

April 7, 2010

FINAL  
**MANAGEMENT COMMITTEE CONFERENCE CALL SUMMARY**  
February 25, 2010

1. Roll call, review/modify agenda – The agenda was modified as it appears below.
2. Approve October 13-14, 2009, meeting and December 4, 2009, conference call summaries and review previous meeting assignments – The meeting summary was approved as revised (>Angela Kantola will post the revised summary to the listserver) and the conference call summary was approved as written.
3. Review of tasks specified in the June 11, 2009 FY 2009 sufficient progress memo (see Attachment 2).
4. Updates
  - a. Fiscal Year 2011 Recovery Program Funding Recommendations Included in the President’s budget – John Shields posted a draft of the non-federal participants’ funding request flyer to the fws-coloriver listserver today. Brent Uilenberg said budget formulation was very unusual this year and he expressed concern about the likelihood of receiving the ~\$7M identified in the President’s budget. Service amounts are \$709,000 for recovery, \$485,000 Ouray NFH (Upper Colorado), and \$200,000 for the San Juan.
  - b. Washington, D.C., briefing trip – John Shields posted a pdf of the *Program Highlights* briefing book, a sample meeting “backgrounder,” the current meetings itinerary, and the invitation to the Congressional Staff appreciation luncheon to the fws-coloriver listserver today. The non-federal Program participants are working on their annual funding support letters. Ted Kowalski said he believes Alex Davis will participate in the trip for Colorado.
  - c. Legislation: base funding & Ruedi – Tom Pitts posted draft Ruedi legislation and scoring of the Senate and House versions of the annual funding legislation to the fws-coloriver listserver yesterday. One of these two bills could be part of omnibus legislation this year. Tom thinks one of the bills will pass; however, we likely won’t know the outcome until September or October (and thus we won’t know until then if the balance of our annual funding after 2011 will need to be appropriated or continue under power revenues). Brent said Reclamation will try to build appropriations into their FY 13 budgeting process, should the legislation require that, but noted that Reclamation’s 2012 budget has already been submitted to their Washington office. If funding for nonnative fish removal, etc., is not available, it will raise serious ESA compliance issues. Tom Pitts said the Ruedi legislation would make the west slope water users’ provision of Ruedi water under 10,825 non-reimbursable in terms of both capital costs and O & M costs. This legislation is in draft and Tom is soliciting comments.

- d. Capital projects – Brent Uilenberg provided an updated budget table (see Attachment 3). Brent said they'd considered replacing some of the GVIC screens, but GVIC doesn't believe that's necessary at this point. Brent has been working with the Service to develop a permanent solution for fish rearing ponds (for both the Upper Colorado and San Juan programs); they've identified Horsethief as the best place for these ponds. Reclamation needs the recovery programs to quickly confirm the number of ponds, total acreage, and pond configuration so that funds can be obligated this fiscal year. This will be on the Biology Committee's March 10-11 agenda (and the Service and Reclamation will provide justification in advance for the Biology Committee's review). Twenty quarter-acre ponds would cost about \$4.5M total, allocated between the San Juan and Upper Colorado programs. Brent would like to proceed with the value engineering study; Tom Czaplá has suggested that Manuel Ulibarri (Dexter NFH&TC) serve as the Service's expert to participate and provide peer review. O&M costs are not expected to increase because retrieving fish from the leased ponds has been so inefficient. Assuming Biology Committee approval, then the Management Committee supports the construction of these ponds. OMID – Brent said Colorado is very supportive of potentially participating and contributing O&M funds to the OMID Canal automation, but are still working to commit funds. (Tom Pitts suggested including the brief write-up on OMID in the DC package.) At Price-Stubbs, the PIT tag reader won't be installed until after peak runoff. Brent said with all of these items included, our capital funds still have an adequate cushion.
- e. [10.825 Alternatives](#) update – Tom Pitts said water users have developed a 2-component alternative: 1) Ruedi continued use of 5412.5 much as in the past (West Slope); 2) 5412.5 releases from Granby Reservoir (provided to Granby via conversion of an old irrigation right) (East Slope). The NEPA process began last fall and now is into technical reports, assessments, and hydrological analyses. Tom said he believes they've found a way to address issues regarding flows in the Frying Pan River (Basalt economic interest for trout anglers). Interim agreements are in place with Denver and the River District to release water from Wolford and Williams Fork through July 1, 2010; those agreements will be extended, probably through 2013. Permanent agreements will be in place by the PBO deadline. NEPA compliance likely won't be completed until mid-September.
- f. Aspinall PBO & [EIS](#) – The [PBO](#) was completed in December. The Biology Committee has begun discussing monitoring requirements as outlined in the PBO (see attachment 4). >For the D.C. trip, the PD's office will add a link to the PBO to the 1-page backgrounder in attachment 4 (and explain that the PBO provides ESA compliance for all historic projects and a block of future water). The final EIS is in process and Reclamation hopes to complete the ROD in 2010, at which point they can implement the preferred alternative to help meet the flow recommendations. In the meantime, operations likely will be similar (given sufficient hydrology), but not exactly like those in the preferred alternative.
- g. Green River flow protection – On February 18, Tom Chart sent the Management and Water Acquisition committees a copy of the letter sent by the Utah State Engineer to Julie Lyke regarding legal protection of Green River flows. A task force has been

formed to identify alternative approaches to flow protection and has begun meeting regularly. The Utah State Engineer's office has proposed a schedule to complete the daily time-step modeling by July 1, 2010; analyze demand scenarios under various flow conditions by January 1, 2011; review options for legal projection of flows in FY 11, and then begin implementing flow protection 2012. These steps will be added to the RIPRAP (dates are still under discussion and the Management Committee will have another opportunity to review the proposed dates during their April RIPRAP review). The Service filed a letter of protest to the Blue Castle nuclear plant change application. Blue Castle would like to identify water from Flaming Gorge available to the Recovery Program, but that's tied to the larger Utah flow protection process and the Service believes we need to let that process unfold first.

- h. Program Director's Office updates (Chart, 5 min)
  - [2011 depletion charge and annual agency budget adjustments](#) – Angela Kantola posted this to the fws-coloriver listserver on 2/6/10. The CPI adjustment was -0.4% (applies to Service and State FY 11 contributions and the FY 11 depletion charge). Reclamation's FY 11 power revenue contribution will be adjusted based on the CPI to be released this coming October. >Angela Kantola will check with Dave Campbell regarding the San Juan Program treating a negative CPI as zero. *Done: Mark McKinstry (BOR) in the San Juan Program said the San Juan Program did experience the negative 1.3% CPI this year.* .
  - RIPRAP revisions/assessment; 2011 work plan modifications – The Program Director's office recommendations were posted to listserver on 2/11/10 and these now are in technical committee review. The Management Committee can expect to see the technical committees' comments by mid to late March.
  
- 5. Discuss agenda for March 3, 2010, Implementation Committee conference call – Angela Kantola posted the draft agenda to the fws-coloriver listserver on 2/23/10 (see below). >The Program Director's office will provide background information on LCC's prior to the Implementation Committee call (*done*).
  - Approve September 24, 2009, meeting summary
  - Updates
    - Southern Rockies Landscape Conservation Cooperative (LCC) (Guertin, DeAngelis, 15 min)
    - Updates on Program legislation and post-2011 base funding (Pitts, 15 min)
    - Washington, D.C., briefing trip (Shields, Pitts, 15 min)
    - Capital projects (Uilenberg, 10 min)
    - [10,825 Alternatives](#) update (Pitts, 10 min)
    - Aspinall PBO & [EIS](#) (Uilenberg, Chart, 15 min) (See Attachment 4)
    - Green River flow protection (Mohrman, 10 min)
    - RIPRAP revisions/assessment; 2011 work plan modifications (Kantola, 5 min)
  - Schedule September 2010 Implementation Committee meeting (All, 10 min)
  
- 6. Upcoming Management Committee tasks, discuss agenda for April 7, 2010 meeting (Hilton Garden Inn Denver Airport, 16475 East 40th Circle, 9:30 a.m. to 3:30 p.m.) – Agenda items will include: review (and approval, if delegated by the Implementation Committee) of

RIPRAP revisions and assessment and modifications to the 2011 work plan; updates on development of the Selenium Management Program and Gunnison River Study Plan, a discussion of how we can get to a decision on Tusher Wash; updates on and follow-up on Washington, D.C. briefing trip.

**ADJOURN 3:45 p.m.**

**Assignments**

**Assignments from Previous Meetings**

1. The **Fish and Wildlife Service** will meet to consider if it would be acceptable to screen the irrigation water and not the low-head hydropower water at Tusher Wash or if other methods (e.g., a weir wall) might achieve our objectives for screening Tusher Wash. *Discussions underway; but pending decisions on dam rehabilitation. 8/10/09: Robert King said no decision has been reached yet on dam rehabilitation. Brent said a fish preclusion weir such as the one that will be installed at the Hogback Diversion on the San Juan could be an option if fish mortality in the power turbines isn't a significant problem (and would cost much less than the \$7-\$9 million to screen the entire canal flow). Brent Uilenberg will draft a recommendation for reviewing this. (Ask Biology Committee to review, first considering work done on similar turbines and potential for fish-friendly turbines, if needed. If this is unclear, field work may be needed to determine mortality at Tusher; this might be considered pre-design work under capital funds). Brent will prepare a decision tree outline. 2/25/10: Brent will send this out. The key decision point is to determine if fish entrainment mortality through the turbines acceptable (which may require a scope of work to do some monitoring and evaluation). Perhaps "fish-friendly" turbines would be a good alternative. Another question is whether the owners plan to raise the height of the dam. The Committee agreed to put a discussion of this item on their April meeting.*
2. The **Program Director's office** will provide a more specific recommendation regarding establishing a basinwide recovery/conservation oversight team for the endangered fishes. *8/10/09: Tom Czaplá said the Program Director's office believes that some continuing coordination by Service staff in California/Nevada and Regions 2 and 6 is the best way to accomplish this. As with the recovery goals, these Service offices would maintain communication with their stakeholders and then coordinate with one another. Tom will ask that Service group for their suggestions on how they would like to continue this coordination role as the recovery goals revision process wraps up. Pending. 2/25/09: Service Solicitor strongly recommended revising the full recovery plans (which will include the recovery goals). Tom Pitts asked if the recovery team would be reconvened; >the Service will look into this and also into Tom's question as to whether recent regulations have expanded potential recovery team membership.*
3. **Brent Uilenberg** will provide a revised RIPRAP budget table ASAP. *Pending now that capital funds indexing has been determined. 8/10/09: Reclamation is working on this, but will need an estimate of needed rearing ponds (number, acreage, flow needs). Tom Czaplá will provide additional information on pond space needed for humpback chub, backup bonytail broodstock, etc. Ponds may be developed at Horsethief State Wildlife Area and the Upper Basin may be first in line for capital funds in 2010-2012 due to delays in San Juan*

projects. 10/14: Pending shortly; Michelle Shaughnessy is meeting with Reclamation regarding ponds next week. 2/22: Service preparing a justification for building ponds at Horsethief to be reviewed by Biology Committee in March. PD's office has recommended Manuel Ulibarri of Dexter NFH provide Service expertise for the value-engineering review.

4. The **Program Director** will further discuss with the Service developing a programmatic biological opinion for the White River Basin when the Gunnison River PBO nears completion. *Pending. 8/10/09: We need to review the flow recommendations. Tom Pitts also suggests reviewing water demand data from the state (unclear if that's been updated to include projected needs for oil and gas development). Dan McAuliffe said a pending roundtable report should address oil and gas development and associated water demand estimates. (Dan Birch can provide status update).*
5. **Dan McAuliffe** will discuss Yampa River habitat modifications with Tom Nesler and Sherm Hebein. Reclamation remains available to assist. *2/22: CDOW continues to modify connected slackwater habitats to hinder NP reproduction in the upper Yampa River. BOR determined that previously-contemplated habitat modification using berms at RM 151 was not feasible due to local channel dynamics. However, other forms of channel manipulation may be possible to exclude northern pike (to be discussed by BC).*
6. The **Program Director's Office (Tom Czapla)** will alert the committee when the 5-year status reviews are completed and provide a link to the documents. *Pending; no change in listing status anticipated.*
7. The **Program Director's Office** will develop FY 2011 guidance for research to determine levels of selenium that affect eggs of endangered Colorado pikeminnow and razorback sucker (working with the San Juan Program). *2/22: Not yet developed; should be a component of the Gunnison River Study Plan.*
8. **Tom Pitts** will follow up on why the "to the maximum extent practicable..." phrase was added to the most recent draft of the Ruedi legislation. *2/25/10: This language is no longer included in the draft language.*
9. The **Program Director's office** will discuss drilling in the floodplain further with the states' Management Committee members to determine appropriate next steps. *On hold.*

### **New Assignments**

1. **Angela Kantola** will post the revised October 13-14, 2009, meeting summary to the listserv.
2. For the D.C. trip, **Program Director's office** will add a link to the Gunnison River PBO to the 1-page backgrounder in attachment 4 (and explain that the PBO it provides ESA compliance for all historic projects and a block of future water).
3. **Angela Kantola** will check with Dave Campbell regarding the San Juan Program treating a negative CPI as zero. *Mark McKinstry (BOR) in the San Juan Program agreed to treat the negative CPI as zero (no change to Reclamation power revenue contributions for FY 2010,*

*despite the Sep. '08 to Sep. '09 CPI of -1.3%, released 10/15/09). The San Juan Program required PI's to submit 2010 scopes of work with zero-based budgets (no increases over 2009) For the Upper Basin, Pat Tease (of Reclamation's Power Office) informed Angela Kantola and Dave Speas that the -1.3 would apply. So, the CPI was inconsistently applied among the two programs.*

4. The **Program Director's office** will provide background information on LCC's prior to the Implementation Committee call. *Done.*

Attachment 1  
Participants  
Colorado River Management Committee Conference Call  
February 25, 2010

Management Committee Voting Members:

Brent Uilenberg	Bureau of Reclamation
Ted Kowalski for Dan McAuliffe	State of Colorado
Robert King	State of Utah
Tom Pitts	Upper Basin Water Users
John Shields	State of Wyoming
Julie Lyke	U.S. Fish and Wildlife Service
Dave Mazour	Colorado River Energy Distributors Association
John Reber	National Park Service
Mike Roberts	The Nature Conservancy
Clayton Palmer	Western Area Power Administration

Nonvoting Member:

Tom Chart	Recovery Program Director, U.S. Fish and Wildlife Service
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Recovery Program Staff:

Angela Kantola	U.S. Fish and Wildlife Service
Tom Czapl	U.S. Fish and Wildlife Service

Others:

Leslie James	Colorado River Energy Distributors Association
Dave Speas	Bureau of Reclamation
Krissy Wilson	Utah Division of Wildlife Resources
Adam Bergeron	The Nature Conservancy

ATTACHMENT 2  
 Action Items from the Draft 2009 Sufficient Progress Memo  
 February 25, 2010

ACTION ITEM	LEAD	DUE DATE	STATUS
<p>The Service will continue to closely follow the effectiveness of nonnative fish management actions and the responses of the endangered and other native fishes. Data should continue to be reported annually, and necessary changes to nonnative fish management actions should be made in a timely fashion.</p>	<p>FWS, CDOW, UDWR</p>	<p>Ongoing</p>	<p>7/13/09: Critical data from 2008 submitted. CDOW discontinued translocation of SMB to Craig Justice Center Ponds, which will be returned to a trout fishery. Elkhead will remain primary translocation site for SMB (subsequent to spills or until the upper reservoir can be accessed). CDOW will continue to translocate northern pike to State Parks Headquarters Pond (Kyle's pond), Loudy Simpson, and Yampa State Wildlife Area ponds (subsequent to connection in the latter two locations). Northern pike CDOW is removing from Catamount are euthanized. Future actions contingent on further contaminant results from riverine samples of northern pike and smallmouth bass. Elkhead under a public fish consumption advisory. After 12/8-9/09 nonnative fish workshop, PI's and the Program immediately began revising 2010 SOW's, (approved by BC 1/14/10). Revisions respond to need to increase removal / disruption of SMB spawning throughout Upper Basin by adjusting previous sampling schedules to better align with SMB spawning (a very strong year class of SMB spawned in 2007 is expected to reach sexual maturity in 2010).</p>
<p>A research framework project was initiated in 2005 to conduct additional data analyses to further understand environmental variables and life-history traits influencing the dynamics of Colorado pikeminnow and humpback chub populations. The draft research framework report is behind schedule (originally due in 2007), but is expected in July 2009. Results will be used to refine hypotheses and direct management actions.</p>	<p>Valdez, Bestgen</p>	<p>7/31/09</p>	<p>8/24/09: Draft sent to PD's office and co-authors for review; target date for BC review is <del>4/15/09</del> PD's office meets to discuss March 3, then will circle back with the PI's.</p>
<p>The Flaming Gorge Technical Work Group (Reclamation, the Service, and Western) needs to continue to provide brief updates on current and projected Flaming Gorge operations at Biology Committee meetings.</p>	<p>USBR, FWS, WAPA</p>	<p>Ongoing</p>	<p>Ongoing and on track.</p>
<p>The Recovery Program and the Utah State Engineer's office have been working on mechanisms to protect year-round flows in the Green River; however, this is behind schedule. A schedule and outline of the steps required for both the year-round protection above the Duchesne (to occur in 2009) as well as flow protection below the Duchesne is needed: a) the public meeting held by August 31, and the protection finalized by December 31, 2009; and b) by September 30, 2009, a schedule outlining steps for year-round protection downstream of the Duchesne to the confluence with the Colorado River.</p>	<p>Utah</p>	<p>Public meeting: 8/31/09          Schedule/outline: 9/30/09</p>	<p>Public meeting held 8/20/09 for above Duchesne; completion anticipated by 12/30/09 (year-round above Duchesne). Outline/schedule for protection below Duchesne anticipated by 9/30/09. Program partners (Service, Reclamation, and Utah) are working to identify specific flow targets that would trigger subordination. The Water Acquisition Committee has been working on this and the State has held several public meetings in the basin. A Green River Utah Water Acquisition Team is established and is meeting regularly to identify alternative approaches for protecting flows for the endangered fish in the Green River. RIPRAP tasks/due dates to be revised.</p>

The Colorado Division of Wildlife will complete the Yampa River Aquatic Management Plan (with an Upper Yampa River northern pike strategy) by early July 2009. The Program will use this strategy and available information to evaluate the need to expand northern pike control upstream of Hayden to Steamboat Springs, possibly including removal efforts.	CDOW		8/10: Draft is in internal CDOW review. 9/22: CDOW sent the draft to the Program Director who forwarded it to the States and Service for a courtesy review prior to final approval. 10/14: Biology Committee comments are due back by the end of October 2009. 2/19: CDOW addressing comments (Ted Kowalski or Dan McAuliffe will follow up with CDOW).
Now that the Myton Diversion rehabilitation has been completed, the Program, Service, and Duchesne Work Group will work together to determine if any changes are needed in ongoing monitoring efforts necessary to evaluate the flow recommendations.	PD, FWS, DWG	Ongoing	8/10: Diversion operational and SCADA now online. Hydrological monitoring: after a full year's operation, the data will be examined to assure that the water is reaching the Randlette gage. Biological monitoring: Ute Tribe is conducting fish community surveys in the Duchesne; PD/FWS to define monitoring needed to evaluate flow recommendations.
Implementation of Coordinated Reservoir Operations (CROS) provided some peak flow augmentation in 2008; however, constraints on operations due to flooding concerns need further investigation to determine the feasibility of further enhancing CROS benefits.	NWS, Mohrman, CWCB, WAC	March 1, 2010	7/22/09: National Weather Service began a flood stage investigation last season which should provide some answers before 2010 peak flow. 11/27//09: NWS recommended revised bankfull, action and flood stage levels and will host a mid-December conference call to discuss. 2/19/10: NOAA met with Palisade and decided to raise the official flood stage at CAMC2 by 0.5 feet instead of 1 foot. Proposed advisory and flood stages are now: Bankfull --> 11 Feet (20.3 kcfs) Advisory --> 12 Feet (23.7 kcfs) Flood--> 12.5 Feet (~25.4 kcfs) If no objections by 2/26, NOAA will implement this change; FWS recommends flow stage be 13 feet and is discussing with NWS.
Work on Coordinated Facilities Operations Project (CFOPS) will resume and is expected to be completed in 2010, but a specific schedule needs to be developed by October 1, 2009.	Upper Basin water users	October 1, 2010.	Implementation schedule provided Oct. 1, 2009 and approved by Service 10/27; calls for completion of a final CFOPS report by September 30, 2010. The team is now organized and will be moving forward shortly with goal of completing Phase III report by September 30, 2010.
Close coordination will be maintained by meeting twice a year with Grand Valley water users	PD's office, water users	Meetings ongoing.	Fall meeting held December 1; need to schedule meeting for this spring (mid-April).
Close coordination will be maintained by conducting conference calls as needed to discuss river conditions prior to the weekly Historic User Pool calls. The focus should be on taking full advantage of water savings brought about by operation of the Grand Valley Water Management project for late summer flow augmentation.	CWCB, Reclamation	8/1/2010	10/14: CWCB is working with the Colorado Basin River Forecasting Center (CBRFC) to update their models and forecasting tools to provide late-summer forecasts for the HUP managing entities. Beginning in 2010, CBRFC will provide an early-August forecast of expected flow volumes for Green Mountain Reservoir and the Grand Valley for August – October. CBRFC also will provide statistical information about expected flows. CBRFC began providing additional short-term forecast information to the weekly HUP calls in 2009.
The goal of the 10,825 Project is to have agreements signed with the Service prior to Dec. 2009 committing east & west slope water users to permanent sources of Ruedi replacement water (as required by the Colorado River PBO).	Upper Basin water users, FWS	Agreements to be signed by July 2010	8/3/09 Tom Pitts will work with water user attorneys to draft commitments by the water users to implement the two-component 10,825 solution and provide drafts for Service review (meetings to begin in September). 10/14: Interim agreements actually don't expire until July 1, 2010, that's the date by which new agreements need to be in place. Agreements will be extended until permanent 10825 is finalized. Delivery of permanent 10825 should occur in summer 2013. There will be temporary extensions for Williams Fork and Wolford through 2013.

Attachment 3

San Juan and Upper Colorado Cost Ceiling Summary

	SAN JUAN	UPPER COLO.	TOTAL
<b>Remaining Cost Ceiling End of FY 2008 1/</b>	\$15,400,000	\$28,332,000	\$43,732,000
<b>P.L. 111-11 Cost Ceiling Increase</b>	\$12,000,000	\$15,000,000	\$27,000,000
<b>FY 2009 Expenditures</b>	\$285,000	\$5,999,000	\$6,284,000
<b>Remaining Cost Ceiling End of FY 2009</b>	\$27,115,000	\$37,333,000	\$64,448,000
<b>Projected Expenditures FY 2010 - 2023 2/</b>			
Farmers Mutual Ditch Repair	\$9,000,000		\$9,000,000
APS Fish Passage	\$1,500,000		\$1,500,000
Fruitland Fish Passage	\$1,500,000		\$1,500,000
Hogback Fish Barrier	\$2,500,000		\$2,500,000
Butch Craig Levee Repair		\$500,000	\$500,000
GVIC Fish Screen Retrofit		\$400,000	\$400,000
OMID Canal Automation		\$16,500,000	\$16,500,000
Price-Stubb Fish Passage Pit Tag Reader		\$120,000	\$120,000
Tusher Wash Fish Screen/Barrier		\$8,000,000	\$8,000,000
<b>Projected Expenditure Total</b>	\$14,500,000	\$25,520,000	\$40,020,000
			\$0
<b>Unallocated Remaining Ceiling FY 2010 - 2023</b>	\$12,615,000	\$11,813,000	\$24,428,000
<b>Notes:</b>			
1/ Indexed to 2008 price level			
2/ Projected costs are based on estimates of varying detail and should be used as approximations only.			

**New demands/needs for research, monitoring and other projects from [Aspinall PBO](#)**

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**Recovery Program Obligations under the PBO:**

**Monitor fish populations in Gunnison River:** Program monitors pikeminnow populations and is developing a basin-wide razorback monitoring program to include monitoring of multiple life stages. Monitoring program design is expected to be completed in fiscal year 2010. Implementation to begin in 2010 and include multi-life stage monitoring on the lower Gunnison. Density estimates will be developed for Colorado pikeminnow and razorback sucker in the lower Gunnison River.

**Collect tissue samples during monitoring:** During fish community monitoring in the lower Gunnison River, tissue samples will be collected from razorback suckers, as well as a chosen surrogate species, to determine selenium concentrations.

**Assist in development of Study Plan to evaluate effects of Aspinall reoperation and how it improves habitat & contributes to recovery.** Complete within one year of PBO. Include an evaluation of the effects of reoperation on critical habitat in the Gunnison River and Colorado River from the Gunnison River confluence to Lake Powell. Focus on previously identified uncertainties related to geomorphic processes, floodplain inundation, and temperatures:

While relationships among initial motion, significant motion and streamflow are well defined, duration of flows necessary to accomplish habitat work is not completely known. Because flow duration recommendations were developed based on a wet period, the recommended durations require a large volume of water that may not always be available.

Water availability may limit the ability of the Gunnison River to meet the Flow Recommendations under certain conditions.

Because of timing and other differences in runoff patterns of the Colorado and Gunnison rivers, it is difficult to predict the effect of Gunnison River flow changes on the Colorado River.

The trade-off facing Colorado pikeminnow between stream bed maintenance and temperature regime in the Gunnison River is an uncertainty that may need to be evaluated by the Recovery Program.

The Recovery Program may need to evaluate the trade-off between high spring flows and base flows needed during the mid- to late summer to operate Redlands (and, to a lesser extent perhaps, maintain movement of sediment through the system).

**Conservation Recommendations:** (Discretionary agency activities to minimize/ avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.)

**Selenium:** Recovery Program initiate investigations to determine appropriate levels of selenium to insure recovery of Colorado pikeminnow and razorback sucker. Any new studies would follow established Recovery Program protocol for priority and funding.