minimization measure during reinitiation. If the RIP is not amended by the Executive Committee to address the new species or critical habitat, then during reinitiation of consultation the Federal action agency(-ies) and Applicant(s) would work to develop content for alternate minimization measures regarding impacts to the new species or new critical habitat.

[Guidance may include potential paragraph addressing coverage for individual actions addressed by category (if any) in water management biological opinion.]

ESA Coverage of Additional Future Actions through the Program

These Guidelines can also apply to any future, additional water management actions within the action area that are not covered by the water management biological opinion but seek to use the RIP in ESA consultation as content for conservation measures, RPAs or RPMs. Recovery activities may facilitate ESA compliance for additional individual actions or programmatic related actions that undergo separate ESA section 7 consultation. These Guidelines may be modified as needed for accommodating future consultations into this process (see *Modification of Guidelines* below).

Recovery actions may serve as conservation measures to minimize impacts of new actions and may provide the RPA and RPMs for impacts of more than one action. For new actions, any RPA and RPMs must be implemented before the impact from the action occurs. If the Service finds during a separate section 7 consultation that RIP activities are sufficient to facilitate ESA compliance for that new water management action, the biological opinion for that new action will identify those conservation measures, if any, and identify the RIP activities that provide the content for an RPA and RPMs. If the Service finds that RIP activities are not able to offset impacts of the new action and/or are not able to provide content for the RPA and RPMs related to the new water management action, the biological opinion for this new action will be written to identify which activity(-ies) need to be incorporated into the LTP, the RIP Action Plan, and/or the Annual Work Plan and implemented to provide coverage for the new action. If this occurs, the Service (with the consent of the Federal action agency(-ies) and Applicant(s)) will notify the RIP's Executive Committee in writing, identify the additional beneficial activity needed, and provide the Executive Committee an opportunity to review the needed activity and incorporate the activity into the LTP, the RIP Action Plan and/or the Annual Work Plan. If the Executive Committee does not incorporate the new activity, the Service will work with the Federal agency(-ies) and Applicant(s) for that new water management action to ensure compliance with ESA section 7 through means other than the RIP. Coordination with the Executive Committee will not alter the timeframe for consultation.

Because water in the MRG is fully appropriated, when considering new water-related management actions, only water projects or actions that result in no new net depletions may be considered within the context of the RIP and receive ESA compliance following these Guidelines. The Service will also consider whether the anticipated success of the RIP in contributing toward ESA species recovery is compromised as a result of a new water management action under consultation.

Modification of Guidelines

Once adopted by the Service, the Federal action agencies, and the Executive Committee, these Guidelines describe how ESA compliance will be facilitated in the MRG through a RIP approach. Experience may dictate a need to modify these Guidelines in the future.

A review of these Guidelines may be initiated by the Federal action agencies, the RIP's Executive Committee, or the Service if the need becomes apparent. Suggested modifications to these Guidelines will be provided to the Service and the Federal action agencies for review and approval.



Middle Rio Grande
Collaborative
Recovery
Implementation
Program (RIP)

Action Plan

Activities, Schedule, and Budget Projections for
Middle Rio Grande Endangered Species Recovery
Implementation Program

June 21, 2012

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Preface

The Middle Rio Grande ~~Collaborative~~ Recovery Implementation Program (~~MRGRIP or Program~~RIP) is established through the following formal documents: the RIP Document, this RIP Action Plan, and a Cooperative Agreement, utilizes three main plans to plan and implement activities to benefit the listed endangered species: the Long Term Plan (LTP); the Action Plan; and the Annual Work Plan.

The LTP provides a list of activities, a proposed schedule of time, and estimated costs to implement and complete those activities, and designation of responsible parties for activities through the year 2030. The LTP The Long Term Plan (LTP) provides comprehensive description of Program activities, schedules, and responsibilities to the year 2030. It is a roadmap for the actions and activities anticipated for the MRGRIP to meet its purposes and goals. lists the criteria and metrics (including interim and short term) that will be used to measure sufficient progress, which will ensure ongoing compliance with the ESA for covered actions.

The Action Plan tiers off the ~~2013 Long Term Plan~~LTP and includes the activities that are projected to be implemented during the first 5 years after the RIP is establishednecessary to establish a recovery implementation program and transition the Collaborative Program into the MRGRIP. The Action Plan provides for system management so that adaptive management principles can be applied within the Middle Rio Grande. and to necessary to establish a recovery implementation program and transition the Middle Rio Grande Endangered Species Collaborative Program (Collaborative Program) into the MRGRIP. Implementation of (The Action Plan will proceed when appropriate according to provides for system management so that adaptive management principles can be applied within the Mmiddle Rio Grande (MRG). The Action Plan has a 5-year window of planning activities and is expected to be the document that is updated on an annual or biannual basis.

<Note: Gray shading indicates BOR edit that is inconsistent with F&W edit previously made>

The Annual Work Plan is the list of activities, schedule, and budget that will be funded during the upcoming federal fiscal year by the MRGRIP. It will take all the contributions, federal and nonfederal, into consideration.

In addition to the three MRGRIP plans, federal and non-federal water management entity Program members have will established a Water Management Plan (WMP) that includes the suite of water management tools available to assist the Program in meeting its species goals. The WMP is referenced in the LTP and the Action Plan.

Comment [PR31]: We had discussed deleting this sentence as an artifact that in fact was describing the Action Plan (which at one time would have been renamed the “Long Term Plan”)

Comment [PR32]: Suggested revision to eliminate superfluous language.

Comment [PR33]: Suggested revision to “soften” adaptive management language as discussed at June 15th meeting

Comment [JM4]: Need to add references in the LTP

Acronyms

AM – Adaptive Management

AMP – Adaptive Management Plan

Collaborative Program – Middle Rio Grande Endangered Species Collaborative Program

ESA – The Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*)

LTP – Long-Term Plan

MRGRIP – Middle Rio Grande Collaborative Recovery Implementation Program

Service – U.S. Fish and Wildlife Service

DRAFT

Definitions <Move to an appendix>

Adaptive Management (AM) – A structured, iterative and analytical process for designing and implementing management actions to maximize learning about critical uncertainties that affect decisions, while simultaneously striving to meet multiple management objectives. It involves synthesizing existing knowledge and identifying critical uncertainties, developing hypotheses related to those critical uncertainties, exploring alternative management actions to test those hypotheses, making explicit predictions of their outcomes including level of risk involved with implementation, selecting one or more actions to implement, conducting monitoring and research to see if the actual outcomes match those predicted, and then using these results to learn and adjust future management and policy.

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Flycatcher – The shortened name given in this document to the southwestern willow flycatcher (*Empidonax traillii extimus*).

Larvae – The newly-hatched form of a fish in which the individual lacks a functional mouth and fully developed fins, and it continues to feed off a yolk-sac. Larval fish are often very small (5-15 mm) and bear little resemblance to adults. Approximately 4 to 7 days depending on temperature.

Minnow – The shortened name given in this document to the Rio Grande silvery minnow (*Hybognathus amarus*).

Population Viability Analysis (PVA) – One of the most important uses of population viability models comes from modern conservation biology, which uses these models to determine whether a population is in danger of extinction or recovery probability. PVA uses population-specific time-series and life history data to construct a probabilistic population model which includes provisions for uncertainty about environmental drivers, uncertainty about chance demographic processes, and uncertainty about parameters of the model. PVA's – This is called population viability analysis (PVA) and consists of demographic and possibly genetic models that are appropriate means for predicting the effects of a proposed action on species of concern in ESA consultations and are used to make decisions on how to manage populations of threatened or endangered species. The National Research Council has called population viability analysis “the cornerstone, the obligatory tool by which recovery objectives and criteria [for endangered species] are identified.”

Sufficient Progress Metric – Across concept used in different disciplines, a measure of to gauge the satisfactory ongoing performance of a program in accordance with a plan or established set of standards. The concept Determinations of sufficient progress have recently been increasingly adopted utilized by the U.S. Department of the Interior as an a

Comment [PR35]: The original “adopted” implies a formal rulemaking process or issuance of policy guidance that have not occurred.

~~method for assessing the of accomplishments and shortcomings of a conservation program that is being used as a “reasonable and prudent alternative,” a reasonable and prudent measure,” or as a “conservation measure” as in order to achieve and maintain compliance with the Endangered Species Act (ESA).~~ In a recovery implementation program, ~~Sufficient progress metrics in this context are~~ generally a series of factors or criteria used by the program and the U.S. Fish and Wildlife Service to evaluate whether the program is performing satisfactorily to promote progress toward recovery and can continue to receive allow coverage for related proposed actions under Section 7 (jeopardy) or Sections 9 (take) of the ESA.

Comment [PR36]: Suggested revision, necessary for context.

Viability (genetic) – To be genetically viable, a ~~group of individuals~~ population must start out with, and maintain, sufficient genetic diversity to adapt to the anticipated range of environmental conditions that it will encounter. Factors which can work against the maintenance of genetic diversity include: episodes of extremely small numbers of breeding individuals, high frequency of inbreeding, and selection in artificial environments.

~~have a realistic chance of avoiding the problems of inbreeding that results from a small number of individuals increasing the chances of sibling crosses. A population of plants or animals requires a certain amount of genetic diversity and consequently a certain minimum number of members. Where a population has become extremely small in a population bottleneck, it may have lost its genetic viability, and if numbers recover it will be through inbreeding, possibly leaving a genetically unhealthy population.~~

Viability (population) – ~~A species The ability of a population’s ability to persist and to avoid extinction, or the calculated likelihood of a population avoiding extinction.~~ The viability of a population ~~will increase or decrease in response to~~ typically varies with changes in the rates of birth, death, and growth of individuals. In natural populations, these rates ~~are not stable, but undergo themselves~~ fluctuations due in response to external forces (floods, droughts, introduced species), and internal forces (competition and genetic composition). Such factors can drive populations to extinction if they are severe or if several detrimental events occur before the population can recover.

Comment [UF&WS7]: PVA is the calculated probability of extinction or persistence. Viability is a more general term not limited to PVA.

Young-of-Year – A fish that is less than one year of age from the approximate date in which it was hatched. ~~Young of year may include the “larval” stage which may span for only about the first month of life (see Larvae).~~

1 Introduction

1.1 Background

The Middle Rio Grande Endangered Species Collaborative Program (Collaborative Program) will transition to the Middle Rio Grande Collaborative Recovery Implementation Program (MRGRIP). This Action Plan identifies substantive MRGRIP elements, [actions](#) and tasks that are necessary to meet the purpose and goals of the MRGRIP.

The following [purposes and goals](#) of the MRGRIP were adopted from the Collaborative Program. The purposes are to:

- Promote the conservation and contribute to the recovery of the endangered species in the Program area;
- Assist in attainment of Endangered Species Act (ESA) compliance for all parties with the concurrence of the U.S. Fish and Wildlife Service; and
- Encourage water development and management activities consistent with State and Federal laws and mandates.

The following goals were established by the Collaborative Program as a means to fulfill the above purposes. All signatories believe that the [Collaborative Recovery Implementation Program](#) [<update from Program document>](#) is the best mechanism to carry out the following goals in accordance with State and Federal laws and Rio Grande Compact obligations.

1. Alleviate jeopardy to the listed species in the Program area.
 - a. Identify and articulate the critical scientific questions that will help evaluate flexibility in the system that wasn't known to be there in 2003.
 - b. Understand the system well enough to develop adaptive management tools to support a sustainable Biological Opinion.
2. Conserve and contribute to the recovery of the listed species.
 - a. Stabilize existing populations.
 - b. Develop self-sustaining populations.
3. Protect existing and future water uses.
4. Report to the community at large about the work of the Program.

Comment [PR38]: Have these been "synched" with the Program Document as discussed?

1.2 Need for Action Plan

~~This Action Plan is needed to identify specific actions and tasks that the MRGRIP plans to implement, according to Annual Workplans, need to be implemented annually by the MRGRIP during the first five years of its existence to comply with advance the purposes and goals as stated above. Future 5-year This Action Plans covers a 5-year ongoing period, and it shall will be updated annually with revised actions and from tasks generally drawn from and tiered from the broader inventories of possible species recovery actions identified and described in the Program’s Long-Term Plan (LTP) and species Recovery Plans. All updates or revisions to the RIP Action Plan shall be approved by the EC. This Action Plan organizes tasks according to species life history and not by program element as in the LTP so that activities are integrated and can be performed following the principles of adaptive management. In selecting future Action Plan actions and tasks, the EC’s decision-making will be guided by species needs for survival and recovery as determined by the best available scientific information and shall consider new information from the adaptive management process, input from the Service regarding adjustments to the RIP Action Plan activities or metrics, and recommendations in the RIP Evaluation Team’s River Advisory Team’s Report concerning improvements to or modification of the management activities, input from the Service regarding adjustments to the RIP Action Plan activities or metrics, and other appropriate sources of information.~~

<Latest version of LTP modifies this language (sync with that <see note in Preface>)> The Long-Term Plan (LTP) is a background guidance document that provides an inventory describing the full range of potential activities that may be implemented by the RIP to meet its purposes and goals. The previous 2006 Long Term Plan will be updated and replaced by a revised LTP pursuant to one of the tasks under the first Action Plan for the RIP. The LTP extends to the year 2030 and it provides a prioritized list of activities, a proposed schedule of time, and estimated costs to implement and complete those activities, as well as a designation of responsible parties for each activity. The LTP lists the criteria and metrics (including interim and short term) that will may be used to measure sufficient progress, --subject to revised indicators of species viability revealed by the best available scientific information -- and satisfaction of which these metrics is expected to will ensure ongoing substantive compliance with the Endangered Species Act for covered actions.

Comment [ET9]: Somewhere in this section include “The Action Plan is needed to identify specific activities that are planned to be implemented during the first 5 years of the RIP. It is tiered from the LTP and the species recovery plans which include broader sets of possible recovery actions.”

Comment [PR310]: This is included below.

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Comment [PR311]: This looks like what we agreed on

Comment [ET12]: This sentence is pre-decisional and cannot be used like this. “The LTP lists the criteria and metrics (including interim and short term) that will be used to measure sufficient progress, which will ensure ongoing compliance with the ESA for covered actions.” There is no guarantee now that any future BO will be complied with indefinitely.

Comment [PR313]: The wording has been change from guarantee to expectation.

1.3 Formulation of Elements and Activities

~~<BOR has technical changes to add>~~The Elements and Activities described in this Action Plan and in the LTP are principally founded on the work and accomplishments of the Collaborative Program from 2000 to 2012 (see: <http://www.middleriogrande.com/Default.aspx?tabid=174>), the 2009 draft long-term plan (Water Consult 2010), the recovery plans for the southwestern willow flycatcher and the Rio Grande silvery minnow (U.S. Fish and Wildlife Service 2009, 2002), biological assessments (U.S. Bureau of Reclamation 2003, 2012), the 2003 Biological Opinion (U.S. Fish and Wildlife Service 2003), and [the initial framework for an adaptive management plan](#) (Murray et al. 2011).

This Action Plan includes activities for the endangered Rio Grande silvery minnow (Minnow; *Hybognathus amarus*) and the southwestern willow flycatcher (Flycatcher; *Empidonax traillii extimus*). The threatened Pecos sunflower (*Helianthus paradoxus*), the endangered Interior least tern (*Sternula antillarum athalassos*), and the candidate New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) are not addressed in this Action Plan. The only population of the Pecos sunflower within the MRG water management action area is at the La Jolla Waterfowl Management Area in Socorro County near the confluence of the Rio Puerco. The least tern has been observed as a ‘vagrant’ or ‘highly unusual’ species in the area, and the jumping mouse nests in dry soils, but uses moist, streamside, dense riparian/wetland vegetation up to an elevation of about 8,000 feet. It is believed that activities designed to benefit the Minnow and the Flycatcher will not harm and possibly also benefit these other species.

This Action Plan is organized ~~such that it to~~ focuses RIP activities on the species of concern in a manner that promotes and emphasizes the integration of the essential components of species habitat (water, channel morphology, floodplain, food, water quality, etc.) within an adaptive management framework. This [framework](#) is an important [premise underlying Action Plan implementation concept](#), as it [directs that means the MRGRIP activities pertaining to and affecting species must should be designed and well coordinated to incorporate, where appropriate <warranted?>, appropriate hypotheses, research and monitoring of species needs and responses. ~~so that and the implementation of these actions will reduce critical management uncertainties and the MRGRIP’s and information learned from research and monitoring must be regularly exchanged within the Program and particularly to water management entities’ future actions can be further refined in accordance with the information learned and species management uncertainties remaining to be investigated. This information~~](#)

Comment [ET14]: Somewhere in this section include “The recovery actions identified in this Action Plan include those considered to be most important to alleviate threats to species and promote recovery within a 5 year timeframe.”

Comment [PR315]: This has been done; see below.

will allow water managers and regulators to address species needs in a more effective and resource-efficient manner.

Comment [PR316]: The observations in these sentences have been dispersed to more appropriate passages in this Introduction (adaptive management, etc.), to avoid repetition.

This Action Plan builds on and formalizes the existing coordination of water management agencies in the Middle Rio Grande (MRG), regulatory authorities, and program participants during the water year. ~~A more formalized approach will be taken within this Action Plan~~ to ensure that MRG activities, including ~~those contained in the WMP water management and operations, are coordinated work together together~~ throughout the year and ~~those activities are~~ are well informed by ~~the~~ science. ~~This Action Plan provides the framework to conduct scientific research and monitoring to address relevant unknowns about the species and address natural and human caused uncertainties through an adaptive management process. For example, coupling scientific inquiry with the predicted runoff conditions occurring in a particular year will enable the MRGRIP to understand species behaviors to the natural varying conditions endemic to the MRG. This information will, in turn, allow water managers and regulators to address species needs in a more effective manner so that all available resources are better utilized in a comprehensive and collaborative manner.~~

Comment [JM17]: how does scientific inquire and runoff predictions enable better understanding - wouldn't it be actual runoff?

Comment [PR318]: The observations in these sentences have been dispersed to, or rephrased in, more appropriate passages in this Introduction (adaptive management, etc.), to avoid repetition.

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The recovery actions and tasks identified in this Action Plan include those considered to be most important, within a 5 year timeframe, to alleviate threats to species and promote recovery. The Action Plan also describes the some elements, and activities ~~ons and tasks~~ that have been prescribed (under the 2003 Biological Opinion) and relied on to date in an attempt to ~~are adequately understood and have proven effective for~~ securely managing the species while the current recovery implementation program formation efforts has been ~~are~~ in process <i.e., ongoing activities will continue>. In particular, the operation of Minnow propagation facilities that was prescribed to ensure survival and promote recovery will continue under a MRGRIP while these resources are needed.

Comment [PR319]: This assertion seems conclusory and not necessarily warranted scientifically (although it may turn out to be essentially true).

While it is still unknown if two or more additional and distinct, self-sustaining populations can be established for the Minnow, the Program believes it is important to assist with efforts on range expansion outside the MRG. The Big Bend 10(j) efforts which have been underway since 2007 may provide one additional area if stocked fish become self-sustaining. The Program proposes relatively short-termed and phased-in assistance for additional range expansion efforts outside the MRG. In addition, within the Program Area certain efforts will be taken to expand the Minnow's range.

Comment [JM20]: define

The MRGRIP will support recovery efforts for the Flycatcher within the Program Area. The formulation of elements and activities for the Flycatcher is presented in a similar manner to that of the Minnow. Many of the activities for the Minnow should be

beneficial for the Flycatcher as well. The efforts for Flycatcher that are funded by the MRGRIP are restricted to the Program Area with the exception of supporting monitoring at Elephant Butte, which is just south of the Program boundary.

1.4 Relationship to Adaptive Management

There is within the elements described in this ~~is LTP Action Plan~~ the acknowledgement that there are still a number of ~~unknowns~~ critical uncertainties and hypotheses about the listed species and ~~its~~ their habitat that are ~~relevant~~ integral to water management and species recovery activities ~~and are important to better understand to enable recovery.~~ Many of these uncertainties and hypotheses were compiled from submissions by Program participants within Appendix C of the Adaptive Management Plan, Version 1.1 (AM Plan; Murray et al. 2011), completed by the Collaborative Program in 2011. For example, ~~this Appendix C captures the uncertainty regarding the Minnow population benefits of managing flows to achieve positive October population monitoring responses, which can be critical because the current Recovery Plan focuses attention on these responses as extinction prevention and downlisting criteria and they thus to some extent drive official Minnow recovery efforts. The AM Plan suggests statistical analysis, including population viability analysis (PVA) modeling, as a means for testing alternative hypotheses with implications for revising the Program's flow and drying management strategies.~~

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As early as 2009, PVA has produced analysis showing a resilient Minnow population with no response to normally diminishing summer flows, and suggested that PVA be deployed to support a targeted adaptive management revision with a monitoring model to detect early signs of possible failure of resilience, as well as models of a carefully designed intervention and species response to this intervention. As the Plan notes, rigorous adaptive management requires such a commitment of effort and resources to resolve significant uncertainty by deliberately designing and implementing management actions to test hypotheses, maximize learning and produce better decisions than would adherence to the status quo.

In addition to species uncertainties, the high variability in the climate, environmental changes, and the changing human landscape within the MRG creates ~~many~~ considerable system uncertainties ~~as to environmental conditions and resource availability;~~ on an annual, and often, daily basis. Water operation and management is ~~fairly~~ complex and ~~species~~ the effects responses to management actions are on the species often ~~can~~ not readily ~~measurable~~ discerned with current monitoring ~~be measured directly or even indirectly.~~ Water rResources that can be used to supplement natural flows are not only

very limited, but highly variable and often dependent, physically, operationally and legally, ~~often~~ on what occurred during the previous year or two. ~~Therefore~~ Due to this high level of uncertainty in the system and due also to the consequent managerial complexity, to address ESA coverage and species recovery in the MRG, integrating adaptive management into the culture of water management is believed to be the best approach to addressing ESA coverage and species recovery in the MRG, as it promises to enable decisive change, to adapt quickly and decisively as needed, and to utilize new determinations of optimal management strategies information from focused managerial hypothesis testing, research and monitoring.

The Collaborative Program completed the Adaptive Management Plan Version 1 (AM Plan) in October of 2011 (AM Plan; Murray et al. 2011). This AM Plan provides a framework for completing activities to maximize species recovery progress and reduce management and technical uncertainties. The AM Plan provides specific design principles for AM adaptive management activities including: 1) meeting program goals; 2) including measurable triggers, safeguards and emergency activities to avoid jeopardy; 3) achieving numerous attributes including that integration with flow and habitat restoration activities, be feasible to monitor and implement, be reversible or adjustable, and other attributes detailed within the AM Plan; and, 4) communicate communicating progress and results throughout the process.

~~Within Implementation and periodic revision of elements, actions and tasks of this Action Plan, LTP will proceed according to adaptive management principles: will be identified in the design and implementation of the selection and design of specific activities and tasks will follow the identification of critical that have uncertainties regarding their effects on the species responses determined by PVA to be important for survival and recovery-, will incorporate testable hypotheses related to these uncertainties, will explore alternative management actions to test those hypotheses, will make explicit predictions of the outcomes including the level of risk involved with implementation, and will select an action to implement based on all of the following criteria:~~

- Cost-benefit: it is believed, on sound evidence, that there is a good probability that it will work as intended, and will be worth adopting (i.e., feasible and economical) if it is; and
- Acceptable risk: the range of plausible outcomes if it does not work as intended, are either: (a) tolerable, or (b) controllable, and the early warning detection monitoring is in place and the damage control capability is ready to deploy; and

Comment [JM21]: Action Plan?

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Comment [PR322]: These criteria are synthesized from the "Principles for Designing AM Actions" and "Program Background" sections of ESSA's Adaptive Management Plan, Version 1 (at pages 43-44 and page 3, respectively).

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- Learning potential: there is a commitment to monitoring to determine if it does or does not work, and the statistical design of the monitoring has sufficient power for that task; and
- Management commitment: There is a commitment to revise management, as well as a clear and achievable allocation of responsibilities to do so, based on the outcome of the monitoring, and there is an advance decision rules are endorsed in advance to determine for whether the experimental action will be adopted as routine (and no longer experimental) or modified and tested further or abandoned.

and that can be improved through dynamic decision making. Reduction of unknowns and addressing uncertainties will be accomplished by conducting and utilizing focused research and monitoring with feedback to water managers as part of the process.

The Program’s PVA models are a critical formal component of adaptive management, and the RIP intends to be committed to ongoing use of PVA results, as consistent with use the results of the best available science standards, to guide adaptive management implementation as these results become available. For example, the Program’s PVA models can serve as a formal component of AM, by identifying critical uncertainties, evaluating the potential of a proposed experiments to reduce the uncertainties, providing a risk assessment for the experiment itself, and re-evaluating population status and management strategy after the results of the experiment are analyzed. In addition, the Program will use Annual reviews and other information assimilation tools will be used by the Program MRGRIP to ensure that the AM adaptive management process is serving to reduce uncertainties and inform water management decisions

1.5 Water Management Tools and Strategies

<BOR to revisit?>ISC also to revisit - The WMP describes the suite of water management tools and strategies available for providing flows or depletion offsets that support species elements and Program goals, and it identifies the specific tools provided by each federal and non-federal water management decision maker (the Water Managers). The MRGRIP will make recommendations to the Water Managers based on species needs, and the Water Managers will utilize the tools described in the WMP to meet the needs.

In response to the reduced opportunities for acquisition of traditional San Juan-Chama Project water supplies for Reclamation’s Supplemental Water Program, the WMP identifies potential replacement supplies and alternative water management strategies. The WMP builds upon the Reclamation’s 2006 Long Term Water Acquisition & Management Plan and New Mexico’s 2008 Strategic Water Reserve Implementation

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Analysis Report, and identifies the supporting and institutional constraints/processes associated with implementation of the MRGRIP.

Although there has been sufficient water over the last ten years to meet the 2003 Biological Opinion flow targets under the dry, average and wet conditions, until the WMP no plan or strategy existed for getting through a critically dry scenario where there is limited to no water supply reserves. Included in the WMP is a shortage sharing strategy for managing water for species and habitat during drought conditions where water supplies are critically low. Additionally, stakeholders meet on a regular basis to coordinate river management actions that slow drying in the San Acacia and Isleta reaches.

1.6 Formulation of Sufficient Progress Metrics

This topic will be discussed in the June EC meeting. After the meeting, this section will be refined and inserted. To be refined such that most of content will be in Program Document with activities and tasks in Action plan identified as sufficient progress? Under discussion among Action Plan Team.

Proposed process for developing sufficient progress metric; distribute separately from AP: The Service will make an annual determination whether the RIP is making sufficient progress toward recovery of listed species. This determination of sufficient progress ensures continued ESA compliance for covered actions. It is conditioned on the Fish and Wildlife Service's assessment in its Biological Opinion that the RIP activities, combined with any other conservation measures, fully serve to minimize detrimental listed species effects of the proposed water use and management actions; and that covered actions in combination with RIP activities are not reasonably expected, directly or indirectly, to diminish listed species' numbers, reproduction, or distribution so that the likelihood of survival and recovery in the wild is appreciably reduced. The sufficient progress determination will also assess whether RIP activities are advancing species recovery by working toward the reduction of threats to listed species and the improvement of the status of listed species and their habitats.

RIP Sufficient Progress Metrics will consist of (1) measures of implementation of RIP activities listed in the current Five-Year Action Plan and (2) measures of species response to RIP activities, including demographic indicators of species survival, reproduction and recruitment and population viability analysis assessment of probability of species survival over a given period (e.g. 100 years). During the first two to three years of RIP operations, implementation measures will play the primary role in assessing RIP progress, as the RIP builds its capacity to implement a rigorous Adaptive Management program, as well as

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developing and refining its monitoring protocols to measure species response to specific management activities.¹ These Metrics, especially those measuring species response, will be quantitative to the extent possible, but qualitative Metrics may be used when no quantitative measure exists or is possible for the factor in question.

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This framework for developing metrics may be visualized as filling in the following matrix. As represented here, this framework would allow the RIP to assess with some precision its level of success in implementing activities and promoting species responses that maintain and advance listed species' likelihood of survival and recovery—at both the population and the species level—as well as allowing the RIP to select and develop future activities. Adaptive Management approaches and metrics that are informed by such assessments:

“Operational”		
“Interpretational”	Implementation	Species Response
<p><u>Avoids appreciable reduction in likelihood of survival and recovery so as to trigger need for reinitiation.</u></p>	<p><u>e.g. x fish released from hatchery</u> <u>x miles of river bank lowered</u> <u>x af of water pumped into river</u></p>	<p><u>e.g. demographic indicators, CPUE index from monitoring sites</u></p> <p><u>PVA assessment of probability of survival at 100 years</u></p>

¹As discussed in RIP Program Document Section VI.B, a priority activity under the RIP Action Plan is to develop a RIP monitoring program by the end of the third year of the RIP that builds upon existing population and genetics monitoring efforts. This proposal recognizes that the current monitoring protocols are not sufficiently precise and sensitive to be endorsed by the RIP for purposes of measuring species response to specific management activities and progress toward recovery, given year-to-year population variability. Based upon that RIP monitoring program, the RIP will work to develop demographic metric(s) to assess population trends and progress toward recovery under the RIP. Before that information is available, the RIP will consider the results of ongoing monitoring in its implementation of activities and annual update of the RIP Action Plan. The status of the species will be assessed during this interim period with reference to implementation of the RIP activities, including procedures to develop the metrics to assess the status of the species. It is recognized that annual sufficient progress toward recovery may be maintained notwithstanding a failure to meet one of more of these demographic metrics.

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<p><u>Achieves sufficient progress toward recovery</u></p>	<p><u>e.g. $x + y$ fish released from hatchery</u> <u>$x + y$ miles of river bank lowered</u> <u>$x + y$ af of water pumped into river</u></p>	<p><u>e.g. demographic indicators, such as ???</u></p> <p><u>PVA assessment of probability of recovery</u></p>
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At the May 29, 2012 Collaborative Program Executive Committee meeting, the Fish and Wildlife Service presented a table of potential Sufficient Progress Metrics that could fill this matrix, with most of the values to be assigned to each factor yet to be determined. It was agreed at the same meeting that some of these values would be determined as a result of the incorporation of upcoming scientific analysis from the sources listed below (e.g. 2012 Workshop(s), Program science) after assessment and decision by the EC. It is further anticipated that the initial development of RIP Metrics will benefit from the compilation and analysis of available science performed by the Service, as part of its preparation of the BiOp, as to effects of the covered actions and RIP activities on listed species. The Program’s PVA modeling can perform the ongoing function of assessing the validity of each factor as a significant contributor to the likelihood of species’ survival and recovery. PVA model outputs can thus validate indicators of progress and, further, can be used to propose other indicators and thereby assume an important role in ongoing development and refinement of the RIP’s Sufficient Progress Metrics.²

Initially, the RIP Sufficient Progress Metrics will be approved by the EC, following issuance of the contemplated Middle Rio Grande water management and river maintenance Biological Opinion. Thereafter, the responsibility for updating RIP Sufficient Progress Metrics as the Five-Year Action Plan is annually updated and amended is expected to devolve upon the Science Coordinator, in coordination with and with the approval of the EC (including the Service). Because Sufficient Progress Metrics must continually remain relevant to species status and prospects for survival and

²As PVA model results consist of a probabilistic calculation of species extinction or recovery, the PVA Workgroup is currently discussing the appropriateness of utilizing its modeling results as a determinative, rather than a relative, indicator of the effects and effectiveness of management and conservation actions; e.g testing for preventing extinction (a 50% likelihood of survival over 100 years), warranting downlisting (75% likelihood), or warranting delisting (90% likelihood, per Recovery Criterion 3-A-1).

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recovery, utilizing the best available scientific information as this information is developed, key considerations to be utilized by the Science Coordinator and the EC in updating Sufficient Progress Metrics include:

- Relevance to species population viability (i.e. to maintaining the risk of extirpation below an acceptable level and the probability of recovery above an acceptable level);
- Relevance to RIP recovery actions identified in the Action Plan and Annual Workplan (since the metrics serve to evaluate these);
- Measurability of demographic and other factors important as indicators of viability (e.g. survival, reproduction, recruitment, distribution, genetic diversity), appropriate correlate measures, and the degree of confidence in such correlations;
- Feasibility and achievability of measured activities and/or population viability factors within resource (funding, water) and RIP organizational and institutional constraints.

During the initial and subsequent formulation of Sufficient Progress Metrics, the Science Coordinator and EC will consider the following sources of information to ensure that proposed Metrics maintain relevance to species population viability, utilizing the RIP protocols and procedures for internal science review and external peer review as needed:

- Long-Term Plan: activities deemed by RIP to be relevant to recovery goals;
- Recovery Plan: Criteria for recovery and preventing extinction; prescribed activities;
- Program science: Science Workgroup and Population Viability Analysis Workgroup, PVA response to questions posed by Service and others, Adaptive Management, internal peer review;
- Independent science: Fish and Wildlife Service's Five-Year Review, Science to be presented to Service before and during analysis for Biological Opinion, external peer review;
- Science Workshop(s) during summer 2012.

RIP activities in many instances tier from species recovery plans. Because the RIP will implement recovery activities identified in an Annual Workplan approved by the Service, the Service expects the RIP to achieve sufficient progress towards recovery.

However, if there are circumstances that undermine the RIPs ability to implement priority activities on schedule, it may not be possible to fully meet all factors and metrics considered. A weakness or deficiency that is temporary or is limited to a single or few metrics would not necessarily result in a lack of overall progress toward recovery. If the Metrics are not being met and the Service makes an initial determination that the RIP is not making sufficient progress, the Service will notify the EC and request its assistance in resolving the situation. If such attempts at resolution are unsuccessful, the Service may document the situation and make a written request of the EC. If the situation is not resolved, it is recognized that Service may conclude that sufficient progress toward recovery has not been maintained, thereby triggering re-initiation of consultation related to the concerns at issue. Failure of the RIP to continue to offset the effects of the covered actions will trigger reinitiation of consultation related to the concerns at issue. The Service and federal action agencies agree to work expeditiously on any such re-initiation. The Service further agrees to consider the benefits from the potential continuation of contributions by entities during any reinitiated consultations, including in the development of new reasonable and prudent alternatives or other measures in new or revised biological opinion(s).

2 Elements for Rio Grande Silvery Minnow

2.1 Element 1 - Spawning and Survival of Larvae

Action 1.1: Create <overbank/floodplain> habitat for spawning and larval rearing.

Task 1.1a: Develop and implement a habitat restoration strategy, resulting in a prioritized list of habitat projects.

Task 1.1b: Over 5 years, target a total of 300 acres of overbank/floodplain habitat in the Cochiti, Albuquerque, Isleta, and San Acacia reaches based on past experience and implementability.

Action 1.2: Provide spring-time hydrologic (flow) conditions <springtime environmental conditions> sufficient to produce Minnow spawning and larval fish survival.

Task 1.2a: In advance of spring runoff, the Action Team will evaluate the annual species management objectives, available resources, climatic projections, and other information to develop recommendations for that specific year.

Task 1.2b: Manage resources in accordance with Action Team's annual recommendations as needed to provide environmental conditions sufficient to produce Minnow spawning and larval fish survival.

Task 1.2c: Manage rates of recession to minimize stranding and mortality of Minnows.

Placeholder task: Provide wet river for at least 45 days post peak spawn <this will be covered in the Action Team's annual recommendations>

2.2 Element 2 - Post-Spawning <non-runoff survival?> **Rephrase**

Action 2.1: Provide viable wetted habitats during summer and fall that can be shown to improve survival and recruitment of Minnow during main channel drying events.

Task 2.1a: Develop a "Refuge Habitat Plan for Rio Grande Silvery Minnow During River Drying Events" to identify desirable areas for refuge sites, strategies for enhancing their benefits, available water sources, and evaluation methods.

Task 2.1b: Construct and maintain “refuge habitats” in the Albuquerque, Isleta, and San Acacia reaches for Minnow during river drying events as prescribed by the Refuge Habitat Plan (Task 2.1a).

Action 2.2: Provide hydrologic (flow) <environmental> conditions in summer, fall, and winter to support survival in all years. <delete? reword? replace?> <Conduct operations in such a manner to avoid need for refuge habitats.>

Task 2.2a: In advance of spring runoff, the Action Team will evaluate the annual species management objectives, available resources, climatic projections, and other information to develop recommendations for that specific year.

Task 2.2b: Manage resources in accordance with Action Team's annual recommendations as needed to provide environmental conditions sufficient to produce Minnow post-spawning survival.

Task 2.2c: Manage rates of recession to minimize stranding and mortality of Minnows.

Placeholder tasks:

Review and update the “2006 Long Term Water Acquisition & Management Plan” and “2008 Strategic Water Reserve Implementation Analysis Report.”

Engage the River Advisory Team to advise Water Managers regarding the need to slow the rate and extent of river drying during low-flow periods in summer, fall and winter. This will include advising on the need to implement the shortage sharing strategy in the WMP during critically dry years, and the need to coordinate river management actions, particularly in San Acacia Reach and Isleta reaches, to allow for Minnow to move to wetted areas; e.g., LFCC pumping, SADD minnow gate, and other activities or tools.

Provide hydrologic (flow) conditions in summer, fall, and winter to support survival in all years; e.g., implement a “Drought and Emergency Water Management Plan,” provide depletion offsets for flood and irrigation management deviations and habitat restoration depletions; review and update strategic water management documents (e.g., “2006 Long Term Water Acquisition & Management Plan” and “2008 Strategic Water Reserve Implementation Analysis Report.”)

Action 2.3: Increase reach boundary connectivity.

Resolve later? Rick and Grace look at San Acacia study again and select tasks that are feasible for the next 5 years.

2.3 Element 3 - Conservation Hatchery Programs <Extinction prevention / Safety net / Source for propagation/augmentation?>

Rephrase

<Was this element discussed or was it deferred?>

Action 3.1: Plan and evaluate Minnow propagation and augmentation program.

Just in case, tasks from table pasted into each of the Element 3 Action--delete if no consensus on them (consensus was reached in a previous meeting on the Actions themselves).

Task 3.1a: *Revise and refine "RGSM Genetics Management and Propagation Plan" including captive rearing and propagation to augment the population in the middle Rio Grande and identification of reintroduction sites to start new populations.*

Task 3.1b: *Perform genetic evaluation of captive and wild fish and determine effect of augmentation on genetic viability of wild populations.*

Task 3.1c: *Determine best propagation strategy for genetic viability of Minnow as part of Task 3.1a: Revise and refine "RGSM Genetics Management and Propagation Plan."*

Task 3.1d: *Determine genetic effective population size of the Minnow.*

Action 3.2: Develop, support, and maintain propagation and rearing facilities for Minnow.

Task 3.2a: *Continue to fund, maintain, and operate the Albuquerque BioPark Facility.*

Task 3.2b: *Continue to fund, maintain, and operate the Los Lunas Silvery Minnow Refugium.*

Task 3.2c: *Continue to fund and support technical assistance from the Dexter National Fish Hatchery and Technology Center (DNFH), including maintaining fish on site.*

Continue efforts at Rio Grande silvery minnow Sanctuary

Action 3.3: Rear and maintain Minnow in captivity.

Task 3.3a: Annually gather Minnow eggs in drift from wild populations and rear the young in captivity, with a goal of collection of approximately 500,000 eggs to meet annual stocking commitments.

Task 3.3b: Maintain at least 100,000 Minnow of wild genetic origin in captivity on an annual basis for restoration in case of a catastrophe.

Task 3.3c: Quantify and evaluate genetic diversity of wild and captive fish to ensure genetic diversity as part of Task 3.1.4a: Perform genetic evaluation.

Task 3.3d: Maintain sufficient numbers of Minnow to augment existing populations, as necessary.

Continue augmentation program

Action 3.4: Augment wild populations as necessary.

Task 3.4a: Develop a “Plan to Investigate and Identify Additional Introduction Sites for Minnow.”

Task 3.4b: Conduct hydrology, habitat, and fish community analyses to identify suitable introduction sites most likely to support self-sustaining populations.

2.4 Element 4 - Research, Monitoring, and Adaptive Management

<Rework and refine tasks in this element.>

Action 4.1: Develop and implement monitoring programs with sufficient reliability, precision, and accuracy for RIP needs.

Task 4.1a: Synthesize data.

Task 4.1b: Convene a workshop of species and monitoring experts, and Program managers, to evaluate and refine the existing monitoring program and to define standards of precision and change detection that will be met by the monitoring program.

- Task 4.1c: Write and scientifically review a refined “Fish Population Monitoring Plan” with the appropriate design and data analysis to meet the needs of Program managers.
- Task 4.1d: Implement, evaluate, and refine the monitoring program, as necessary, to meet the criteria of precision and detection level needed by Program managers.
- Task 4.1e: Develop metrics to recommend to Executive Committee.
- Action 4.2:* Identify and prioritize specific science <and adaptive management?> activities that address overall Program goals.
- Task 4.2a: <Upon establishment of the Science Panel> Perform a “state of the science” review.
- Task 4.2b: Hold an Executive Committee 1 to 2-day workshop to brief the Program and the Executive Committee on the “state of the science”.
- Task 4.2c: Develop a prioritized list of activities and related research that needs to be conducted in the foreseeable future.
- Task 4.2d: Schedule periodic updates with the Executive Committee strictly focused on status of science activities, knowledge, and Program priorities.
- Task 4.2e: Complete a draft Peer Review Process for EC review and approval. Implement process for multiple pending peer reviews including (list of reviews with target dates).
- Task 4.2f: The RIP will establish a team to develop agreed-upon demographic metric(s) to assess population trends and progress toward recovery under the RIP.
- Task 4.2g: Evaluate existing habitat projects as to whether it provides species benefits.
- ~~Task 4.2h: Evaluate existing habitat projects as to whether it provides species benefits.~~
- Action 4.3:* Conduct minnow research critical to RIP.
- Task 4.3a: Determine factors that affect age structure, age-specific survival rates, and recruitment.
- Task 4.3b: Determine factors that affect growth rates of Minnow.

- Task 4.3c: Determine fecundity (average number of eggs per female) and maternity (proportion of young produced per female that reach maturity).
- Task 4.3d: Determine effective female:male gender ratio for spawning.
- Task 4.3e: Determine food habits of the Minnow.
- Task 4.3f: Conduct a series of flow/habitat experiments to determine optimum species life stage water needs.
- Task 4.3g: Conduct a series of flow/habitat experiments to determine optimum species life stage water needs.
- Action 4.4: Determine the viability of Minnow populations. *<Rick and Dave to tackle?>*
- Placeholder?* Task 4.4a: Conduct a Population Viability Analysis (PVA).
- Task 4.4b: Develop, document, and implement “Quantitative Population Models in a PVA Framework.”
- Task 4.4c: Evaluate extinction risk for Minnow populations for various environmental conditions and management actions.
- Task 4.4d: Evaluate effects/benefits of habitat restoration (including floodplains, refuges during drying events) on populations of Minnow.
- Task 4.4e: Evaluate effectiveness of augmentation on wild population viability.
- Task 4.4f: Evaluate potential impacts of climate change on viability of Minnow populations.
- Action 4.5: Establish and maintain a Database Management System for RIP needs. *<Move to Program Management?>*
- Task 4.5a: Procure original datasets from investigators in a flat-file, fixed format.
- Task 4.5b: Reconcile all data errors, inconsistencies, and discrepancies with data collectors to ensure a clean and concise database.
- Task 4.5c: Establish a “Data Assembly, Storage, and Quality Control Protocol” that provides data formats, dates for data submission, and conditions for data releases and accessibility to the data by the general public.
- Task 4.5d: Assemble available data in a clear and concise manner.

Task 4.5e: Coordinate future data assembly and quality control through an established “Data Assembly, Storage, and Quality Control Protocol.”

2.5 Element 5 - Additional Wild Self-Sustaining Populations

Action 5.1: Support the development of additional wild self-sustaining populations of Minnow. <Discussed briefly? Not completed?>

Task 5.1a: Develop <of if one exists, Evaluate> an <EC-approved> “Plan to Investigate and Identify Additional Introduction Sites for Rio Grande Silvery Minnow.”

Task 5.1b: Conduct hydrology, habitat, and fish community analyses to identify suitable introduction sites most likely to support self-sustaining populations.

Task 5.1c: Investigate and obtain authorization to introduce Minnow into potential sites through necessary means, including a 10(j) rule-making (experimental population).

Action 5.2: Rear and maintain minnow in captivity in order to augment wild populations as necessary (Actions 3.3 and 3.4).

3 Elements for Southwestern Willow Flycatcher

3.1 Element 1 - Territory Establishment and Nesting Success

Action 1.1: Create habitat conducive to territory establishment and nesting success.

Action 1.2: Create hydrologic conditions conducive to territory establishment and nesting success.

3.2 Element 2 - Flycatcher Research, Monitoring, and Adaptive Management

Action 2.1: Assess, identify and prioritize specific science <and adaptive management?> activities that address overall Program goals.

Action 2.2: Conduct Flycatcher research critical to RIP.

Action 2.3: Determine the viability of Flycatcher populations.

Action 2.4: Develop and implement monitoring programs with sufficient reliability, precision, and accuracy for RIP needs.

Action 2.5: Incorporate Flycatcher data into RIP Database Management System.

<*Action 2.6:* Facilitate the exchange of information with other groups.>

3.3 Element 3 - Populations Outside the Program boundaries (within New Mexico)

Action 3.1: Support the development of other populations of Flycatcher.

DRAFT

4 Ongoing Action Plan Elements

4.1 Element 1 – RIP Management

<Actions need clarification>

Action 1.1: Facilitate Program planning and management <and implementation?>.

Action 1.2: Provide ongoing Program Management.

Action 1.3: Implement priority Program projects.

DRAFT

5 Priorities, Responsible Parties, Dates of Performance

DRAFT

6 Time Schedule

DRAFT

7 Estimated Costs

DRAFT

References

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- U.S. Fish and Wildlife Service. 2009. Revised Rio Grande Silvery Minnow (*Hybognathus amarus*) Recovery Plan. Albuquerque, NM.
- Water Consult. 2010. Revised Draft 04/09/10 Long Term Plan Middle Rio Grande Endangered Species Collaborative Program. Water Consult, Engineering and Planning Consultants Loveland, CO.

Formulation of Sufficient Progress Metrics

The Service will make an annual determination whether the RIP is making sufficient progress toward recovery of listed species. This determination of sufficient progress ensures continued ESA compliance for covered actions. It is conditioned on the Fish and Wildlife Service's assessment in its Biological Opinion that the RIP activities, combined with any other conservation measures, fully serve to minimize detrimental listed species effects of the proposed water use and management actions; and that covered actions in combination with RIP activities are not reasonably expected, directly or indirectly, to diminish listed species' numbers, reproduction, or distribution so that the likelihood of survival and recovery in the wild is appreciably reduced, or result in the destruction or adverse modification of critical habitat. The sufficient progress determination will also assess whether RIP activities are advancing species recovery by working toward the reduction of threats to listed species and the improvement of the status of listed species and their habitats.

The RIP will adopt specific criteria (Sufficient Progress Metrics) by which the above sufficient progress determination is assessed. The RIP Sufficient Progress Metrics ("Metrics") will consist of (1) measures of implementation of RIP activities listed in the current Five-Year Action Plan and (2) measures of species response to RIP activities, including demographic indicators of species survival, reproduction and recruitment and population viability analysis assessment of probability of species survival over a given period (e.g. 100 years). It is recognized that the current monitoring protocols are not sufficiently precise and sensitive to be endorsed by the RIP for purposes of measuring species response to specific management activities and progress toward recovery. During the first two years of RIP operations, the RIP will continue to collect and consider the results of ongoing demographic monitoring data in its implementation of activities under the RIP, but will not use such data in a Sufficient Progress Metric. During this interim period, implementation measures will play the primary role in assessing RIP progress, as the RIP builds its capacity to implement a rigorous Adaptive Management program, as well as developing and refining its monitoring protocols to measure species response to specific management activities.¹ Also during this period, the EC will work to determine appropriate and scientifically supportable Metric(s) to determine if the species is making progress towards recovery, and progress made by the RIP in reaching agreement upon use of CPUE and/or other methods and demographic metrics will be considered by the Service. It is recognized that annual sufficient progress toward recovery may be maintained notwithstanding a failure to meet one of more of the Metrics. These Metrics, especially those measuring species response, will be quantitative to the extent possible, but qualitative Metrics may be used when no quantitative measure exists or is possible for the factor in question.

² I.e., where the available data lend themselves to PVA analysis and where a PVA model is constructed to perform this type of assessment.

Possible Final (as)

As described above, the Metrics are expected to incorporate and reflect both measures of implementation of RIP activities and of species response, as well as standards of avoiding jeopardy (and adverse critical habitat modification) and of advancing species recovery. This framework for developing metrics may be visualized as filling in the following matrix, which is presented purely as an example of the types of metrics that the RIP could utilize and not as a proposal to adopt these particular metrics. As represented here, this framework would allow the RIP to assess with some precision its level of success in implementing activities and promoting species responses that maintain and advance listed species' likelihood of survival and recovery—at both the population and the species level—as well as allowing the RIP to select and develop future activities, Adaptive Management approaches and metrics that are informed by such assessments:

<u>Example of types of metrics to be utilized after interim period</u>		
	<u>“Operational”</u>	
<u>“Interpretational”</u>	<u>Measures of Implementation of RIP Action Plan</u>	<u>Measures of Species Response</u>
Avoids appreciable reduction in likelihood of survival and recovery (and adverse critical habitat modification) so as not to trigger reinitiation.	e.g. x fish released from hatchery x miles of river bank lowered x af of water pumped into river	e.g. demographic indicators, CPUE index from monitoring sites PVA assessment of probability of survival at 100 years
Achieves sufficient progress toward recovery	e.g. $x + y$ fish released from hatchery $x + y$ miles of river bank lowered $x + y$ af of water pumped into river	e.g. demographic indicators, such as ??? PVA assessment of probability of recovery

Particular values for these types of metrics would be determined as a result of the incorporation of upcoming scientific analysis from the sources listed below (e.g. 2012 Workshop(s), Program science, science compiled for Biological Assessments, Biological Opinion, etc.) after assessment and decision by the EC. The Program's PVA modeling may be able to assess the contribution of each factor underlying such types of metrics (e.g. flow or habitat) to the likelihood of species'

Possible Final (as)

survival and recovery.² PVA model outputs can thus validate indicators of progress and, further, can be used to propose other indicators and thereby assume an important role in ongoing development and refinement of the RIP's Sufficient Progress Metrics.

Initially, the RIP Sufficient Progress Metrics will be approved by the EC. Thereafter, updating RIP Sufficient Progress Metrics, as the Five-Year Action Plan is annually updated and amended, is expected to be the responsibility of the Science Coordinator (or related position or entity to be defined), in coordination with and with the approval of the EC (including the Service). Because Sufficient Progress Metrics must continually remain relevant to species status and prospects for survival and recovery, utilizing the best available scientific information as this information is developed, key considerations to be utilized by the Science Coordinator and the EC in updating Sufficient Progress Metrics include:

- Relevance to species population viability (i.e. to maintaining the risk of extirpation below an acceptable level and the probability of recovery above an acceptable level);
- Relevance to RIP recovery actions identified in the Action Plan and Annual Workplan (since the metrics serve to evaluate these);
- Measurability of demographic and other factors important as indicators of viability (e.g. survival, reproduction, recruitment, distribution, genetic diversity), appropriate correlate measures, and the degree of confidence in such correlations;
- Feasibility and achievability of measured activities and/or population viability factors within resource (funding, water) and RIP organizational and institutional constraints.

During the initial and subsequent formulation of Sufficient Progress Metrics, the Science Coordinator and EC will consider the following sources of information to ensure that proposed Metrics maintain relevance to species population viability, utilizing the RIP protocols and procedures for internal science review and external peer review as needed:

- Long-Term Plan: activities deemed by RIP to be relevant to recovery goals;
- Recovery Plan: Criteria for recovery and preventing extinction; prescribed activities;
- Program science: Science Workgroup and Population Viability Analysis Workgroup, PVA response to questions posed by Service and others, Adaptive Management, internal peer review;

² I.e., where the available data lend themselves to PVA analysis and where a PVA model is constructed to perform this type of assessment.

Possible Final (as)

- Scientific information considered by the Fish and Wildlife Service in its Five-Year Review and Biological Opinion, Scientific information presented to Service before and during analysis for Biological Opinion;
- External peer review;
- Science Workshop(s) during summer 2012.

The Water Management Plan for the MRG RIP

Principles and General Outline

The purpose of the Water Management Plan (WMP) for the Middle Rio Grande Recovery Implementation Program (MRG RIP) is to provide a framework for the MRG RIP to make informed water management decisions for simultaneously meeting the two purposes of the RIP:

- To provide sufficient resources for protecting and enhancing the existence of the MRG endangered species with the goal of achieving recovery; and
- To meet current and future water demands in the MRG.

The WMP will be based upon underlying principles of the RIP Program Document and prescribed river management goals and actions defined within the MRG RIP Action Plan and the Annual Work Plan. An interdisciplinary team utilizing acquired knowledge that is refined through the adaptive management process will formulate recommendations for water managers to use in developing and implementing annual water operations plans based on forecasted hydrologic conditions and specific MRG RIP goals. The guiding principles that will be utilized in developing the WMP are as follows:

Guiding Principles:

- 1) The participating water management agencies must and will continue to act in accordance with their statutory authorities, policies and responsibilities to their respective constituents. Each agency will operate within and will not cede their respective water management authorities or responsibilities.
- 2) There will not be any “takings” of private property rights (water rights and land). Any acquisitions of private/public property will only occur through negotiations between willing parties.
- 3) Existing agreements, authorities, policies and operating criteria will form the basis for development of the WMP.
- 4) The WMP will focus on a suite of actions that will seek to improve in-river conditions for species based on sound science implemented through an adaptive management process while utilizing available water supplies more effectively during high water years in order to meet desired conditions during anticipated drought years.

Outline of the WPM:

While the Minnow Rider states that acquisition of water shall be at federal expense it does not preclude stakeholder agencies from providing benefits necessary for ESA compliance. Indeed, budgetary constraints and reduced opportunities for acquisition of San Juan-Chama Project water supplies, which has been the mainstay for Reclamation's Supplemental Water Program, require the development of alternative water management strategies, as will be contained in the MRG WMP. The WMP will build upon the Middle Rio Grande Endangered Species Collaborative Program's Water Acquisition and Management work group (WAM) and Species Water Management work group (SWM) efforts, as well as Reclamation's 2006 Long Term Water Acquisition & Management Plan and New Mexico's 2008 Strategic Water Reserve Implementation Analysis Report.

The WMP will be a companion plan to the MRG RIP Action Plan and Long Term Plan, and will contain the suite of water management tools available to meet the needs of listed species and water users. The WMP will include specific tools that each of the MRG water managers (the Bureau of Reclamation, the Army Corps of Engineers, Executive Agencies of the State of New Mexico, the Middle Rio Grande Conservancy District, and the Albuquerque Bernalillo County Water Utility Authority [collectively, the Water Managers]) will utilize to improve river conditions while meeting its principle water needs. The Fish and Wildlife Service (Service) will also be included in the WMP to reflect their involvement at Bosque Del Apache National Wildlife Refuge (BDANWR), as well as their regulatory and advisory role. Additionally, the six MRG Pueblos will be included in consideration of their status as the senior water right users, and their interest in MRG water management.

Each of the Water Managers will operate within and will not cede their respective water management authorities or responsibilities. The RIP action team (A Team) will make recommendations to the Water Managers based on forecasted hydrologic and water supply conditions, specified species needs, and identified scientific purposes, and the Water Managers will utilize the tools described in the WMP to meet those needs.

In the WMP, the tools will be sorted into one of three categories: 1) tools for minnow spawning and survival of larvae; 2) tools for providing suitable habitat for survival and recruitment of Minnow during low-flow periods in summer, fall, and winter; and 3) tools for enhancing coordination of water operations. Additionally, the WMP will describe a time horizon for each tool: short term, mid term and long term. Each tool will include a description, the principle water manager(s), the cooperating water manager(s), and a list of necessary actions that can be taken to fully implement the tool. Entering into specific water management agreement(s) with key parties may be a necessary action to implement some tools such as the Emergency Drought Water agreements.

Included in the WMP will be development of a drought management pool in upstream reservoirs to supplement river flows during drought conditions where water supplies are critically low. Additionally, the WMP will include specific focus on the San Acacia reach, and within that team BDANWR will be a critical member.

Timeline:

Reclamation proposes to take in a lead role while fully working with the Water Managers and the Service concurrently with completing the BA, the Supplement of State and other non-Federal, non-Pueblo actions, and developing the draft Biological Opinion (BO). The WMP will be a critical component of the RIP and will be negotiated and finalized as part of the RIP Action Plan between now and mid-September. The Service would then use the totality of the Action Plan that includes the WMP to fully analyze the proposed measures. The goal is to have these documents and associated commitments serve as the essential conservation measure going forward under the MRG RIP.

The WMP will be a component of the MRG RIP Action Plan and will be referenced in the Cooperative Agreements that each of the Water Management agencies will sign as part of their commitment to the MRG RIP process. It is anticipated that the MRG RIP documents and Cooperative Agreements will be complete and ready for incorporation into the BO at year's end. Together the individual Cooperative Agreements and the MRG RIP Action Plan that includes the WMP will memorialize each agency's commitment to support the actions described in the Action Plan and to utilize the necessary resources to develop and use each tool.

We will have a new BO with the MRG RIP as the essential Conservation Measure by February 2013!!

COOPERATIVE AGREEMENT
FOR THE MIDDLE RIO GRANDE COLLABORATIVE RECOVERY
IMPLEMENTATION PROGRAM

This Cooperative Agreement is entered into by the¹ United States Bureau of Reclamation (Reclamation), the United States Army Corps of Engineers (Corps), the United States Fish and Wildlife Service (Service), the Pueblo of Sandia, the Pueblo of Santa Ana, the Pueblo of Isleta, the Santo Domingo Tribe, the New Mexico Interstate Stream Commission, the New Mexico Attorney General's Office the New Mexico Department of Game and Fish, the New Mexico Department of Agriculture, the City of Albuquerque, the Albuquerque-Bernalillo County Water Utility Authority, the Middle Rio Grande Conservancy District, the Assessment Payers Association of the Middle Rio Grande Conservancy District, and the University of New Mexico.

I. Background

The Middle Rio Grande Endangered Species Collaborative Program (Collaborative Program) was established by Memorandum of Understanding (MOU) in 2002 as a collaborative effort consisting of federal, state, and local governmental entities, Indian Tribes and Pueblos, and non-governmental organizations to: A) act to prevent extinction, preserve reproductive integrity, improve habitat, support scientific analysis, and promote recovery of the listed species, in a manner that benefits the ecological integrity, where feasible, of the Middle Rio Grande (MRG) riverine and riparian ecosystem; and B) exercise creative and flexible options under the Endangered Species Act (ESA) so that water use and development can proceed in compliance with applicable laws.

A Memorandum of Agreement (MOA) signed by Program participants in 2008 superseded the previous MOU, as amended. In the MOA, Program participants committed to participate and support the Collaborative Program through May 2021.

In 2009, the Executive Committee (EC) of the Collaborative Program agreed to investigate and consider the transition to a recovery implementation program (MRGRIP or RIP) to better address the conservation needs of the species and to serve as an ESA compliance vehicle for water related actions in the MRG. The goals of the RIP are to:

1. Alleviate jeopardy to the listed species in the MRG Program area
 - Avoid actions that preclude survival or recovery of the listed species
 - Continually identify the critical scientific questions and uncertainties that will be addressed through adaptive management in support of a hydrologically and biologically sustainable MRG water operations Biological Opinion (BO)

¹ This list of signatories will reflect those parties that actually join the RIP through signing this Cooperative Agreement. In this example, we listed all 16 members of the Collaborative Program.

2. Conserve and contribute to the recovery of the listed species as described in the RIP
 - Stabilize existing population through ongoing and future management activities
 - Support the development of self-sustaining populations
3. Protect existing and future water uses
 - Provide a mechanism for ESA compliance for identified federal actions and ongoing non-federal water related actions
 - Provide a process for streamlined Section 7 consultation for future water uses needing compliance with the ESA
4. Be transparent to stakeholders, the public, and other interested parties

The RIP may not impair state water rights of individuals and entities or federal reserved water rights of individuals and entities; federal or other water rights of Indian nations and Indian individuals, or Indian trust assets; San Juan-Chama Project contractual rights; the State of New Mexico's ability to comply with Rio Grande Compact delivery obligations; or the Middle Rio Grande Conservancy District's statutory obligations to its constituents. Water to be acquired or otherwise made available must be from a willing seller or lessor and be used in compliance with the laws of the State of New Mexico including, but not limited to, permitting requirements.

To establish the foundation for a long term recovery implementation program, the RIP incorporates an Action Plan that draws from a Long Term Plan inventory based on the elements described in the species recovery plans. The RIP also incorporates an Adaptive Management Program framework for working towards recovery, and ESA compliance principles for water-related actions in the MRG.

II. Statement of Purpose and Agreement

The purpose of this Cooperative Agreement is to establish the Middle Rio Grande Collaborative Recovery Implementation Program. Through execution of this Cooperative Agreement, signatories are committing to participate in the MRG Collaborative RIP to the extent possible with full consideration given to the attached RIP Document that details RIP implementation.

[The following language is provisional as the Section 7 compliance process has not been completed.]

The [anticipated] 2013 BO identifies implementation of activities under the RIP's Action Plan (identified more specifically in annual work plans to be approved by the EC) as a conservation measure offsetting the effects of water related actions addressed in the 2013 BO. The Service agrees that implementation of that conservation measure will alleviate the likelihood of jeopardy and adverse modification under Section 7 of the ESA for the effects of water related actions addressed in the 2013 BO. The Service agrees that, except as provided in the 2013 BO, no other measure or actions shall be required or

imposed on the signatories to comply with the ESA with regard to the actions covered by the 2013 BO. The signatories are entitled to rely on this agreement in making the commitment described below.

The signatories to this Cooperative Agreement agree to participate in good faith to implement certain activities designed to offset the effects of water related actions in the MRG relating to species listed as threatened or endangered pursuant to the ESA and their associated habitats, and to use best efforts to work toward the recovery of such species, within the limits of each participant's authority. The recovery activities and the processes by which they are implemented are further identified in the attached RIP Document. The signatories to this Cooperative Agreement agree to participate in good faith and support the RIP including the committees established by the RIP. To the extent that implementing the RIP requires active cooperation by signatories, those signatories agree to take reasonable actions needed to implement the RIP. No signatory is required to take any action that would violate law or regulation, or an individual signatory's decrees or its statutory obligations or authorizations, or any applicable limits on its legal authority. No signatory is precluded from undertaking good faith negotiations over specifics applicable to implementation of the RIP.

III. Authorities and Responsibilities

A. Federal Cooperation with States. Section 2(c)(2) of the ESA, 16 U.S.C. 1531(c)(2), states that "the policy of Congress is that federal agencies shall cooperate with state and local agencies to resolve water resource issues in concert with conservation of endangered species." Under Section 6 of the ESA (16 U.S.C. 1535), the Secretary of the Interior is directed to cooperate to the maximum extent practicable with the states in carrying out the program authorized by the ESA and to consult with the affected states before acquiring any land and water, or interest therein, for the purpose of conserving listed species. Under 31 U.S.C. 6305, an executive agency should enter a cooperative agreement when anything of value will be transferred to a state or local government to carry out a public purpose authorized by federal statute.

B. Recovery Plans and Teams. Under Section 4(f) of the ESA, 16 U.S.C. 1533(f), the Secretary of the Interior is directed to develop and implement plans for the conservation of endangered species. The Secretary of the Interior may procure the services of public and private agencies, individuals and institutions in developing and implementing the recovery plans. Advice from these agencies, individuals, and institutions is not subject to the Federal Advisory Committee Act, 5 U.S.C. app.2.

C. Consultation and Regulatory Certainty. Under Section 7 of the ESA, 16 U.S.C. 1536, federal agencies shall use their programs and authorities in furtherance of the purposes of the ESA and ensure that their actions are not likely to jeopardize listed species or adversely modify designated critical habitat of such species. Under the Fish and Wildlife Coordination Act, 16 U.S.C. 661 *et seq.*, federal agencies must consult with the Service and with state wildlife agencies on the impacts to fish and

wildlife resources of federal or federally licensed or permitted water projects. The authority for federal agencies to enter into this Cooperative Agreement is provided under Section 1 of the Fish and Wildlife Coordination Act.

D. Operation of Federal Water Projects. The Reclamation and the Corps are charged with the operation of certain federal projects in the Middle Rio Grande Basin in New Mexico under applicable federal laws.

E. Operation of Water Projects by Local Authorities. Certain RIP signatories, such as the Albuquerque-Bernalillo County Water Utility Authority and Middle Rio Grande Conservancy District, have certain legal authorities and responsibilities to deliver water to meet the legitimate and legal demands of their ratepayers and constituents. Nothing in this Cooperative Agreement shall derogate from these signatories' authorities and responsibilities. These signatories will encourage habitat restoration and protection to the extent that goal is consistent with maximizing water resources dedicated to uses for present and future ratepayers and constituents.

F. Applicable State Law. Subject to applicable compacts and decrees, the State of New Mexico administers water rights, including water rights for fish and wildlife purposes. New Mexico also has certain statutory authorities and responsibilities to protect and manage its fish and wildlife resources. All water rights necessary to carry out the RIP will be applied for by a state agency or other project sponsor, and granted as appropriate under the state's water law and in keeping with state authorities and responsibilities for fish and wildlife. Nothing in this Cooperative Agreement shall be construed as creating federal water rights or requiring the granting of water rights to federal entities.

G. Applicable Tribal Law.
Text to be developed specific to signatories

H. Trust Responsibility.

- a. The United States has a unique legal relationship with Indian tribal governments as set forth in the Constitution of the United States, treaties, statutes, Executive Orders, and court decisions. Since the formation of the Union, the United States has recognized Indian tribes as domestic dependent nations under its protection. The Federal Government has enacted numerous statutes and promulgated numerous regulations that establish and define a trust relationship with Indian Tribes.
- b. Our Nation, under the law of the United States, in accordance with treaties, statutes, Executive Orders, and judicial decisions, has recognized the right of Indian tribes to self-government. As domestic dependent nations, Indian tribes exercise inherent sovereign powers over their members and territory. The United States continues to work with Indian tribes on a government-to-government basis to address issues concerning Indian tribal self-government, tribal trust resources, and Indian tribal treaty and other rights.

- c. The United States recognizes the right of Indian tribes to self-government and supports tribal sovereignty and self-determination.

I. State Responsibilities. Nothing herein shall affect the authority of New Mexico to manage, control and administer its water resources nor its authorities and responsibilities regarding its fish and wildlife resources. New Mexico shall efficiently manage costs in implementing RIP activities and encourage habitat protection by local authorities.

J. Statement of Authorities. The signatories hereby state that they have legal authority to enter into the Cooperative Agreement, and have legal authority to participate in the Middle Rio Grande Collaborative Recovery Implementation Program.

IV. Terms and Conditions

A. Effective Date and Duration. This Cooperative Agreement shall be effective upon execution and shall remain in effect until the federally listed species in the MRG addressed in the RIP are recovered or until amended pursuant to IV.D. below.

B. Approval. Government funding commitments made in this Program are subject to approval and appropriations by the appropriate Local, State, Tribal and Federal legislative bodies, and are subject to the approval of the signatories' governing bodies.

C. Anti-Deficiency Act. Nothing in this Agreement shall be interpreted to require any obligation or payment of funds in violation of the Anti-Deficiency Act (31 U.S.C. §1341).

D. Amendment. This Cooperative Agreement may be extended, amended, or terminated by agreement of the signatories. Any signatory may withdraw from the Cooperative Agreement upon written notice to the other signatories. Upon withdrawal, such signatory shall not be deemed to have waived or relinquished any right to challenge the legal, scientific, or technical validity of any aspect of the 2013 BO or agency action based thereon by virtue of its reliance on the RIP or by virtue of its support for the RIP in other administrative or judicial proceedings.

E. No Delegation or Abrogation. Although this Cooperative Agreement sets forth a cooperative process, all signatories to this Cooperative Agreement recognize that they each have legal and statutory responsibilities that cannot be delegated, and that this Cooperative Agreement does not, and is not intended to, abrogate any legal or statutory responsibility of the signatories. All signatories agree that they have respective rights, responsibilities and obligations, and each signatory will continue to act in an independent capacity, and no signatory is to be considered the officer, agent or employee of any other signatory.

F. No Admissions by Signatories. The signatories are entering into this Cooperative Agreement on a voluntary and cooperative basis in an effort to resolve ESA species conflicts through a negotiated and mutually agreed upon basin-wide program. Nothing herein shall constitute an admission that any ongoing water related activities or new water related activities have caused or will cause adverse effects to the target species or their habitats. Nor shall anything herein change the legal standards under Section 7 of the ESA applicable to water related actions in the MRG.

G. Recovery Implementation Program Modifications. Modifications to the RIP may be made following Program governance and decision-making protocol without requiring modification to this Cooperative Agreement.

H. Consistency with Applicable Law. This Cooperative Agreement is subject to and is intended to be consistent with all applicable Federal, Tribal, and State laws and interstate compacts. The provisions of any statutes and/or regulations cited in this Agreement contain legally binding requirements. The Agreement itself does not alter, expand, or substitute for those provisions or regulations. This Agreement does not impose legally-binding requirements on the Parties, nor does it create a legal right of action for the Parties or any third party.

I. Agency and Partnership. Unless expressly provided by law, personnel or volunteers of one party shall not be considered to be agents, partners or employees of the other party for any purpose, and no joint venture or principal-agent relationship shall be deemed to exist. The personnel and volunteers of one party are not entitled to any of the benefits that any other party provides for its employees or volunteers.

J. Sovereign Immunity. The signatories to this Cooperative Agreement do not waive sovereign immunity by entering into this Agreement and specifically retain immunity and all defenses available to them as sovereigns pursuant to State and Federal law.

K. Legal Rights and Remedies. Nothing in this Agreement shall be construed to alter the legal rights and remedies that each party would otherwise have. No party waives any legal rights or defenses by entering into this Agreement or participating in the process contemplated hereby. This Agreement is not a Federal contract, rule, or regulation. This Agreement shall not be construed as or interpreted to be final Federal agency action.

L. Liability. To the extent authorized by law, on behalf of itself, its officers, directors, members, employees, agents, and representatives, each party agrees that it will be responsible for its own acts and omissions and the results thereof and that it shall not be responsible for the acts or omissions of other parties, nor the results thereof. To the extent authorized by law, each party therefore agrees that it will assume the risk and liability to itself, its agents, employees, and volunteers for any injury to or death of persons or loss or destruction of property resulting in any manner from the conduct of the party's own operations and/or the operations of its agents,

employees, and/or volunteers under this Agreement. To the extent authorized by law, each party further releases and waives all claims against the other party for compensation for any loss, cost, damage, expense, personal injury, death, claim, or other liability arising out of the performance of this Agreement.

M. Notices section for points of contact?

N. Release of Information. Except as required by court order or ruling, no joint lead or cooperating agency will release any pre-decisional material or working information or documents to the public other than through an approved Freedom of Information Act request or comparable state law-based process, or unless the agency or agencies have already disseminated the specific materials or documents to the public. The agencies agree to inform each other if it is determined that there is a legal requirement to release any such information, and that information will include expected release date of the information.

O. Severability. Should any portion of this Agreement be judicially determined to be illegal or unenforceable, the remainder of the Agreement shall continue in full force and effect, and any party may renegotiate the terms affected by the severance.

P. Third Party Beneficiary Rights. The Parties do not intend to create in any other individual or entity the status of third party beneficiary, and this Agreement shall not be construed so as to create such status. The rights, duties and obligations contained in this Agreement shall operate only among the Parties to this Agreement, and shall inure solely to the benefit of the Parties to this Agreement. The provisions of this Agreement are intended only to assist the Parties in determining and performing their obligations under this Agreement.

Q. Endorsement. Nothing in this Agreement may be interpreted to imply that any party endorses any product, service or policy of the other Parties. No party will take any action or make any statement that suggests or implies such an endorsement.

R. Nondiscrimination. This Agreement is subject to all applicable statutes relating to nondiscrimination. Federal statutes relating to nondiscrimination include, but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352); and (b) Title IX of the Education Amendments of 1972 (20 U.S.C. 1681-1683 and 1685-1686).

IN WITNESS WHEREOF each party has caused this Cooperative Agreement to be executed by an authorized official on the day and year set forth below by signature.

By _____ Date _____
U.S. Bureau of Reclamation

By _____ Date _____
U.S. Army Corps of Engineers

By _____ Date _____
U.S. Fish and Wildlife Service

By _____ Date _____
Governor, Santo Domingo Tribe

By _____ Date _____
Governor, Pueblo of Sandia

By _____ Date _____
Governor, Pueblo of Santa Ana

By _____ Date _____
Governor, Pueblo of Isleta

By _____ Date _____
New Mexico Interstate Stream Commission

By _____ Date _____
New Mexico Attorney General's Office

By _____ Date _____
New Mexico Department of Game and Fish

By _____ Date _____
New Mexico Department of Agriculture

By _____ Date _____
City of Albuquerque

By _____ Date _____
Albuquerque-Bernalillo County Water Utility Authority

By _____ Date _____
Middle Rio Grande Conservancy District

By _____ Date _____
Assessment Payers Association of the Middle Rio Grande Conservancy District

By _____ Date _____
University of New Mexico

DRAFT