



# Upper Colorado River Endangered Fish Recovery Program

Summary Dated: September 21, 2012

CR/FY-11 UCRRIC  
Mail Stop 65115

## Memorandum

To: Implementation Committee  
Management Committee, Consultants, and Interested Parties  
Meeting Attendees

From: Director, Upper Colorado River Recovery Implementation Program

Subject: Draft September 19, 2012, Recovery Implementation Committee Meeting  
Summary

Attached are the draft action and assignment summary and the general summary from the September 19, 2012, Implementation Committee meeting.

Attachment

- Summary -  
Actions and Assignments  
Recovery Implementation Committee Meeting – September 19, 2012

**ACTIONS:**

1. Approved the March 5, 2012, conference call summary as written.
2. Approved a resolution that the Recovery Program operates in accordance with the Department of Interior Scientific Integrity Policy (see Attachment 3).
3. Confirmed the date of their next conference call on March 5, 2013, from 9:00 a.m. to 11:30 a.m.
4. The Committee recommended that the PDO develop a strategic communications plan so all partners have that in hand when future Sufficient Progress memos are signed.

**ASSIGNMENTS:**

1. Angela Kantola will finalize the revised March 5, 2012, conference call summary and have it posted to the Program's website (done).

**MEETING SUMMARY:**

**CONVENE: 10:30 a.m.**

1. Introductions, modify/review agenda, Chairman's updates – The agenda was modified as it appears below. Michelle Garrison is representing Colorado today. Becky Mitchell has accepted a new position with the Colorado Water Conservation Board. Michelle and Harry Crockett will now represent Colorado on the Management Committee and Ted Kowalski on the Implementation Committee. Laverne Kyriss is retiring; Shane Capron will replace her on the Implementation Committee. (Western will determine their MC member by October 1.) Steve Guertin has accepted the position of Deputy Director for Policy at the Service's headquarters in Washington D.C. Julie Lyke is moving to the position of Deputy Director of the Black-footed Ferret Conservation Center. The Committee expressed their thanks to Laverne and Steve and Julie. Leslie James noted that HR6060 is on the House suspension calendar at noon today (the House passed the bill).
2. (Action Item) Approve revised March 5, 2012, conference call summary – Angela Kantola said comments received on this summary included spelling out an abbreviation in item #3 and correcting the name of the gravel pit site (Grand Junction Pipe Pond) in item #5. The Committee had no additional comments and approved the summary. Angela will finalize the revised summary (done).
3. Program Director's report on the Recovery Program, status of the fish, drought update, and nonnative fish management activities – Tom Chart gave an overview of Program accomplishments, issues, and future direction by recovery element.

Tom outlined how Program participants have worked to maintain flows through this very difficult drought year. Tom described the later release of flows from Flaming Gorge until razorback sucker larvae were detected to help move larvae onto the floodplain (as called for in the Larval Trigger Study Plan). This year will have met the extremely dry condition for that plan. Clayton noted that without the LTSP, Flaming Gorge would have run for one week at power plant capacity, and earlier than it did this year. Releases from the Aspinall Unit on the Gunnison allowed continued operation of the Redlands fish ladder despite low flows. Ed Warner noted that Reclamation is discussing with the Service the potential to lower the Gunnison winter base flow target somewhat to save storage for the following year. The Price River report was completed this year and Jana Mohrman is working on completing flow recommendations for the White River. The Nature Conservancy has been assisting with the hydrological analysis. A number of localized fish kills were reported throughout the basin in this dry year, many likely due to sediment/ash runoff from summer fires.

Reclamation completed repairs to the high-flow damage at the Price-Stubb fish passage and Thunder Ranch floodplain dike. Screens were operated this season on the Government Highline canal, but low flows prevented operating the passage facility there as well as the screens and passage at GVIC. Tom said the Program has been working on resolving how to screen the Tusher Wash diversion on Green River. The Biology Committee will recommend employing a low voltage electrical barrier to deflect fish away from the diversion canal. Brent Uilenberg said this option is expected to cost ~\$2M (versus \$8-9M for a conventional screen).

The Horsethief Canyon Native Fish Facility ponds were completed this year, adding 6 surface acres of hatchery production which will allow us to stock out larger fish. These ponds also will provide refugia space for humpback chub if that becomes necessary.

Tom reviewed timelines to down/delisting and progress toward recovery of the four endangered fishes. We're closest to considering downlisting of Colorado pikeminnow. The revised recovery goals will address the natural fluctuations we see in the fish populations. Tom showed photos of installation of the new White River PIT tag antenna. The Program has been installing more of these "passive" monitoring systems throughout the basin. Questar paid for this antenna as part of a pipeline they're putting in under the White River and was really helpful in working with the County Commission to permit installation.

Tom and Debbie reviewed ongoing outreach efforts as well as new interpretive signs being installed this year. Debbie brought samples of the new educational item that the Information and Education Committee recently approved: razorback sucker and humpback chub "stress fish" with information about the Recovery Program printed on them.

Tom noted that more than 2,001 water projects depleting an average of 2.8 million acre feet per year (2.5 MAF historic, occurring prior to inception of the Program) rely on the Recovery Program for ESA compliance. The threats to the endangered fishes from these water depletions have been relatively static over the life of the Program and we've been able to work with our partners to provide flows for fish through reservoir releases, contracts, improved irrigation efficiency, etc. In contrast, the threat of nonnative fish has increased

significantly. Tom and Pat Martinez described the increasing presence of invasive aquatic species in the basin and the Program's response (both increasing and focusing Program efforts). Dan Luecke asked if the nonnative biomass has increased, or just the number of species. Pat Martinez said larger-bodied nonnative fish species have increased, and these large-bodied predator type fishes seem to be most likely to contribute to native fish extinction. Tom discussed the draft Upper Colorado River Basin Nonnative and Invasive Aquatic Species Prevention and Control Strategy, saying that the Nonnative Fish Subcommittee continues to revise the document. The Management Committee in August emphasized the urgency of this work, noting that our lack of an effective strategy could postpone downlisting for Colorado pikeminnow. Therefore, the Management Committee recommended either streamlining the strategy or producing a more action-oriented document. The Strategy needs to: 1) build on recent efforts to shift focus from control in rivers to containment at sources and prevention of a next invasive; and 2) incorporate a more robust approach (using more tools). We will strive to include/implement a strategy in our FY13 work planning. This will require much more conversation on the topic this winter, and the States' fishery chiefs should be part of that. John Shields added that implementation will come by adding items to the RIPRAP (and it will take some work to achieve consensus on those). Tom Pitts said nonnative fish management is really one of the most difficult issues the Program has faced. Tom said that Yampa Basin residents have long history of working together and we have some serious nonnative fish issues there. Last week Tom and others convened local interests (from Steamboat, Craig, Bassmasters, Trout Unlimited, Upper Yampa Conservancy, Colorado Parks and Wildlife, and the Program Director's office) to discuss ideas to: 1) protect endangered fish; 2) enhance native fish; and 3) find compatible sportfish opportunities. The meeting was very productive and another meeting will be scheduled to continue this conversation.

As we move into 2013, Tom said Program participants will be watching the flows and determining how to respond after the 2012 drought. We know smallmouth bass produce well in drought years, and so we'll be watching that as well as how the drought and fish kills affected the endangered fish populations. We'll continue to work with the Uintah Ouray Tribe on lower White River access. Everyone will be waiting to see what happens with the funding legislation currently in Congress. The Program will be taking a close look at its database management workload, especially in light of increasing PIT antenna data.

Dan Luecke noted that the 2002 drought coincided with mark-recapture protocol for population estimates. We saw decline in Colorado pikeminnow, for which the umbrella explanation was the drought. Subsequently, we've also learned about the relationship between drought and nonnative fishes. Dan asked if we've learned anything else from 2002 that would inform 2012. Tom said there was a fair bit of adult mortality in 2002 and Kevin Bestgen will be working to describe linkages in his Green River Colorado pikeminnow population estimate report. We'll have to wait for the 2013 data on that population and Kevin's subsequent report.

4. Review of sufficient progress items –See Attachment 2. John Shields noted that the sufficient progress memo received press this year. It came out pretty well, but John suggested we may want to have talking points or other materials ready for this in the future. Steve Guertin agreed, and recommended building in the extra step of a strategic

communications plan so all partners have that in hand when the memo is signed. The Committee agreed.

5. DOI/Reclamation Scientific Integrity Policy (Attachment 3) – The Committee discussed the draft policy. Leslie noted (and Michelle and Laverne agreed) that the policy isn't as clear as it might be about partners (e.g., as it might apply to work they conduct outside of, but perhaps in support of the Program), but they support the concept of scientific integrity and therefore don't oppose the resolution. The resolution says "the Recovery Program" operates in accordance with the policy, which should ease concerns on this point. Tom Pitts said the San Juan Program made the DOI policy a part of their Program document. Tom believes this resolution is responsive to questions Congress has asked about how we operate. The words "Management Committee" are unnecessary in the last clause, so the Committee removed that. In strong support of scientific integrity, the Committee approved the resolution.

## 6. Updates

- Capital projects – Brent Uilenberg reviewed current and recently-completed capital project items. Repairs to damage caused by 2011 high flows to Price-Stubbs totaled \$1.3M and should be complete in a couple of weeks. For OMID, they approved the O&M contract on September 6, the grant agreement with CRWCD is in place; and the agreement with CWCB is in progress. Construction should start in 2013, and likely will be a 4-year process. The CalPoly study is in draft and likely will result in some capital cost reductions to OMID with roughly the same anticipated water savings (17,200 af). The report will be distributed on the listserver as soon as it's final. Reclamation is still negotiating a potential contract for the San Juan Program Hogback Fish Barrier with the Navajo Nation. They received approval to carry funds for this project (~ \$2 – \$2.5M) into FY13. At Tusher Wash, Reclamation proposes conducting the NEPA analysis in combination with the NEPA work on the diversion dam rehabilitation, but in light of budget and other concerns, Brent does not know if this will get underway in FY13. Although there's \$8.3M in the President's 2013 budget, more realistically, the Federal government will be under at least a six-month continuing resolution at 2012 levels (\$5.8M). Most will be applied to the OMID project. If sequestration were to happen, appropriations would be cut 8.2%. Steve Guertin expects 92% funding for Federal agencies to begin with and then see what happens in January (agencies may have some flexibility in where they apply the cuts). (Sequestration does not apply to power revenues.)
- Funding legislation – H.R. 6060, "The Endangered Fish Recovery Programs Extension Act of 2012," was introduced by Rep. Rob Bishop of Utah on June 29 with 13 of 14 members of the 4-state delegation sponsoring or co-sponsoring the bill. More than two dozen letters of support were submitted. The Water and Power Subcommittee heard the bill on July 10 and it. Mark-up in the House Resources Committee occurred on August 2<sup>nd</sup> and the bill was passed out of Committee by unanimous consent. The ranking member of the Water and Power Subcommittee, Rep. Napolitano, suggested the authorization end date should be 2023 instead of 2016. OMB scored the bill budget neutral; therefore, cut-go requirements did not apply. The House passed the bill (H.R. 6060) this afternoon, September 19, 2012

(viewable on C-SPAN, <http://www.c-spanvideo.org/program/HouseSessionPart155> at 10:15 – 15:32). Tom Pitts and others thanked Leslie for CREDA’s hard work on behalf of this bill. No action is expected on the bill in the Senate until after the election during the lame duck session. It is anticipated that the Senate will bundle bills in one or more omnibus bills that – hopefully – have been pre-approved for passage by the House of Representatives. It is expected that the Recovery Program bill will be included in one of the omnibus bills, if those omnibus bills can be put together and passed by the Senate. Although there are no guarantees that the legislation pass during this session of Congress, we are closer than we have been in four years to achieving this. Tom Pitts said that we have restored the bipartisan support of this Program, which is excellent.

- Washington, D.C. briefing trip – The 2011-2012 *Program Highlights briefing booklet can be downloaded at* <http://www.coloradoriverrecovery.org/committees/management-committee/dctrip/2012BriefingBook.pdf>. *A trip report document providing an overview of the March briefing visits and outcome can be downloaded at:* <http://www.coloradoriverrecovery.org/committees/management-committee/dctrip/2012DCTripReport.pdf>. For 2013, no Federal employees will participate in the trip, of course. The briefing trip likely will be scheduled in mid- to late-March (likely the week of March 11 or 18), and will need to be scheduled by the end of November.
- Recovery goals and 5-Year Status Reviews – Tom Chart said the humpback chub and Colorado pikeminnow status reviews are available on the Program’s [website](#); the razorback sucker and bonytail 5-year reviews were just signed and will be on the website shortly. Letters have been sent to four prospective Colorado pikeminnow Recovery Team members and a draft recovery plan is ready for the team to review (Tom hopes the team can perhaps meet in November). Five prospective members for a humpback team also have been identified, but the pikeminnow team will be established first. The San Juan program found some concentrations of razorback sucker and Colorado pikeminnow where the San Juan enters Lake Powell. Tom Czaplá said the data indicate razorback sucker are carrying out a complete life cycle in the lake. Biologists would like to survey the Colorado River arm of Lake Powell, but since razorback can complete their life cycle in the Colorado River and its tributaries above Lake Powell, the Service will need to discuss what Lake Powell means for recovery. Although Reclamation has FY 13 funds for this, our Program does not have funds available for a requested match. The San Juan is designated critical habitat into Lake Powell down to Neskahai Canyon, and the Colorado down to Hite.
- Management Committee clarification of flow recommendation approval process Tom Chart said his office and Robert Wigington drafted a document to clarify the Recovery Program’s process for approving flow recommendations for the endangered fishes. This draft is in Management Committee review and will be discussed in the November 5 webinar. Tom Pitts has provided comments and Tom Chart will have another draft to the Management Committee shortly.

- Green River flow protection – Jana Mohrman reviewed progress on Green River modeling (which will lead to legal protection of flows) (see Attachment 4). Dan Luecke said he doesn't believe the interested parties ever fully agreed to what flows Utah needed to protect, and there may be some contention when we get to that point (will relate to future contemplated projects like the Lake Powell Pipeline, etc.).
  - FY 2013 Work Plan update – Angela Kantola said FY 2013 is the second year of the two-year FY12-13 work plan and the budget appears very tight, with ~\$50K not yet obligated. Final funding amounts won't be known until outcome of the legislation is determined and the October 2011 – September 2012 CPI is released (used to calculate the power revenue contribution to annual funds). Opportunities to fund contingency projects would appear minimal. Projects which might be considered in FY 13 if funds were available include: restoration of nonnative fish management projects to full budget to continue “expanded surge” begun in FY11; sediment monitoring (including development of a plan); floodplain site monitoring/management; FR-115 synthesis report; Lake Powell sampling; and chemical reclamation to eradicate nonnative fishes at Miramonte and Paonia reservoirs (with these reclamation activities potentially cost-shares of Section 7 and non-Program state funds).
  - [Southern Rockies LCC \(Landscape Conservation Cooperative\)](#) (Tom Chart and Steve Guertin, 10 min) (2:20 – 2:30). In August, Reclamation announced funding for nine Southern Rockies LCC applied science projects (Attachment 5). The LCC has entered into a strategic synthesis process and contracted with the Heinz Center (environmental economic facilitator out of Washington). Heinz will be interviewing agencies, tribes, and groups on the landscape to compile a list of existing priorities and then will provide a convergence analysis to identify common themes and priorities. From this, the steering committee will begin to identify the resource priorities and conservation objectives the partnership wants to pursue. This should be completed in July 2013, and the process will include a workshop(s) to which partners will be invited. The Steering Committee has identified three focal areas for 2013: (projects to be determined): tamarisk; incorporating ecological flows needs into hydrological models (a work group will identify the needs and perhaps host a workshop; information is available but needs to be brought together and incorporated into hydrological models); and a review of the list of 2012 priorities that didn't get funded. Jana noted we'd also suggested work water temperatures (relationship to potential for further nonnative aquatic species invasions/expansions). Steve said all LCCs will be discussing the U.S. Fish and Wildlife Service Director's guidance to start designating “surrogate” or representative species around which we'll focus conservation priorities in these large landscapes.
7. Wrap-up and schedule next Implementation Committee meeting call – The Committee set a conference call for Tuesday, March 5, 9 – 11:30, mountain time.

**ADJOURN: 3:00 p.m.**

## Attachment 1 - Participants

### IMPLEMENTATION COMMITTEE MEMBERS:

Steve Guertin, U.S. Fish and Wildlife Service (Chairman)  
Ed Warner, U.S. Bureau of Reclamation  
John Reber, National Park Service  
Dan Luecke, Environmental Groups  
Leslie James, Colorado River Energy Distributors Association  
Pat Tyrrell, Wyoming State Engineer's Office  
Michelle Garrison for Ted Kowalski, Colorado Water Conservation Board  
LaVerne Kyriss, Western Area Power Administration  
Tom Pitts, Upper Basin Water Users  
Not represented: Utah Department of Natural Resources  
Program Director Tom Chart, U.S. Fish and Wildlife Service (nonvoting)

### OTHERS:

Julie Lyke, U. S. Fish and Wildlife Service  
John Shields, Wyoming State Engineer's Office  
Brent Uilenberg, U.S. Bureau of Reclamation  
Harry Crockett , Colorado Parks and Wildlife  
Clayton Palmer, Western Area Power Administration (via phone)  
Jana Mohrman, U. S. Fish and Wildlife Service  
Debbie Felker, U. S. Fish and Wildlife Service, Recovery Program  
Pat Martinez, U. S. Fish and Wildlife Service, Recovery Program  
Tom Czapla, U. S. Fish and Wildlife Service, Recovery Program  
Angela Kantola, U. S. Fish and Wildlife Service, Recovery Program  
Krystyna Wolniakowski, National Fish and Wildlife Foundation (via phone)  
Patrick McCarthy, The Nature Conservancy (via phone)

ATTACHMENT 2

Action Items from the [2012 Sufficient Progress Memo](#)

September 19, 2012

General – Upper Basin-wide				
#	Recommended Action Items	Lead	Due Date	Status
1	The Service will make a recommendation for how to ensure that all new petroleum pipelines have emergency shutoff valves and will investigate the use of the <a href="#">Pipeline Integrity Management Mapping Application</a> (PIMMA) to address existing pipelines potentially needing shutoff valves (e.g., pipelines upstream of or near critical or other important habitat).	FWS	12/31/12	Service may consider asking industry to assist via Section 7 consultation.
2	The Program Director's office is working with the Nonnative Fish Subcommittee and signatories to the <a href="#">Nonnative Fish Stocking Procedures</a> to address comments on the draft <i>Upper Colorado River Basin Nonnative and Invasive Aquatic Species Prevention and Control Strategy</i> . Following "internal" review by the Recovery Program's Biology and Management committees, the Program will seek external peer review prior to accepting the <i>Strategy</i> as final.	Program	Date TBD; will go to BC earlier than previously indicated.	A subgroup of the I&E Committee will refine comments on the I&E section of the <i>Strategy</i> and then have a conference call with the Nonnative Fish Subcommittee. Update of steps leading to completion will be provided to the Management and Biology committees in Autumn 2012. The Management Committee asked that the Program Director's office streamline the document somewhat and accelerate the schedule.
3	The Service recommends that the Recovery Program carefully review the applicability of proposed screens for nonnative fish on a case-by-case basis and scrutinize screen designs, including projected operation and maintenance costs in the future. And, that the Recovery Program fully recognizes that screens are only a component of a multi-faceted nonnative fish control strategy (e.g., one that adheres to the NNF Stocking Procedures, promotes compatible sportfisheries, and prevents new nonnative fish threats).	<i>Nonnative Fish Stocking Procedures</i> signatories	Ongoing	
4	Revised Integrated Stocking Plan needs to be completed.	PDO	12/31/12	Draft sent to <i>ad hoc</i> group 4/13/12; conference call held 5/9/12. Next draft to <i>ad hoc</i> group by the end of September.

	The Program Director's Office will monitor results from ongoing humpback chub population estimates (Deso-Gray 2010-2011; Black Rocks and Westwater 2011-2012 and monitoring (Cataract Canyon annual CPUE; Yampa River information gathered through nonnative fish management projects). The Program Director's Office convened a panel to discuss humpback chub genetics and captivity and identify actions necessary to ensure the survival and recovery of humpback chub and an implementation plan for those actions in 2011. 200 age-0 Gila will be brought into captivity from Black Rocks/Westwater in 2012 (relates to broodstock development once fish are determined to be humpback chub).	PDO, Service, UDWR	Deso-Gray data reported annually; Black Rocks draft final report due 8/1/13; Westwater draft final report due FY13.	Results reviewed annually. Bringing age-0 <i>Gila</i> from Black Rocks into captivity planned for Autumn 2012.
<b>Green River</b>				
6	An RFP for a 2012-2013 mortality study and literature review is anticipated in April 2012. Meanwhile, Program participants are investigating the potential for an electrical barrier at the head of the canal as one option to reduce or eliminate entrainment (and thus, "take") of fish in the canal.	Tusher Wash <i>ad hoc</i> group.		No response to RFP (and so it's been dropped); Biology Committee discussed in July, will review options again in October; Tusher Wash <i>ad hoc</i> group continues to review and discuss options, with an electric barrier now looking like the most viable option.
7	Red Fleet Reservoir has been recommended for reclamation (rotenone). A microchemical analysis of otoliths from both the reservoir and the river is underway to better understand the contribution of walleye to critical habitat from this potential source population.	UDWR		Otoliths processed; draft report in review; data will be included in draft final C18/19 report due October 1, 2012 (although this deadline may have to slip due to PI illness).
<b>Yampa River</b>				
8	CWCB is scheduled to complete accounting of past depletions using the StateCU model by the spring of 2012. The depletion accounting report will include a discussion of the need for flow protection (which would require a peak flow recommendation). The Water Acquisition Committee will continue to discuss the need for a peak flow recommendation.	CWCB, WAC	<del>June 2012</del> 12/31/12	Depletion accounting for Yampa & Colorado rivers will be based on 2005 consumptive use (irrigated acreage based on satellite images and some aerial photography). CWCB is double-checking irrigated acreage, will have it verified by the Water Commissioner (hopefully by December 31, 2012), and then can run the model.

9	CSU will complete the <a href="#">programmatic synthesis of smallmouth bass removal efforts</a> , providing a comprehensive evaluation of the Program's removal efforts as well as a thorough assessment of escapement from Elkhead Reservoir (draft final report due to Recovery Program 8/31/2012). The Recovery Program will review the final report on escapement from Elkhead Reservoir and determine appropriate adaptive-management response. CSU also is conducting a <a href="#">programmatic synthesis of northern pike removal efforts</a> (2011-2012) to evaluate current removal efforts in the context of northern pike life history throughout the Yampa River drainage (draft final report due to Recovery Program 6/30/13).	CSU, Program, CPW	Draft final smallmouth bass synthesis report due 10/1/12.	The programmatic synthesis report will consist of three parts and each will be separately peer-reviewed. Part 1, Elkhead escapement has been peer reviewed. Part 2, Population Dynamics is due October 1, 2012, and Part 3, Projection Tool, will follow shortly thereafter. The three parts will then be finalized in one document. The NNFSC continues to evaluate opportunities and priorities for applying appropriate responses to source populations.
10	Native fish conservation areas are being evaluated as part of the draft basinwide nonnative fish strategy. Subsequently, applicability to the Yampa River will be evaluated.	Program, CPW		See item #2 re: <i>Basinwide Strategy</i> .
11	CPW has detailed its ongoing and anticipated pike management actions throughout the drainage in its 2010 'Yampa River Basin Aquatic Wildlife Management Plan (CDOW 2010).' CPW will tabulate these activities for the Program Director's Office and, based upon Program Office feedback, will provide management objectives and actions for any waters within the drainage that CPW and the Program Office mutually agree are inadequately addressed by the 2010 Plan.	CPW		Pending. Tabulation complete and will go to PDO by September 30. Joint recommendations from PDO and CPW for how to address any inadequacies will be made at the NNF workshop.
<b>White River</b>				
12	A working draft <i>Flow Recommendations for the Endangered Fish of the White River, Colorado and Utah</i> was sent to the Biology and Water Acquisition committees and GRUWAT on July 1, 2011. Conflicting comments were received. A revised draft is expected by midsummer 2012. Work on a PBO is anticipated subsequent to report approval.	PDO	Summer 2012. 12/31/12.	Pending. Good progress is being made and TNC is providing assistance.
13	Program scheduled to begin specific effort to remove smallmouth bass in 2012. CPW will propose plans to removing bag limit for smallmouth bass (and possibly other nonnative sport fishes) in the 400 yards below Kenney Reservoir that still has limits in 2013. Recovery Program supports multi-agency effort to designate White River as native fish conservation area.	CPW, UDWR		White River smallmouth bass removal conducted by Service & CPW; additional electric seining also conducted. CPW has prepared an issue paper on the bag limit for Commission consideration in this regulation cycle. (Regulation expected to be finalized in November and go into effect in March 2013.)
<b>Colorado River</b>				
14	Recovery Program participants will consider options and opportunities for meeting flow recommendations on a more consistent basis after completion of 10,825 agreements.	Program		All agreements are expected to be in place by December 31, 2012.

15	The CWCB will provide the depletion accounting for 2006-2010 for the Upper Colorado River using State CU in the spring of 2012. If the amount of consumptive use, location of use, and timing of use is not the same as in the past, they would then put that information into StateMod to show how those changes affect the river.	CWCB	<del>June 2012</del>	See item #8.
16	Completion of CFOPS Phase III should be out in draft in August 2012 and report completion anticipated by September 30, 2012.	Water users	<del>September</del> November, 30, 2012.	Draft now expected in October.
17	In 2012, additional passes will be devoted in the reach of the Colorado River from Rifle to the Beavertail to remove invading northern pike. CPW will conduct a reconnaissance in floodplain & canal habitats to identify potential sources of this species. Sampling will also be conducted from Silt to Rifle to remove northern pike.	FWS, CPW	Service, CPW	Additional passes completed. A critical new ramp was constructed that improves access. CPW seeking landowner permission for reconnaissance work.
<b>Gunnison River</b>				
18	Every effort should be made to ensure that the Gunnison River remains a native fish stronghold. The topic of precluding new species introductions also will be addressed in the draft Nonnative Fish Strategy.	Program		See item #2 re: <i>Basinwide Strategy</i> .
<b>Dolores River</b>				
19	The Nonnative Fish Subcommittee will review response options and propose action item(s) to be reviewed with the Dolores River Dialogue and Lower Dolores Working Group and potentially added to the RIPRAP in 2013.	NNFSC, others.	January 2013.	CPW is implementing emergency order removing all bag and possession limits on smallmouth bass in Miramonte Reservoir and has announced plans to rotenone the reservoir in late summer or fall of 2013.

Attachment 3

Approved by the Implementation Committee on September 19, 2012

**Resolution of the Implementation Committee of the Upper Colorado River  
Endangered Fish Recovery Program on  
Adherence to Department of Interior Scientific Integrity Policy**

WHEREAS, the U.S. Department of Interior (DOI) has established a policy entitled “[Integrity of Scientific and Scholarly Activities](#)” (Jan. 28, 2011) to ensure and maintain scientific and scholarly ethical standards in Departmental decision-making, and

WHEREAS, the aforementioned policy applies to all DOI employees and all contractors, cooperators, partners, permittees, and volunteers who assist with developing or applying the results of scientific and scholarly activities, and

WHEREAS, the majority of Recovery Program projects are carried out using power revenues administered by DOI’s Bureau of Reclamation (Reclamation), and

WHEREAS, Reclamation formally adopted the aforementioned policy on March 6, 2012 in the [Reclamation Manual](#), and

WHEREAS, the Upper Colorado River Endangered Fish Recovery Program (Recovery Program), desires to adhere to the highest standards of scientific integrity in all of its scientific endeavors;

NOW THEREFORE BE IT RESOLVED by the Implementation Committee of the Recovery Program that the Recovery Program operates in accordance with the U.S. Department of Interior policy entitled “[Integrity of Scientific and Scholarly Activities](#)” (Jan. 28, 2011), including future updates of this policy.

Attachment 4  
Utah's Green River Model Update

No.	Demand Scenario	Hydrology	Upstream from Utah Demands	Purpose	Status
1	MODSIM Calibration	1970-2005 – Historical	Current	Model Calibration	Completed
2	Current Water Rights	"	"	Baseline	Completed
3	Future Demands	Utah Future	"	"	Completed
4	Current / New Operation	1970-2005 Historical with modified Green River Basin Model Releases for Flaming Gorge & Yampa	2010 Demands from the "2007 Colorado Demand Schedule"	Analyze Utah's future demands with BOR operational rules	Waiting On Data from BOR
5	Future / New Operation	Utah Future	"	"	Waiting On Data from BOR
6	Future / New Operation	"	2060 Demands from the "2007 Colorado Demand Schedule"	Analyze the total Potential future conditions from all States	Waiting On Data from BOR

Action Items are:

- 1) BOR will provide the input data sets from their model for the MODSIM model.
- 2) Utah Water Rights Division will continue to run the scenarios as defined above.
- 3) Utah Water Rights Division will prepare results from these scenarios for future discussion. Currently just the dry climate scenarios are being run, other hydrologic categories have been requested and are being considered.
- 4) Also being considered is a model run using Reclamation's Basin Study future depletion scenario instead of the 2007 demands. Utah is considering using this, but may wait until the Basin Study is finalized. Utah questions whether the scope of this project needs to include future demands upstream of Utah (in Colorado and Wyoming on the Green and Yampa rivers).

The model and documentation can be found at:

<http://www.waterrights.utah.gov/distinfo/colorado/GRUWAT.asp>

The modeling is somewhat behind the originally-contemplated schedule:  
2011: Develop model for historic and future scenarios, analyze model results  
2011 – 2012: Prioritize methods for flow protection  
2012 – 2014: Obtain authority to protect flows  
2014 – 2015: Implement Legal Protection

## Attachment 5

# Landscape Conservation Cooperative Project Funding

## Southern Rockies Landscape Conservation Cooperative (SRLCC)

### **Arizona Department of Game and Fish, A Landscape Approach for Fisheries Database Compilation and Predictive Modeling Funding Opportunity Announcement Reclamation Funding: \$99,661 Applicant Funding: \$108,584**

The Arizona Department of Game and Fish and the University of Washington will produce a defensible data set and decision tool for the conservation of fish and other aquatic and riparian species in Arizona. The AZGF will also offer neighboring states the expertise and knowledge gained in this project. The project will compile and geo-reference fish observation data into a Geographic Information System. This new spatial database will then be used to develop a decision tool that can forecast the spread of invasive species across the landscape.

### **Colorado State University, National Wetland Inventory Mapping for the Colorado Portion of the SRLCC Funding Opportunity Announcement Reclamation Funding: \$73,187 Applicant Funding: \$74,370**

The Colorado Natural Heritage Program of Colorado State University will use its expertise in wetland mapping to digitize original National Wetland Inventory maps for the Colorado portion of the Southern Rockies LCC. The project will complete the remaining 316 quads within the Southern Rockies LCC that lack digital wetland data. They will utilize automated image processing techniques to digitize scanned versions of the original NWI maps and convert them into geo-referenced polygonal data.

### **Arizona State University, Effects of Bio-control and Restoration on Wildlife in Southwestern Riparian Habitats Funding Opportunity Announcement Reclamation Funding: \$90,337 Applicant Funding: \$90,469**

Arizona State University, Northern Arizona University, Utah Division of Wildlife Resources, University of California and Western Foundation of Vertebrate Zoology will determine if the introduction of the biocontrol agent (tamarisk leaf beetle, *Diorhabda* spp.) as an insect consumer and defoliator of salt cedar influences wildlife populations and communities via alterations to food resources and/or habitat. The investigators will take advantage of an existing program that introduced the beetle over the past two years by tracking changes in amphibian, reptile and avian communities.

### **New Mexico Office of the State Engineer, Improving Crop Coefficients for the Middle Rio Grande Funding Opportunity Announcement Reclamation Funding: \$150,000 Applicant Funding: \$151,641**

The New Mexico Office of the State Engineer is planning to improve crop coefficients for the Middle Rio Grande by assessing actual crop water use through the use of remote sensing technologies that estimate the evapotranspiration of individual crops within the basin. The results from this project will provide

local, state and federal water managers with a better estimate of future water demand estimates from decision-making models based on climatic change and other water limiting factors by improving the accuracy of the calculation of water used by crops.

**The Nature Conservancy, Evaluation of Decision Support System Platforms and Tools for Integrated Water Management in the Colorado River Basin Funding Opportunity Announcement Reclamation Funding: \$69,216 Applicant Funding: \$103,094**

The Nature Conservancy will evaluate alternative decision support platforms and tools for incorporating ecological flow into water management for the Colorado River Basin. The project will result in recommendations for a decision support platform that links coarse and fine scale tools and for improving the Colorado River Simulation System as the central analytical tool for basin-wide water supply planning. This will build on the Colorado River Basin Water Supply and Demand study that is being led by Reclamation.

**U.S. Forest Service - Rocky Mountain Research Station, Modeling Woody Plant Regeneration and Debris Accumulation under Future Streamflow and Wildlife Scenarios in the SRLCC Statement of Interest Reclamation Funding: \$51,840 Applicant Funding: \$52,000**

The U.S. Forest Service - Rocky Mountain Research Station will expand cottonwood population models with data gathered from the Middle Rio Grande in New Mexico, into an applied science tool. This tool will model and predict changes in density of vegetation under various streamflow and wildfire scenarios. The model created will be useful to the Southern Rockies LCC by creating a code that will run model simulations after variables in density, tree species present and wildfire probability are entered by the user.

**U.S. Geological Service - Fort Collins Science Center, A GIS-Based Evaluation of Fremont Cottonwood Stand Dynamics in the SRLCC Statement of Interest Reclamation Funding: \$37,400 Applicant Funding: \$37,400**

The U.S. Geological Survey, Fort Collins Science Center is proposing to generate GIS-based evaluation of Fremont cottonwood stand dynamics in the Southern Rockies LCC. The first objective is to make the full data set available to the Southern Rockies LCC in a GIS platform suitable for additional spatial data analysis. This data will provide a baseline through which researchers in future years can assess changes in floodplain land cover and land use. They also plan to develop and apply a model of Fremont cottonwood stand dynamics in the Southern Rockies LCC, focusing on "survivorship" of stands made up of old trees. This part of the project will give water and riparian resource managers a better understanding of the urgency with which restoration or other management activities should be undertaken in order to maintain a specific amount and/or spatial configuration of mature cottonwood woodland.

**U.S. Geological Service - Southwest Biological Center, The Impact of Ecosystem Water Balance on Desert Vegetation: Quantification of historical patterns and projection under climate change  
Statement of Interest Reclamation Funding: \$62,413 Applicant Funding: \$99,375**

The U.S. Geological Survey, Southwest Biological Science Center will develop an applied science tool that would help resource managers understand how desert vegetation may be impacted by climate change as a result of changes in the water available in desert soils. The project will leverage an existing historical data collection effort that recorded soil water availability and productivity of different desert plants at test sites located throughout the desert southwest. The project will combine this observed data into statistical models that would allow researchers to forecast climate-induced shifts in plant species performance by understanding past relationships between soil water availability and plant species abundance through time and space.

**U.S. Forest Service - Rocky Mountain Research Station, Vulnerability of Riparian Obligate Species in the Rio Grande to the Interactive Effects of Fire, Hydrological Variation and Climate Change Statement of Interest Reclamation Funding: \$89,940 Applicant Funding: \$89,933**

The U.S. Forest Service, Rocky Mountain Research Station will conduct a risk analysis for riparian obligate species in the Rio Grande area of New Mexico with regards to wildfire, climate change and the effect of the aforementioned on streamflow. Under a few different climate change scenarios and a selection of target species, the team will produce several maps geared to resource managers displaying vulnerability of certain species under certain scenarios. The study will also result in a vulnerability analysis for various species regarding fire and climate change scenarios.