



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE Mountain-Prairie Region



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End. Species Act--Section 7

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### Memorandum

To: Implementation/Management Committee, Consultants, and Interested Parties

From: **Deputy** Regional Director, Region 6

Subject: Assessment of "Sufficient Progress" under the Upper Colorado River Recovery Program and of Implementation of Action Items in the December 20, 1999, 15-Mile Reach Programmatic Biological Opinion

#### I. "Sufficient Progress"

In accordance with the Section 7, Sufficient Progress, and Historic Projects Agreement, the Fish and Wildlife Service has reviewed the Colorado River Recovery Implementation Program's 2002 and cumulative accomplishments. Per that Agreement, the Service used the following criteria to evaluate whether the Recovery Program is making "sufficient progress:"

- Actions which result in a measurable population response, a measurable improvement in habitat for the fishes, legal protection of flows needed for recovery, or a reduction in the threat of immediate extinction
- Status of the fish population
- Adequacy of flows
- Magnitude of the impact of projects

A complete assessment of recent accomplishments under the Recovery Implementation Program Recovery Action Plan (RIPRAP) is contained in Attachment 1. Previous years' accomplishments are outlined in the RIPRAP itself.

#### A. Status of the Species

Significant changes in the status of the four species generally are not detected on a year-to-year basis. Table 1 presents the most current estimates of the mean number of wild adults in populations of Colorado pikeminnow and humpback chub, and provides a general overview of

efforts to augment or reestablish razorback sucker and bonytail populations in the Upper Colorado River Basin. Wild populations of Colorado pikeminnow and humpback chub have been studied since the 1960s, and population dynamics and responses to management actions have been evaluated since the early 1980s. It is anticipated that self-sustaining populations of razorback sucker and bonytail will be reestablished over the next 15 years, during which time population dynamics and responses to management actions will be evaluated. Regions 6 and 2 of the U.S. Fish and Wildlife Service (Service) are collaborating to ensure a coordinated effort to achieve the recovery goals in both the upper (including the San Juan River) and lower basins.

As stated in the recovery goals for the four endangered fishes, the Service considers a reliable population estimate as one that is based on a multiple mark-recapture model. Monitoring must be designed to determine if the demographic criteria of the recovery goals are being met. Accordingly, in the Upper Colorado River Basin, closed-population, multiple mark-recapture estimators are being used to derive population point estimates for Colorado pikeminnow and humpback chub (see section V). Population and demographic data collected through monitoring will be used to track progress toward achieving the recovery goals. The accuracy and precision of each point estimate will be assessed by the Service in cooperation with the Recovery Program and in consultation with investigators developing the point estimates and with qualified statisticians and population ecologists. Such an assessment will occur in 2004. In addition to the demographic criteria, the recovery goals identify site-specific management actions/tasks ("recovery factor criteria") to minimize or remove threats. Details of these and other management actions/tasks that contribute to recovery in the upper basin are identified in the Recovery Program's Recovery Implementation Program Recovery Action Plan (RIPRAP).

Table 1. Summary of species status.

SPECIES	RIVER SYSTEM		
	MIDDLE GREEN	LOWER GREEN	UPPER COLORADO
<b>Colorado pikeminnow</b>	About 3,500 adults (based on 2000 data); report on 2000–2003 estimates due March 2004.	Estimates initiated in 2001; report on 2001–2003 estimates due March 2004.	About 700 adults (based on 2000 data); estimates continued in 2003.
	SAN JUAN: Estimate of about 20 wild adults based on data collected in the early to mid-1990's; stocking young-of-year fish is currently underway.		
<b>Humpback chub</b>	<u>Yampa Canyon:</u> Population small, about 400 adults, based on model using 1998–2000 data. Effort expanded in 2003 to develop a more precise estimate.	<u>Desolation/Gray Canyon:</u> Estimates for 2001 and 2002 were 1,500 and 1,700 adults, respectively; estimates continuing with expanded effort in 2003.	<u>Black Rocks Canyon:</u> About 1,000 adults; estimates continuing in 2003. <u>Westwater Canyon:</u> 2,200–4,700 adults based on 3 sampling sites in 1998–2000; effort expanded in 2003. <u>Cataract Canyon:</u> About 500 adults; a mark-recapture will be investigated in 2003 (this effort was scheduled to begin in 2002 but was postponed due to low flows).
	LOWER COLORADO, GRAND CANYON: 2,000–4,000 adults (not including the mainstem); methods being reviewed to improve estimate.		
<b>Razorback sucker</b>	<100 wild adults; population being augmented through stocking, which is being expanded with excess fish stocked into selected floodplain depressions; stocked fish are returning to spawning bar; monitoring and evaluation of stocked fish in 2003–2004 being accomplished through sampling conducted for other population estimates and nonnative fish control.	Few wild adults; population being augmented through stocking; monitoring and evaluation of stocked fish in 2003–2004 being accomplished through sampling conducted for other population estimates and nonnative fish control.	Few wild adults; population being augmented through stocking; monitoring and evaluation of stocked fish in 2003–2004 being accomplished through sampling conducted for other population estimates and nonnative fish control.
	SAN JUAN: No estimate of adults is available; stocking 1-year-old-plus fish (greater than 300 mm total length) is currently underway.		
<b>Bonytail</b>	Populations are currently being re-introduced in Colorado, lower Green, middle Green and Yampa rivers; augmentation is being expanded with excess fish stocked into selected floodplain depressions; survival of stocked fish observed; monitoring and evaluation of stocked fish in 2003–2004 being accomplished through sampling conducted for other population estimates and nonnative fish control.		

## B. Accomplishments

Recovery Program participants accomplished several important objectives over the last year.

- Survival of larval razorback suckers and bonytails in the presence of nonnative fishes in the Stirrup wetland demonstrated how floodplain habitat can enhance recruitment of these fish; research of this type is expected to continue. Razorback suckers stocked in floodplain habitats are starting to show up in subadult and adult classes.
- Completion of Grand Valley Water Management Project check structures and demonstration that in most water years these structures will produce water savings that will accrue to the 15-Mile Reach during the base-flow period (see section II of this memo, PBO review).
- Recent completion of flow recommendations to benefit endangered fish species in the Gunnison and upper Colorado rivers. Reclamation has begun modeling operations of the Aspinall Unit to try to meet these flow recommendations, for which it will prepare an EIS. The Service and Reclamation will initiate discussions in September 2003 to develop an approach for addressing ESA compliance for Aspinall reoperations, as well as other Gunnison Basin projects.
- Lease of 10,825 acre-feet of water from Ruedi Reservoir for annual base-flow augmentation through 2012 completed (see section II of this memo, PBO review).
- The Recovery Program's stocking program is working. Numerous captures of adult razorback suckers from stockings in the Colorado and Green rivers; captures include fish on the Green River spawning bar. Gunnison River larval/spawning-site survey collected 8 larval razorback suckers (5 certain, 3 tentative identifications). These larvae are evidence that stocked fish are spawning in the Gunnison River.

The Service also wishes to acknowledge: 1) completion of integrated stocking plans for the entire upper basin and assessment of monitoring needed to evaluate the contribution of stocked fish to recovery; 2) recovery goals completed in August 2002; 3) completion of the draft strategic plan for geomorphological research and habitat monitoring; 4) completion of a draft floodplain model and initiation of development of habitat-management plans (expectation is that upon completion, capital project budgets will be re-examined); 5) development and initial implementation of a strategic communication plan to gain public support for nonnative fish management activities; 6) completion of a water-reuse system at Ouray National Fish Hatchery (the hatchery is now fully functional and producing razorback sucker larvae for stocking and research); 7) extension of the Recovery Program's cooperative agreement through September 30, 2013; 8) extension of the authorization period to 2008 for capital projects.

### C. Concerns

The Service's memorandum in 2002 assessing sufficient progress expressed concern regarding progress of: 1) evaluation of the floodplain restoration and land acquisition program so habitat restoration can move ahead per whatever new direction is recommended; 2) delays in removal (relocation) of northern pike and smallmouth bass from the Yampa River; 3) finalizing the Service's Gunnison/Colorado flow recommendations report so that the NEPA process and PBO can move forward; and 4) continued delays in completing capital projects on schedule (e.g., Government Highline fish passage and screen, Price-Stubb fish passage, and storage in the Yampa River basin to augment late summer flows). The Service is pleased with the progress the Recovery Program has made on items 1 and 3 above; however, items 2 and 4 continue to be concerns. Current areas of concern are:

- Nonnative fish management. Efforts to control problematic nonnative fishes has been an evolving process, with removal projects expanded in 2003 and taking a treatment-control experimental approach to identify the necessary levels of control. Although the Service is willing to wait for results of these studies and work cooperatively with other Recovery Program participants to determine future directions, the Service's expectation is that decisions will be based on science and that timely, significant progress will be made in efforts to remove or minimize this threat in accordance with the recovery goals. Due, in part, to the need for public outreach/education and last-minute changes in scopes-of-work, permits for removal projects in FY 2003 were delayed, which caused some field work to be delayed, curtailed, and/or cancelled. The Service's expectation is that such delays will not be encountered in the future.
- Continued delays in capital projects. In particular: Price-Stubb fish passage (now scheduled for completion 10/05); Government Highline diversion fish screen and roller dam passage (screen now scheduled for completion 03/04; passage now scheduled for completion 04/05); Grand Valley Water Management Project check structures automation and construction of pumping plant (now scheduled for completion 06/04); and Redlands diversion fish screen (now scheduled for completion 03/05). The Service's expectation is that current schedules will be met (see section II of this memo, PBO review).
- Timely and efficient operation and management of the GVIC fish screen and passage. Improvements to the fish screen are underway and automation of the fish passage is being considered. The Service's expectation is that the needed improvements will be completed by March 2004 and, thereafter, the fish screen and passage will be operated and maintained as prescribed (see section II of this memo, PBO review).
- Delays in the Flaming Gorge EIS process. The Service's most recent expectation was that the draft EIS would be out in June 2003. Continued delays in the EIS process have delayed re-operations to meet the flow and temperature recommendations and protection

08/04 P's  
04/05

of fish flows in the Green River downstream from the Duchesne River confluence.

Other items of concern include: 1) long-term protection of instream flows (needs to stay on the States' radar screens, as it is a requirement in recovery goals); 2) continued delays in completing the Yampa River Management Plan/EA and PBO; 3) the need for Colorado to complete their evaluation of State stocking regulations so the Service and the States can review and revise the Nonnative Fish Stocking Procedures; and 4) lack of progress by West slope water users in identifying a permanent source of their 5,412.5 acre-feet base-flow augmentation water supply (see section II of this memo, PBO review).

#### D. Conclusion ("Sufficient Progress")

Based on evaluation of the status of the fish, adequacy of flows needed for recovery, magnitude of depletion impacts, and cumulative Recovery Program accomplishments and shortcomings, the Service concludes that progress in the Recovery Program is sufficient for projects that have an annual depletion of up to 4,500 acre feet.

We are encouraged with the progress the Recovery Program made in 2002 and efforts accomplished so far this year. The severe drought conditions that occurred in 2002 were especially trying, but demonstrated the cooperative nature of the Recovery Program to work together to meet the needs of people and endangered fish. However, negative effects of the drought on the fish are yet unknown, and we are concerned that recurring delays in completing certain RIPRAP items (see above) exacerbated those effects. For example, if fish passage had been completed, fish would have had access to upstream areas where water and habitat were more plentiful. Similarly, if fish screens had been in place, entrainment of fish in diversion canals would have been prevented; entrainment is of higher concern during drought because diversions are capturing a larger portion of the river flow. Recovery Program participants need to actively pursue resolution of the issues identified above, and we ask that regular progress reports on these items be provided to the Management Committee. We are confident that with continued cooperation by all Recovery Program participants, the Program will continue to make significant strides toward recovery of the four endangered fishes.

## II. Implementation of Items in the 15-Mile Reach Programmatic Biological Opinion

On December 20, 1999, the Service issued a final programmatic biological opinion for the Bureau of Reclamation's operations and depletions, other depletions, and funding and implementation of Recovery Program actions in the Upper Colorado River above the Gunnison River. Known as the "15-Mile Reach Programmatic Biological Opinion (PBO)", the opinion specifies how the Recovery Program will recover endangered fish while water development proceeds in the Upper Colorado River. The PBO cites action items in the Program's Recovery Action Plan (RIPRAP) and charges the Recovery Program with responsibility to ensure these action items are completed and/or implemented. Page 74 of the PBO says: "In 2003 and every 2 years thereafter, for the life of the Recovery Program, the Service and Recovery Program will

review implementation of the Recovery Action Plan actions to determine timely compliance with applicable schedules.” The Service recently conducted this review in consultation with Recovery Program partners (see attached status report) and concluded that the Program is making good progress in accomplishing most of the action items listed in the PBO. Although the schedule for some tasks has slipped, the PBO recognized this might happen:

Page 6: “Under the Recovery Program, the Recovery Program Director’s office annually sends a request to all participants for recommended changes to the Recovery Program’s Recovery Action Plan. These changes include revised due dates, additions and deletions of recovery actions, additional steps to complete a recovery action, or a change in the lead agency responsible for ensuring completion of a recovery action item. . . . Final changes to the Recovery Action Plan require consensus by all Implementation Committee members. If consensus is not reached on a proposed change, the subject item in the Recovery Action Plan remains unchanged. The Implementation Committee routinely makes changes to the schedule for completing recovery actions when the delay is due to uncontrollable circumstances.”

Page 7: “It is the Recovery Program’s responsibility to ensure that all elements of the Recovery Action Plan affecting the Colorado River and other rivers are completed and/or implemented consistent with Recovery Program schedules (contained in the April 1999, “Section 7 Consultation, Sufficient Progress, and Historic Projects Agreement and Recovery Action Plan” and subsequent revisions).”

The PBO review identified the following issues, which are also discussed under Sufficient Progress (section I of this memo):

- Slow progress on providing a permanent source of the West slope portion of the 10,825 acre-feet of base-flow augmentation water and selecting and implementing preferred alternatives under CFOPS to provide up to 20,000 acre-feet on the spring peak.
- Land acquisition for floodplain restoration proved much more expensive than anticipated and relatively few landowners have been willing to participate. The Recovery Program is working to acquire a few more parcels and to best manage the floodplain habitat we have available. If this is not enough habitat to support a self-sustaining population of razorback sucker in the upper Colorado River subbasin, then Recovery Program participants will need to consider using additional Federal and State-owned parcels for this purpose. Additional floodplain habitat is expected to become available when passage is restored at Price-Stubb and the Grand Valley Project on the Colorado River.
- Nonnative fish removal also has turned out to be more difficult than originally anticipated. Efforts at pond reclamation and cyprinid/centrarchid removal from backwaters proved ineffective, but the Recovery Program is moving forward to identify

sources of nonnative fish to determine if they can be controlled at their sources and has also begun to remove channel catfish from the river. State participation and support will be critical in these efforts to reduce the impact of nonnative fish on endangered fish. Part of Colorado's key role in this effort has been development and implementation of Aquatic Management Plans and evaluation and implementation of the Nonnative Fish Stocking Procedures.

- Continued delays in completing capital projects such as Price-Stubbs fish passage and Government Highline fish screen and passage.

*John A. Blawie*

Attachments

May 21, 2003

FY 2003 RIPRAP ASSESSMENT  
Significant Accomplishments (✓) and Shortcomings (✗)

PAGE/ITEM #      STATUS ASSESSMENT

These items fall under more than one river basin action plan:

22, IIA2                      ✓ Technical evaluation of the habitat acquisition program is ongoing.  
>\*26, IIA2d                The Program Director developed a new approach involving preparing  
>\*34, IIA5d                subbasin and site-specific management plans. While the evaluation is  
   underway, land acquisition has proceeded on a few key properties already  
   in process. Three easements were acquired for a total of 121 acres during  
   FY 02. In addition, the Audubon property was secured and an offer was  
   made on Thunder Ranch in early 2003.

GENERAL RECOVERY ACTION PLAN

- 23, IIIB5                    ✓ The Ute Indian Tribe, Uintah and Ouray Agency, has verbally agreed to  
   the Nonnative Fish Stocking Procedures. The Service and Program  
   Director's Office will develop a memo to document tribal acceptance.
- 23, IIIB6                    ✗ The Nonnative Fish Stocking Procedures were not reviewed and revised  
   as planned during FY 02. Colorado has yet to complete an evaluation of  
   state stocking regulations.
- 24, IVE2a                    ✓ Ouray National Fish Hatchery now has a water reuse system, is fully  
   functional and is producing razorback sucker larvae for stocking and  
   floodplain experiments.
- 24, IVF1                    ✓ Assessment of monitoring needed to evaluate contribution of stocked  
   fish to recovery accomplished in August 2002 workshop.
- 24, VI                        ✓ Held signing ceremony for extension of the Recovery Program.  
   Secretary of the Interior Gale Norton joined the Governors of Colorado  
   and Wyoming and WAPA Administrator at the Colorado State Capitol.  
   Utah's Governor signed at a separate time.
- ✓ Worked with The Nature Conservancy to develop an educational  
   exhibit with an aquarium displaying razorback sucker at a site along the  
   Yampa River where extensive recovery work is under way. Other exhibits  
   at sites with high visitation in targeted communities included the Vernal  
   Library, the Museum of Western Colorado, the Colorado and Utah State  
   Fairs, and conferences targeting Upper Basin water users.

- 27, IVA1 ✓ Endangered fish stocking plans for Colorado and Utah have been revised and integrated and are being implemented.
- >27, IVA1c ✓ 39,100 5–8" juvenile bonytail were stocked into the Green River system (13,400 in Colorado and 25,700 in Utah). (A total of 33,000 is called for in the middle and lower Green River under the new integrated stocking plan.)
- ✗ No sub-adult razorback sucker were stocked in the Green River in 2002 because available fish needed another year of growth to achieve the desired stocking size. (A total of 19,860 is called for in the middle and lower Green River in the new integrated stocking plan.)
- 27, IVA1c1 ✗ Draft bonytail flow training report (Crowl) not accepted. Dropped. (Report recommended additional research, but contained little useful information.)
- 27, VB1 ✓✗ Data collected for estimate of humpback chub in Desolation/Gray canyons (although only 2 of 3 planned passes could be completed due to low flows). Sampling will be moved from summer to fall beginning in FY 03 (assuming flows are sufficient) to reduce fish stress; sampling may have to be extended an additional year through fall 2004 (or more if flows insufficient) to produce comparable estimates.
- 27, VC ✓ Data collected for estimate of Colorado pikeminnow in the Green River.

#### YAMPA/LITTLE SNAKE RIVERS

- 28, IA2a2 ✓✗ Yampa scoping meetings held and comments solicited and received on draft Yampa management plan. NEPA compliance will be completed in FY 03. However, progress to complete Yampa Management Plan and PBO continues to be slower than expected.
- 28, IB2a2 ✓ Water supply alternatives identified and evaluated.
- 28, IC2b&ID1b ✗ Service did not identify Little Snake flows or update Yampa flow recommendations – Service anticipates completing this by 6/03.
- 29, IIA1c ✗ Guidelines to facilitate fish passage not prepared. Program Director's office will prepare draft by June 2003.
- >\*29, IIIA1b1 ✓ A total of 539 northern pike were removed from the Yampa River. Of those captured, 288 were translocated to Rio Blanco Reservoir and 165 to Yampa State Wildlife Area ponds. Many local anglers were pleased with the opportunity to catch these fish in the Yampa SWA ponds.

permanent 5412.5 af.

- >\*33, IA513 ✓X Check structures and on the Grand Valley Project canal were completed and operated in 2002 to reduce river diversions. This demonstrated that the check structures will provide additional water to benefit the endangered fish in most years (but not in a year as dry as 2002). Agreement reached in February 2003 on appraised value of storage space in Highline Lake in order to complete pumping plant facility (a component of GVWM which would allow optimum use of Grand Valley Project water). Coordinated automation of check structures still needs to be completed.
- 33, IA5m1 X✓ Coordinated Facilities Study is behind schedule, but expected to be complete by the end of FY 2003.
- 33, IB1 ✓ Flow recommendations (Gunnison & Colorado) report approved by Biology Committee on May 15, 2003.
- 34, IIA3e X✓ Hamilton's overdue Walter Walker selenium remediation report on track for completion in May 2003.
- >\*34, IIB1b3 ✓ Grand Valley Irrigation Company diversion canal fish screen was completed in March 2002.
- X Due to low flows and operational problems, the screen was not operated through most of the irrigation season. It is anticipated that problems with screen operation will be fixed in the near future.
- >\*34, IIB2a3 X Provision of fish passage at Price-Stubbs still behind schedule. Construction tentatively scheduled for FY 04-05.
- >\*35, IIIA2 ✓ X In November 2001, one 19-acre pond on the Colorado River was reclaimed. Project results presented at the Nonnative Fish Control Workshop held February 13-14, 2002, suggested that reclaimed ponds are quickly re-invaded. As a result, pond reclamation was put on hold and the project has been modified to identify major sources of centrarchids prior to resuming any control activities.
- >\*35, IIIB1a&b ✓ The fish barrier net installed in Highline Reservoir continues to operate successfully. Will need replacement if/when determined necessary.
- 35, IIIB4 ✓X Colorado River Aquatic Management Plan in draft; should be completed in 2003.
- 35, IVA ✓ Endangered fish stocking plans for Colorado and Utah have been revised and integrated and are being implemented.

- >35, IVA6c ✓X 8,000 bonytail (6") stocked in the Colorado River in Utah. (A total of 16,500 are called for in the Colorado River under the new integrated stocking plan.)
- 35, VC1 ✓ Report on population estimate of humpback chub in Black Rocks finalized.
- 35, VC2, ✗ Report on population estimate of humpback chub in Westwater late; but now in review.
- 35, VD ✓ Report on population estimate of Colorado pikeminnow in the Upper Colorado River finalized.

### GUNNISON RIVER ACTION PLAN

- >\*37, IIB1c&d ✓ Redlands fish ladder is working for Colorado pikeminnow and native fishes. In 7 years of operation, 59 pikeminnow, 6 razorback sucker and nearly 50,000 other native fishes have used the passageway.
- 37, VA2 ✓ Gunnison River larval /spawning site survey found 8 larval razorbacks (5 certain, 3 tentative identifications). These larvae came from stocked fish and spawning is occurring in the Gunnison River.

Recovery Actions in 15-Mile Reach PBO	RIPRAP Item #	Status	PBO Page #
Define Existing Depletions/Calculate New Depletions			
a). Develop consumptive use and losses report with CRDSS model to verify level of depletions.	Colorado: IA3b	Pending in 05; included in FY 04-05 Program Guidance.	Apx. B, #6
b). Calculate new depletions as a 10-year moving average as determined by CWCB and reported to FWS & CRRIP (every other year or every 5 years).	Colorado: IA3c	Begins in 2011.	7
Habitat Protection Element			
General Protection			
Enforcement Agreement between FWS and CWCB.	General: IC1	Completed in 1993.	8
Late Summer and Fall Base-Flow Period Augmentation			
a). Instream flow decree for 581 cfs in 15-mile reach during July, August, and September.	Colorado: IA4c1	Completed in 1997.	8
b). 300 cfs instream flow right for water accretions in 15-mile reach.	Colorado: IA4c2	Completed in 1997.	8
c). 5,000 acre-feet (af) annually + 5,000 af 4 out of 5 years from Ruedi.	Colorado: IA5a	Ongoing since 1989.	8
d). 21,650 af/year split evenly between Ruedi and water users.	Colorado: IA5b, c, d	Ongoing since 1997. Ruedi long-term agreement for 10,825 af through 2012 being negotiated and should be completed in spring 2003 (*note: agreement was signed in June 2003). 5412.5 af from Williams Fork for east slope water users short-term commitment and 5412.5 af from Wolford for west slope water users commitment through 2010 (extendable for an additional 5 years).	8
e). After 2010, the water users must provide a permanent source of the 10,825 af (divided equally between east and west slope).	Colorado: IA5e3	East slope water users working on Sulphur Gulch; west slope water users just beginning discussions, so this is likely falling behind schedule. Preferred alternative to be selected by July 2005.	8-9
f). 6,000 af from Wolford.	Colorado: IA5h	Ongoing since 1996.	10
g). Grand Valley Water Management - 9,000 af to 15-mile reach through Palisade Pipeline and up to 19,400 af to surplus HUP pool in Green Mt. Reservoir.	Colorado: IA5i	Construction of check structures and Palisade pipeline complete and operational; pumping plant construction scheduled for 2003. Contract for Green Mt. Reservoir water finalized in 2002.	10
Spring Peak Enhancement			
a). Coordinated Reservoir Operations - in all but extremely dry or wet years.	Colorado: IA5i2	Spring peak flows augmented 1997, 1998, 1999. Water years 2000, 2001, and 2002 were below 12,900 cfs threshold.	11
b). Coordinated Facilities Operations Program - provide up to 20,000 af.	Colorado: IA5m2	Phase II report completion pending, Executive Committee identifying preferred alternatives based on study analysis and reality check. Phase II report completion expected in FY 03. Implementation expected in FY 2004.	11
Habitat Development and Maintenance Element			
Floodplain Restoration and Selenium Remediation		Program is preparing subbasin and site-specific management plans to provide clear objectives, costs, and measures of success.	

Recovery Actions in 15-Mile Reach PBO	RIPRAP Item #	Status	PBO Page #
a). Gardner Pond (29-5/8 Road Gravel Pit).	IIA1	Construction complete; operation ongoing.	12
b). Jarvis.		Construction complete; operation ongoing.	
c). Adobe Creek.	IIA2	Construction complete; operation and management plan on hold pending resolution of selenium issues, determination of best use, and permission of new owners. Depending on FY 03 fund availability, NIWQP to purchase right-of-way and construct selenium remediation facilities here in 2003.	13
d). Walter Walker.	IIA3	Construction complete; operation ongoing. More levee to be removed in 2003.	13
e). Land acquisition and levee removal. Fish Passageways	IIA4&IIA5	The PBO estimate of acquiring interest in up to 3,500 acres of bottomland habitat in the Grand Valley and along the Gunnison River turned out to be quite high based on landowner response. Floodplain restoration has proved much more expensive than anticipated and relatively few landowners have been willing to participate. The Recovery Program has acquired 254 acres of floodplain/wetland habitat, and is working to acquire a few more parcels along the Colorado River and to best manage the floodplain currently available. Until it is determined that there is enough habitat to support a self-sustaining population of razorback sucker in the upper Colorado River subbasin, Program participants will continue to consider using additional Federal and State-owned and other parcels for this purpose when additional areas become accessible following restoration of passage at the Grand Valley Project (Government Highline). Additional floodplain habitat is expected to become available when passage is restored at Price-Stubb and the Grand Valley Project on the	13
a). PBO states passage to be completed at Price-Stubb in 2000 (or 2002 if dam removal alternative selected).	Colorado: IIB2	Pending: construction of rock ramp alternative to begin in FY 04 and be complete by Oct. 2005 (delayed due to FERC issues and other landowner conflicts).	13
b). GVIC fish passage.	Colorado: IIB1a3	Completed in 1998. Operational criteria to be completed in 2003.	13
c). Grand Valley Project (Government Highline) fish passage.	Colorado: IIB3	Pending: construction of fish ladder (selective passage) scheduled for completion in 2004 (delayed due to landowner conflicts and overall budget/construction priorities).	13
Native Fish Stocking Element			
Raising native fish in hatcheries and grow out ponds, and stocking them in the riverine habitat.	Colorado: IVA3, IVA4, IVA5	Ongoing. Stocking goals will be met or exceeded in 2003.	14
Nonnative Fish Control Element			
Regulations and Agreements			
a). 1996 Nonnative Stocking Procedures.	General: IIB3	Complete.	15

Recovery Actions in 15-Mile Reach PBO	RIPRAP Item #	Status	PBO Page #
b). 1999 Restriction of stocking of private ponds in Colorado.	General: III B4	Complete; evaluation ongoing.	15
c). Bag limits removed for nonnative warm-water sportfishes in critical habitat in Colorado.	Colorado: III B2	Complete.	15
d). Close river reaches to angling where and when angling mortality determined to be significant to native fish.		CDOW agreed to do when and where necessary.	15
e). CDOW Colorado River fisheries management plan.	Colorado: III B4	Pending: final draft to FWS and Recovery Program by 9/30/03; final approval by Wildlife Commission expected by 12/31/03; implementation in 2004.	16
Removal Efforts			
a). Pond Reclamation.	Colorado: III A2	Pond reclamation accomplished, but proved ineffective. Research initiated to document sources of nonnative fish so Program can determine if they can be controlled at the source.	15
b). Removal of nonnative fishes from back waters.	Colorado: III A3	Pilot program to remove small cyprinids and centrarchids complete, but proved ineffective (one report still pending.) Research begun to document sources of nonnative fish, which may provide another avenue of control. Also, work begun to identify required level of channel catfish control.	16
Research, Monitoring, and Data Management Element			
a). Population estimates will be used to determine if Recovery Actions result in a positive population response.	Colorado: VB; VB3	ISMP proved to be ineffective in tracking population trends. Population indices revised to conform to recovery goals and population estimates ongoing. Current estimates: ~700 adult CPM; ~1,000 HBC in Black Rocks; 2,200-4,700 HBC in Westwater. Service needs to determine first reliable estimates to initiate tracking of population trends (assessment planned for summer 2004).	16
b). Recovery goal development. If population meets or exceeds recovery or Apx. D goals, it will be considered to exhibit a positive population response.	General: VII A5d	Recovery goals complete and supersede population criteria in Apx. D.	16-17
Long-term Funding and Annual Appropriations.	General: VII B	Complete and ongoing.	17
Recovery Agreements			
a). With consultations.	N/A	Ongoing	18
b). By water users controlling a majority of existing depletions above the Gunnison River.	N/A	Complete	18
Depletion Charges on New Depletions.	N/A	Ongoing	19

Recovery Actions in 15-Mile Reach PBO	RIPRAP Item #	Status	PBO Page #
Incidental Take			
a). Develop plan to monitor incidental take of endangered fish in diversion structures.	Colorado: VB4a	Pending (although delayed from original 2001 date): FWS to develop plan in 2003. Anticipate plan will be similar to the 2002 salvage efforts.	71
b). Estimate amount of incidental take of young razorback and pikeminnow in the 15-Mile Reach.	Colorado: VB4b	Pending (after screens are in place and fully operational).	71
Fish Screens (Reasonable & Prudent Measures)			
a). GVIC.	Colorado: IIB1b	Complete; modifications underway.	71
b). Grand Valley Project Gov't Highline.	Colorado: IIB3b	Pending; construction scheduled for completion in 2004.	71
Reinitiation			
a). Review RIPRAP implementation.	Colorado: IA6	This is it. (2003 and every 2 years thereafter).	p.74, c.