



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Mountain-Prairie Region

IN REPLY REFER TO:

FWS/R6
COKANUT

MAILING ADDRESS:
Post Office Box 25486
Denver Federal Center
Denver, Colorado 80225-0486

STREET LOCATION:
134 Union Blvd.
Lakewood, Colorado 80228-1807

APR 5 1996

Memorandum

To: Implementation/Management Committee and Interested Parties

From: Regional Director

Subject: Sufficient Progress/Section 7 Consultations--Upper Colorado River Recovery Program

The Fish and Wildlife Service has compiled information on the accomplishments for 1995 for the Colorado River Implementation Program in accordance with the October 15, 1993, Section 7 Sufficient Progress Agreement. The Program was faced with many action items in FY 1995 as the Program is moving past the research stage to more aggressively implement "on the ground" actions to recover the fish. Per the Agreement, the Service continued to issue Biological Opinions during FY 1995 culminating in a total depletion of 209,000 acre feet of water since the Program began (copy attached). Per the request of the Management Committee, the Service also provided the presently known requests for consultation in Colorado and Utah in FY 1996.

In accordance with the section 7 agreement, the Service used the following criteria to evaluate "sufficient progress":

- a. 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
- b. Status of fish population
- c. Adequacy of flows
- d. Magnitude of the impact of projects.

The Service pointed out in the 1994 evaluation dated February 2, 1995, that there were areas needing aggressive action in FY 1995 and its concern that they progress rapidly (copy attached).

In the review of species status in 1995 there have been some encouraging signs by the Program participants who have documented reproduction of razorback sucker in the Yampa/Green Rivers, however, only very limited recruitment into the population has followed. This new information does give Program participants new opportunities to work with this species to further its recovery. An overall review of the status of this species throughout the upper basin shows the razorback sucker continues to decline. In 1995, small numbers of the razorbacks were stocked in both the Colorado and Green Rivers.

There are preliminary indications that Colorado squawfish are becoming more abundant in the Green River, possibly in response to recovery actions, primarily the reoperation of Flaming Gorge Dam. Development of refugia populations of razorback suckers, Colorado squawfish, and humpback chub are progressing but will still take a few years to accomplish.

ACCOMPLISHMENTS

The Bureau of Reclamation has provided flows in the Green River in accordance with the 1992 Flaming Gorge Biological Opinion. Reclamation provides an annual report to the Service detailing the release pattern from Flaming Gorge and flows at the Jensen gauge. To date, all research flows requested have been provided and the policy enacted by the State of Utah provides a vehicle for protecting these releases against future appropriation.

The Colorado Water Conservation Board completed work on a water availability study and the allocation of compact waters between the five subbasins. The process entailed a great deal of work by the CWCB and water interests throughout western Colorado. The CWCB worked diligently throughout 1995 to prepare instream flow filings for the Yampa and Colorado Rivers. The filings were completed on December 13, 1995. The water rights consisted of two components: a base flow water right and a recovery flow water right. For the Yampa River the base flow water right corresponds to Service low flow recommendations during the nonrunoff months. The recovery flow water rights corresponds to the Service high flow recommendations but are subject to a 52,000 acre foot development allowance and the water right can be modified to allow for an additional 72,000 acre feet of development. In the Colorado River, recommendations are subject to a 100,000 acre feet development allowance and the recovery water right can be modified to allow an additional 300,000 acre feet of development. While the filing represents an important first step in protecting the flow needs of the endangered fish in both river systems, the value of the recovery water rights was compromised by the imposition of the large development allowances, which will act to delay administration of the recovery right for decades.

The Program has operated and maintained two permanent propagation facilities and additional permanent facilities will be constructed at Craig, Colorado, Horsethief State Wildlife Area, Colorado, Ouray Endangered Fish Facility, Utah, and Wahweap, Utah. Additional temporary facilities also are becoming available.

Yampa River passage barriers were evaluated in FY 1995 but a more detailed review of a few diversion structures is required in FY 1996.

The year-to-year lease of 10,000 acre feet of water, along with the provision of the original 10,000 acre feet of water from Ruedi Reservoir, continue to provide an important source of water to supplement flows in the 15-mile reach during late summer.

The floodplain restoration program made important progress in 1995. In the second year of management of Old Charlie wash (Utah) some survival of young razorback sucker and Colorado squawfish was documented. Initial construction on Adobe Creek and Walter Walker (Colorado) backwater habitat was initiated as

well as completion of construction on 29 1/2 Road Gravel Pits backwater/refugia area. Agreement also was reached on comprehensive levee removal and land acquisition strategy for the middle Green River. The strategy will be implemented in FY 1996.

Reclamation continues to provide research flows in the Gunnison River as part of the Aspinall studies. An interim contract among the Bureau, Service, and CWCB was finalized to protect 300 cfs below Redlands Diversion. The Bureau is providing approximately 1,800 acre feet of water from Paonia to offset depletions associated with Horsethief operation. Many other noncaretred items which are important steps to completion of caretred items also were completed.

CONCERNS

As referenced above, a great deal of work by all participants of the Program and other cooperating groups has been initiated, however, of the 18 high priority (caretred) items that were to be completed in 1995, seven are behind schedule.

Progress to deal with the nonnative fish conflict in occupied waters of the Colorado and Green Rivers has continued to be delayed. Even though it is a recognized problem, the Program has been unable to initiate significant actions to deal with the problem.

Several actions to provide flows to the 15-mile reach are behind schedule, including the contracts for water from Ruedi, Collbran, and Silt. In addition, litigation has been ongoing on the 581 cfs instream flow filing since 1992. Over 130 statements of opposition have been registered in State Water Court on the State's recent instream flow filings for the Colorado and Yampa Rivers. While we appreciate that this is the "normal" process for adjudicating water rights in Colorado, the prospect of many years of costly litigation raises serious questions about the ultimate fate and utility of these filings.

In a broader sense, the Service is concerned about how the flow needs of the endangered fish in the Colorado River can be achieved in light of (a) the limited availability of viable options for acquiring water, (b) the extensive litigation associated with obtaining water and water rights, and (c) the State's desire to develop an additional 100,000-400,000 acre feet of water from the mainstem Colorado River above Grand Junction. In addition to placing additional emphasis on completing the actions identified above, the Service believes that the Program needs to assess the potential water withdrawals and the viability of fish recovery on the Colorado River. These concerns were discussed at the March 11, 1996, Implementation Committee meeting, and the Implementation Committee asked the Management Committee to develop a plan/strategy for addressing this issue.

CONCLUSION

The Service has carefully evaluated the following factors in its annual review to determine the ability of the Recovery Program to serve as a reasonable and prudent alternative for water depletion projects in the Upper Colorado River Basin:

- ° recovery program accomplishments and shortcomings
- ° the adequacy of flows necessary to recover the endangered fishes
- ° the magnitude of depletion impacts that have occurred
- ° the status of the fish populations

Based on this evaluation, the Service has concluded that the Recovery Program has generally made sufficient progress for projects with an average annual depletion of less than 1,500 acre feet. This is a reduction from the 3,000 acre feet threshold that was set for 1995. The Service has instructed its field offices that the depletion threshold has been reduced to 1,500 acre feet and that all projects above 1,500 acre feet will be reviewed on a case-by-case basis in accordance with the section 7 agreement.

The Service will raise this threshold back to the 3,000 acre feet level once the following actions have been completed:

1. Finalization and implementation of the nonnative fish stocking procedures (target date: October 1996).
2. Granting of a decree by the water court that allows for release of water from Steamboat Lake for instream flow purposes and finalization of a contract to provide up to 3,000 acre feet of water from Steamboat Lake for the endangered fishes (target date: June 1996).
3. Completion of a short term agreement to supply and deliver up to 21,650 acre feet of water from Ruedi Reservoir for enhancing instream flows in the 15-mile reach (target date: July 1996).
4. Approval of an FY 1997 work plan to implement high priority nonnative fish control projects in Colorado and Utah (target date: September 1996).
5. Develop and agree to the scope and objectives of a strategy for addressing recovery of the endangered fishes in the 15-mile reach of the Colorado River, including a process and schedule for completing the strategy in a timely manner.

Recovering the Colorado River endangered fishes while allowing water development to continue represents a major challenge facing the Recovery Program. The decision to reduce the sufficient progress threshold to 1,500 acre feet should not be construed as lack of commitment to the Recovery Program by the Service. Rather, this action indicates that we need to exercise greater caution in allowing depletions to proceed that may foreclose future recovery options and, thus, sufficient progress.

This decision also is a reminder that we need to recommit ourselves to completing the actions outlined in the RIPRAP according to the agreed upon schedule. I appreciate that these schedules are aggressive, but so is the goal of this Program which is to recover the fish by 2003. Finally, I would

like to encourage everyone to alert the Program as soon as possible when major issues arise or schedules begin to slip. This will provide the Program the opportunity to take corrective actions and avoid these difficulties at the end of 1996.

Attachment

Ralph M. Moya

Attachment



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Mountain-Prairie Region

IN REPLY REFER TO:

ES
MAIL STOP 60120

MAILING ADDRESS:
Post Office Box 25486
Denver Federal Center
Denver, Colorado 80225

STREET LOCATION:
134 Union Blvd.
Lakewood, Colorado 80228

FEB 2 1995

Memorandum

To: Management Committee, Colorado River Recovery Implementation Program
From: Fish and Wildlife Service Representative of Management Committee *Larry Shanks*
Subject: Review of Progress Made Under Recovery Implementation Program
Recovery Action Plan

The Fish and Wildlife Service (Service) has reviewed the accomplishments made by the Recovery Program on actions identified in the September 8, 1994, Recovery Implementation Program Recovery Action Plan (RIPRAP) to determine if progress toward recovery has been sufficient for the Recovery Program to continue to serve as a reasonable and prudent alternative. The following factors, identified in section II of the Section 7 Agreement, were evaluated:

- a. 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.
- b. Status of fish population.
- c. Adequacy of flows.
- d. Magnitude of the impact of projects.

The Service recognizes the dedication and commitment of all Recovery Program participants in updating and implementing the RIPRAP. The Service continues to believe that the Recovery Program is achieving "sufficient progress" toward recovery to allow the Recovery Program to serve as the reasonable and prudent alternative for depletions less than 3,000 acre-feet. This conclusion is based on our assessment that Program participants are working diligently to implement recovery actions within the schedules contained in the RIPRAP. The Service is especially encouraged by (1) the efforts of the Colorado Water Conservation Board and the State of Utah to legally protect instream flows in the 15-mile reach and the Green River, respectively, (2) the efforts of the Bureau of Reclamation to operate Flaming Gorge and the Aspinall Unit to provide research flows and benefit the endangered fish, and (3) the cooperation of the States to develop and implement the Interim Procedures for Stocking of Nonnative Fishes in the Upper Colorado River Basin. The Service also recognizes the many accomplishments documented in the Fiscal Year 1994 Summary Report dated January 30, 1995.

Despite the accomplishments by the Recovery Program, the Service is concerned that the schedules for many RIPRAP items are slipping and that many of the efforts to acquire water and water rights for the endangered fish in Colorado are being challenged in court. With the possible exception of the Colorado squawfish, the populations of the endangered fish have not improved, and the razorback sucker is showing continuing signs of decline. Serious delays in the completion of major RIPRAP actions or a decline in the status of the endangered fish will affect the Service's future assessment of sufficient progress.

Over the past year, the Service has provided information to the Management Committee regarding anticipated section 7 consultations in the Upper Colorado River Basin. As you know, there are many large new and historic projects in the basin that the Service will be requested to consult on over the next several years. In that regard, the Service is recommending several changes and additions to the RIPRAP. These recommendations are being submitted to the Program Director for his consideration. The Service believes it is extremely important that the RIPRAP elements be implemented in accordance with the RIPRAP schedules in order for the Recovery Program to continue to achieve sufficient progress. This is especially important for RIPRAP elements which protect or improve habitat conditions and result in more immediate, positive population responses (i.e., the carated actions in the RIPRAP).

The Service expresses its appreciation to the Recovery Program participants for their dedication in implementing the RIPRAP and making progress to achieve overall Recovery Program goals.

Attachment



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services

Western Colorado Office

764 Horizon Drive, South Annex A
Grand Junction, Colorado 81506-3946

IN REPLY REFER TO:

ES/CO:Colorado River RIP
MS 65412 GJ

November 20, 1995

Memorandum

To: Director, Colorado River Recovery Implementation Program, Regional Office, Region 6, Mail Stop 65115

From: Assistant Field Supervisor, Ecological Services, Grand Junction, Colorado, Mail Stop 65412

Subject: Upcoming Section 7 Consultations in Colorado

As per your request, please find attached the subject projections. I emphasize these are educated guesses only and that final scheduling is primarily the responsibility of project proponents and/or the lead federal agency. Recovery Action Plan items that may be prescribed are tentative at best, but will likely favor flow protection, fish passage, and nonnative control measures.

If you have any questions, contact me at your convenience.

Attachment

cc: FWS/ES, Golden
FWS/CO/KA/N/UT, Mike Stempel
FWS/CO/KA/N/UT, Larry Shanks

KRose:Projections:112095

Attachment

Project	Lead Agency	Depletion (AF)	Action	BA to FWS	River Impacted/RAP Item
Animas-La Plata	BR	154,800 AF	Reinitiation New	6/95	San Juan River/NA
Red Mesa Reservoir	BLM	1202 AF - Historic 997 AF - New		NA	San Juan River/NA
Dolores	BR	131,000 AF (Depletion Amount Disputed)	Reinitiation Historic	FY-96	Colorado River/Nonnative Control Depletion Impacts Offset by Aspinall
Dallas Creek	BR	17,200 AF	Reinitiation Historic	FY-96	Gunnison River/Depletion Impacts Offset by Aspinall
Collbran	BR	Unknown	Pending SB 1109, Status Unknown		
Taylor Draw	FERC	6,800 AF	Reinitiation Historic	FY-96	White River/Fish Passage Provide and Protect Flows
Peach Queen Hydro	FERC	NA	Reinitiation New Amendment	FY-96	Colorado River/Fish Passage (Price Stubb) Provide and Protect Flows
Ute Water Pipeline	BLM	15 Mile Reach: 7,500 AF Historic, 37,400 AF New; Below Persigo: 4,300 AF Historic, 7,200 AF New	Reinitiation Historic Water Use, New Pipeline	FY-96	Colorado River/Provide and Protect Flows. RAP may be inadequate to remove jeopardy and adverse modification
Elkhead Enlargement	BR	Unknown	Pre-ESA Historic and New	FY-97	Yampa River/Provide and Protect Flows, Augment Summer Low Flow Months, Nonnative Control

Project	Lead Agency	Depletion (AF)	Action	BA to FWS	River Impacted/RAP Item
Aspinall	BR	Unknown	Reinitiation Historic	FY- 97/98	Gunnison River/Provide and Protect Flows, Maintain 2000 cfs at Gunnison/Colorado Confluence
Colorado Big Thompson	BR	260,000 AF	Reinitiation Historic	FY-98 FY-99	Colorado River/Provide and Protect Flows, etc. ?

MEMORANDUM

TO: Director, Colorado River Recovery Implementation Program

FROM: Field Supervisor, Ecological Services, Fish and Wildlife Service,
Salt Lake City, Utah

SUBJECT: Anticipated Green River Basin Section 7 Consultations and Associated
RIPRAP Elements Which Must be Completed to Ensure Sufficient Progress

In follow up to last year's schedule for Section 7 consultations (December 14, 1994), I have revised the dates based on most current information and am providing it in the attached summary.

Some specific clarification of issues since last year's schedule was prepared follow:

- 1) Consultations related to Central Utah Projects including Wasatch County, Uintah Basin Replacement and Spanish Fork-Nephi Irrigation (SFN) have all been delayed until this year. Difficulties in developing project plans and shifting project priorities have led to this situation.
- 2) We are currently reviewing a draft assessment for SFN which the Central Utah Water Conservancy District (CUWCP) provided in January and wants to receive a biological opinion by early March. While we will probably not be able to meet such a short deadline, elements of our finding will be conveyed to CUWCP in order for them to continue project planning and NEPA compliance.
- 3) The basis of our opinions to continue or begin diversion of water from the Colorado River basin will be reliance on the RIP and Flaming Gorge operation to provide adequate offsetting measures in the lower Duchesne and Green Rivers. Progress in refining flow requirements for those reaches, making water available, and protecting it will be the milestones we are looking for.
- 4) We anticipate receiving project specific biological assessments from BR for flooded bottomland proposals along the Green River between Dinosaur National Monument and Sand Wash throughout 1996.
- 5) Emergency work to ensure dam safety will begin this year on Scofield dam. Consultation on the operation of the facility and it's potential impact on the Price River will begin this fiscal year.
- 6) Section 7 consultation has been completed for the Price-San Rafael Salinity Control Project and Narrows Project both of which could affect flows in the Price River. Studies being initiated this spring should provide additional

information on the value of the Price River toward the recovery of the four listed fishes. No new RIPRAP items are envisioned at this time.

- 7) Operations and depletions from the remaining projects scheduled should be completed in the outyears as time, staffing and funding become available. Work on Flaming Gorge synthesis and the fifth year of research are proceeding.

I hope this summary gives you a clearer picture of our anticipated Section 7 actions this year. If you have question or concerns, please call.

TABLE 1 SECTION 7 CONSULTATION FY 96

Agency	Name of Project	Type	Depletion (AF)	BA to FWS	Impacted River(s), Potential Flow-related RPPRAP Item	RPPRAP
CUWCD	Wasatch County Water Efficiency Project/Daniels Creek Irrigation Water Replacement Project Depletions	N	(+) 4,000	Spring, 1996	Augmentation to Duchesne so RPPRAP Item unlikely unless these flows do not reach Green River	n/a
CUWCD	Depletions from Spanish Fork/Nephi Irrigation System, Bonneville Unit, CUPCA, including Strawberry Valley Project Historic Depletions	N/H	156,700	January, 1996	Duchesne: Provide/Protect Instream Flows Lower Green: Provide/Protect Instream Flows, Nonnative fish control, Restoration of bottomlands	FY98 FY98
BR	Flooded Bottomlands Habitat Restoration Actions	N	?	1996	Upper Green: Provide/Protect Instream Flows, Nonnative fish control, Restoration of bottomlands Lower Green: Provide/Protect Instream Flows, Nonnative fish control, Restoration of bottomlands	11/94;FY98 FY98
CUWCD	Depletions from Uintah Basin Replacement Project, CUPCA, including Pigeon Water, Clay Basin, and McGuire Draw Dams and Reservoirs	N	22,000	Spring, 1996	Duchesne: Provide/Protect Instream Flows Lower Green: Provide/Protect Instream Flows	FY98 FY98
BR	Depletions from Narrows Project	N	5,557	Section 7 Completed	Lower Green: Provide/Protect Instream Flows 3 year study on Price River initial funding 1996	FY98
BR	Operation of Scofield Project	H	?	August, 1996	Price River: 3 year study funded in 1996 Lower Green: Provide/Protect Instream Flows	? FY98
BR	Depletions from Price-San Rafael Rivers Unit - Colorado River Water Quality Improvement Program	N	25,310	Early-1996	Price/San Rafael Rivers: RPPRAP items may need to be developed to provide/protect instream flows Lower Green: Provide/Protect Instream Flows	? FY98
BR	Depletions from Jensen Unit, CUP	H	15,000	After 1996	Upper Green: Provide/Protect Instream Flows, Nonnative fish control, Restoration of bottomlands	11/94;FY98
BR	Operation of Flaming Gorge Dam and Reservoir	H		1997	Upper Green: Provide/Protect Instream Flows Lower Green: Provide/Protect Instream Flows	11/94;FY98 FY98
BR	Operation of Seedskedege Project	H		After 1997	Upper Green: Provide/Protect Instream Flows	11/94;FY98
BR	Depletions from Lyman Project	H	10,000	After 1997	Upper Green: Provide/Protect Instream Flows	11/94;FY98
BR	Depletions from Uintah Basin Unit - Colorado River Water Quality Improvement Program	H	22,000	After 1997	Duchesne: Provide/Protect Instream Flows Upper Green: Provide/Protect Instream Flows	11/94;FY98 ?
BR	Depletions from Emery Project	H	?	?	Lower Green: Provide/Protect Instream Flows San Rafael (New Item?): Provide/Protect Instream Flows	FY98 ?

March 1, 1996
 Section 7 Consultations Involving Water Depletions
 in the Upper Colorado River Drainage After Initiation of Recovery Implementation Program January 1988

Federal Agency	Project Name	State	River	Initiation Date	Due Date	Depletion Ac. Ft.	Fund \$ *1	Opinion Finalized
BLM	James Creek	CO	White	11/23/88	02/23/89	400	4,000	02/03/89
BLM	Jensen-Miller	CO	White	11/18/88	02/18/89	30	300	02/03/89
BLM	Muddy Creek	CO	Colorado	01/24/89	03/24/89	7,716	80,324	02/07/90
BLM	Yellow Eagle Mine	CO	Dolores	04/05/91	07/05/91	24	275	12/06/91
BLM	Colorado Interest Uinta Pipeline	CO	Green	10/03/91	01/03/92	17	196	02/10/92
BLM	Somerset Coal Mine	CO	Gunnison	04/17/92	07/17/92	1	12	07/24/92
BLM	Trans-Colorado Gas Pipeline	CO	Colorado	03/01/92	06/02/92	13	149	11/30/92
BLM	Chapman-Riebold Amend	CO	White	11/05/92	02/05/92	35	419	07/29/93
BLM	Devils Canyon	CO	Colorado	01/12/93	04/12/93	15	180	07/29/93
BLM	Dowler Pipeline	CO	Colorado	06/16/93	09/16/93	29	0	08/27/93
BLM	Rocky Mt. Natural Gas	CO	Colorado	06/24/93	09/24/93	9	108	08/27/93
BLM	Wilcoxson Water Supply	CO	Colorado	07/20/93	10/20/93	0.55	0	09/27/93
BLM	Mountain Coal	CO	Gunnison	11/26/93	02/26/94	1	12	12/21/93
BLM	Cason Irrigation Pipeline	CO	Colorado	07/20/93	10/20/93	14	169	01/13/94
BLM	Hastings Pipeline	CO	Colorado	12/13/93	02/13/94	44	0	01/28/94
BLM	JQS Pit Reservoirs	CO	Colorado	01/18/94	04/18/94	2.55	31	02/22/94
BLM	Taylor Grazing Pond	CO	Colorado	01/18/94	04/18/94	1.28	16	02/22/94
BLM	Vasten Homestead Waterfowl	CO	Colorado	01/18/94	04/18/94	6.38	79	02/22/94
BLM	Jolly-Potter	CO	Colorado	02/10/94	05/10/94	125	0	03/03/94
BLM	Schenk Water Tank	CO	Colorado	02/25/94	05/25/94	30.4	0	04/07/94
BLM	Greenhorn Stock Pond	CO	Colorado	01/18/94	04/18/94	2.55	31	04/07/94
BLM	North Northwater Spring	CO	Colorado	04/05/94	07/05/94	1.61	20	05/31/94
BLM	Clough-Alber Ponds	CO	Colorado	04/05/94	07/05/94	1.28	16	05/31/94
BLM	New Castle Water Tank	CO	Colorado	04/08/94	07/08/94	446.22	-----	05/31/94
BLM	Jolley Irrigation	CO	Colorado	04/13/94	07/13/94	393	-----	05/31/94
BLM	Programmatic Colo <125	CO	Colorado	05/29/94	08/29/94	1500 hist 1400 new	-----	06/13/94
BLM	Rock Creek	UT	Green	11/06/85	04/18/86	120	1,200	03/24/89
BLM	Columbia Gas Development	UT	Colorado	08/08/91	11/08/91	15	173	10/02/91
BLM	Hog Canyon Reservoir	UT	Colorado	02/14/92	05/14/92	1	12	06/04/92
BLM	Buckhorn Wash	UT	Green	11/06/92	02/06/93	15	180	12/10/92
BLM	Aable Trucking Co	UT	Colorado	05/17/93	08/17/93	20	240	06/21/93
BLM	Moab District	UT	CO-Green	02/02/94	05/02/94	531	*4 *7	05/06/94
BLM	Monument Butte	UT	Green	05/14/94	08/14/94	500	6,170	07/18/94
BLM	Balcon Oil & Gas Development	UT	Green	12/02/94	03/02/95	441	5,605	04/21/95
BLM	Enron Oil & Gas	WY	Green	04/10/89	07/10/89	30	300	04/12/89
BLM	Chevron	WY	Green	08/11/89	11/11/89	8	80	09/08/89

Federal Agency	Project Name	State	River	Initiation Date	Due Date	Depletion Ac. Ft.	Fund \$ *1	Opinion Finalized
BLM	Pac. Enterpr. Oil	WY	Green	08/11/89	11/11/89	2	20	09/08/89
BLM	Coastal Oil and gas	WY	Green	11/09/89	02/09/90	4	40	11/17/89
BLM	Texaco	WY	Green	11/09/89	02/09/90	8	80	11/17/89
BLM	Mobil Oil Drill	WY	Green	05/09/90	08/09/90	8	83	05/11/90
BLM	Amoco Moxa Arch	WY	Green	06/11/91	09/11/91	82	895	08/06/91
BLM	Big Piney/La Barge Crd Act Pln	WY	Green	06/26/91	09/26/91	0	0 *8	08/06/91
BLM	PG&E Fontenelle Gas Infill	WY	Green	06/16/91	09/16/91	61	666	08/14/91
BLM	Mobil Tip Top/Hogsback	WY	Green	05/13/94	08/13/94	162	*4 *7	06/27/94
BR	Lake City/Blue Mesa	CO	Gunnison	12/13/88	03/15/89	25	Exempt	03/08/89
BR	Paradox Valley Salinity	CO	Dolores	03/29/89	06/29/89	1,448	Exempt	06/08/89
BR	Drought-Related Water Sales	CO	Gunnison	03/13/90	06/13/90	Up to 6,000	Exempt	03/28/90
BR	Crested Butte/Blue Mesa	CO	Gunnison	06/03/91	09/03/91	98	Exempt	06/21/91
BR	Paonia Water Sale	CO	Gunnison	08/02/91	11/02/91	800	Exempt	10/23/91
BR	Collbran Project Amend	CO	Colorado	06/24/92	09/24/92	746	Exempt	06/29/92
BR	Lone Dome Ditch	CO	Dolores	03/04/93	06/04/93	240	Exempt	03/12/93
BR	Grand Valley BLM Stk Ponds	CO	Colorado	09/24/93	12/24/93	21	Exempt *7	11/10/93
BR	Crawford Reservoir	CO	Gunnison	09/30/93	12/30/93	8	Exempt *7	11/10/93
BR	Ruedi Rsvr Round 2 Water Sale	CO	Colorado	09/-/-/94	12/-/-/94	17,000	Exempt *7	05/26/95
BR	Strawberry Aqueduct CUP	UT	Duchesne	-----	-----	108,000	*3	08/31/90
BR	Narrows Amendment	UT	Green	07/07/94	10/09/94	157	1,995*3*7	01/09/95
BR	Church & Dwight Co	WY	Green	12/14/87	03/14/88	1,250	Exempt	04/19/88
BR	Flaming Gorge	WY	Green	1978	06/01/90	0	Exempt	11/25/92
BR	Fontenelle Resv Water Contract	WY	Green	02/22/95	05/22/95	500	Exempt *7	05/15/95
BR	Narrows	UT	Green	11/08/91	02/07/92	5,400	62,100 *3	03/25/92
BR/COE	Price-San Rafael	UT	Green	08/09/88	02/15/90	25,310	----- *3	02/04/92
BR/SCS						2,850	Exempt	
COE	West Slope Refinery	CO	Colorado	02/08/89	05/08/89	22,460	258,290	08/15/89
COE	Frei & Sons	CO	Colorado	04/25/89	07/25/89	1,209	12,092	08/16/89
COE	Colo.Div.Mtd. Rio Blanco	CO	White	06/26/89	09/26/89	388	3,881	08/16/89
COE	Steamboat Springs Pipeline	CO	Colorado	03/20/90	06/20/90	200	2,082	11/02/89
COE	Town of New Castle	CO	Colorado	07/06/90	10/06/90	27	285	04/13/90
COE	Colorado DMW Crystal Hatch*2	CO	Colorado	01/24/90	04/24/90	2	1	07/27/90
COE	Bluestone/Roan Creek	CO	Colorado	10/09/90	01/09/91	2,000	21,820	11/14/90
COE	Everist Gravel	CO	Colorado	03/08/91	06/08/91	4	45	03/11/91
COE	Snowmountain Ranch	CO	Colorado	03/15/91	06/15/91	83	908	06/15/91
COE	Indian Partnership	CO	Yampa	12/04/90	03/04/91	2	25	06/17/91
COE	City of Craig	CO	Yampa	06/23/91	09/23/91	600	6,546	09/19/91
COE	Colorado Ute Nuc Sta	CO	Dolores	02/11/92	05/11/92	886	10,189	03/03/92
COE	Indian Meadows	CO	Colorado	04/20/90	07/20/90	139	1,599	03/24/92
COE	Snowmountain Amend	CO	Colorado	05/15/92	08/15/92	6	64	06/03/92
COE	Eagle Golf Course	CO	Colorado	07/30/92	10/30/92	235	2,702	09/04/92

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COE	Cross Bar Ranch	CO	Gunnison	10/14/92	01/14/93	4	48	11/13/92
COE	Colorado DOT	CO	Colorado	09/09/92	12/09/92	3	36	12/08/92
COE	Hahn's Peak Dam	CO	Yampa	09/16/91	12/16/91	31	357	02/12/93
COE	Flannery Reservoir	CO	Colorado	02/23/93	05/23/93	133	1,598 *7	07/02/93
COE	Trout Lake Dam	CO	Dolores	02/17/93	05/17/93	203	0 *7	07/16/93
COE	Pat.-Jacobson Ditch	CO	Colorado	03/19/93	06/19/93	103	0 *7	07/29/93
COE	Clifton Diversion	CO	Colorado	02/05/93	05/05/93	994	0 *7	09/02/93
COE	Lake Windemere	CO	Colorado	04/21/93	07/21/93	4	48 *7	09/07/93
COE	Evans/Mckenzie Ponds	CO	Eagle	08/20/93	11/20/93	0.39	5 *7	11/01/93
COE	West Pond	CO	Colorado	12/09/93	03/09/94	0.16	2 *7	01/13/94
COE	Town of Dolores	CO	Dolores	12/08/93	03/18/94	36.3	0 *7	01/18/94
COE	Palmer Creek	CO	Colorado	03/02/94	06/02/94	0.94	12 *7	03/28/94
COE	Carns Pond	CO	Colorado	02/11/94	05/11/94	8	93 *7	03/29/94
COE	Dry Hollow Creek	CO	Colorado	08/04/93	11/04/93	2.3	28 *7	04/04/94
COE	Town of Granby	CO	Colorado	03/28/94	06/28/94	41	4 *7	04/11/94
COE	Welfelt Wetland	CO	Colorado	03/24/94	06/24/94	4.5	56 *7	04/15/94
COE	Den Pond	CO	Colorado	03/09/94	06/09/94	.43	5 *7	05/31/94
COE	Rivergreen	CO	Gunnison	03/22/94	06/22/94	{3.68 hist}	12 *7	05/31/94
COE	Avon Metro	CO	Colorado	03/25/94	06/25/94	{1.14 new}		
COE	Independence Pond	CO	Colorado	05/03/94	08/03/94	{38.3 hist}	14 *7	05/31/94
COE	Miller Creek Ranches	CO	Green	08/27/94	11/27/94	2.15	27 *7	05/31/94
COE	Pollard Pond	CO	Colorado	04/21/94	07/21/94	45.62	563 *7	06/28/94
COE	Permit 94-475135	CO	Colorado	06/01/94	09/01/94	3.72	46 *7	07/01/94
COE	Alpine Land Dev.	CO	Colorado	06/01/94	09/01/94	.3	4 *7	07/01/94
COE	City of Steamboat Spgs Glf Crs	CO	Yampa	05/24/95	08/24/95	254.6	3,142 *7	07/08/94
COE	Rio Blanco Reservoir #2	CO	White	04/01/95	07/01/95	179.6	2,283 *7	08/21/95
COE	Upper Eagle Diversion	CO	Eagle	05/24/95	08/24/95	133	0 *7	06/27/95
COE	Cotton Ranch	CO	Colorado	09/05/95	12/05/95	603	7,664 *7	07/26/95
COE	High Gross Creek	WY	Green	10/09/91	01/09/92	250.3 hist.	0 *7	09/19/95
COE	Freemont Lake	WY	Green	05/15/92	08/15/92	6	66	10/24/91
COE	Green River/Rock Springs	WY	Green	09/09/93	12/09/93	1,000	11,500	08/07/92
COE	Water Board	WY	Green	01/26/94	04/26/94	{3,244 hist}	18,533 *7	09/27/93
COE	Corral Creek	WY	Green	01/26/94	04/26/94	{1,547 new}	17 *7	03/15/94
COE	Jimmy Creek	WY	Green	01/26/94	04/26/94	8.12	100 *7	03/17/94
COE	Little Twin Creek	WY	Green	01/27/94	04/27/94	6.6	81 *7	05/19/94
DOE	Uranium Mill Tailings-Rifle	CO	Colorado	12/01/88	03/01/89	215	2,150	08/14/89
DOE	Uran Mill Tailings-Gunnison	CO	Gunnison	10/01/90	01/01/91	88	960	12/11/90
DOE	Uran Mill Tailings-Naturita	CO	Dolores	10/01/90	01/01/91	37	404	12/11/90
DOE	Uran Mill Tailings-Grnd Jnctn	CO	Colorado	04/19/91	07/19/91	18	209	01/10/92
DOE	Uran Mill Tailings-Slickrock	CO	Dolores	07/29/93	10/29/93	59	707 *7	08/27/93

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DOE	Naval Oil Shale Res #3	CO	Colorado	05/06/94	08/06/94	4.87	60 *7	06/01/94
DOE	Maybell UMTA	CO	Colorado	11/15/94	02/15/95	280	3,559 *7	02/17/95
FS	Lake Catamount Ski	CO	Yampa	12/17/90	03/17/91	24	262	06/11/91
FS	White Banks Alabaster	CO	Colorado	06/16/92	09/16/92	1	12	07/24/92
FS	Holf Creek Gas Wells	CO	Colorado	08/06/92	11/06/92	3	30	09/09/92
FS	White River Oil & Gas Lease	CO	Colorado	11/06/92	02/06/93	1		02/02/93
FS	Routt Oil & Gas	CO	Colorado/Yampa	11/06/92	02/06/92	62		03/08/93
FS	Vidler Tunnel	CO	Colorado	01/21/93	04/21/93	2,000		07/06/93
FS	Smith-Ermele Pipe	CO	Colorado	03/11/93	06/11/93	0.2		08/02/93
FS	Overton to Terrell Ditch	CO	Colorado	01/27/93	04/27/93	48.1		08/05/93
FS	Gilbert Family Trust	CO	Uncompahgre	03/11/93	06/11/93	1.96		09/04/93
FS	7 Natl Forests Small Dep	CO	Colorado	04/21/93	07/21/93	{ 1,085 hist 245 new }	2,937 *7	09/07/93
FS	Fish Creek Reservy Expan	CO	Yampa	02/23/93	05/23/93	{ 445 hist 656 new }	7,059 *7	09/24/93
FS	Alsbury Res. Enlargement	CO	Colorado	05/20/93	08/20/93	{ 13 hist 133 new }	1,641 *7	02/10/94
FS	Irwin Water Lines	CO	Gunnison	03/11/93	06/11/93	0.5	6 *7	02/22/94
FS	Illeman	CO	Gunnison	03/03/94	06/03/94	242	0 *7	03/28/94
FS	Peck Spring	CO	Uncompahgre	05/16/94	08/16/94	130.3	----- *7	06/08/94
FS	Porter Ditch	CO	Colorado	02/02/94	05/02/94	450	5,553 *7	08/15/94
FS	Horsefly/Johnson Spring	CO	Colorado	06/30/94	09/30/94	202.7	0 *7	08/15/94
FS	Snowmass Ski Devel	CO	Colorado	06/11/93	09/11/93	{ 14 hist 70 new }	1,218 *7	02/10/95
FS	Telluride Ski Resort	CO	Colorado	08/10/94	11/10/94	{ 14 hist 429 new }	5,453 *7	03/22/95
FS	ChemStar Lime CO	CO	Colorado	05/08/95	08/08/95	250	0 *7	05/24/95
FS	Lapadakis Special Use Permit*2	CO	Colorado	12/21/94	03/21/95	260.3	0 *7	01/13/95
FS	Rudolph Irrigation Ditch	CO	Colorado	09/12/95	12/12/95	1785.2	0 *7	10/12/95
FS	Glenn Springs #1 Dom.	CO	Gunnison	09/27/95	12/27/95	276.5	0 *7	10/18/95
FS	Carbondale Water Trmt.	CO	Colorado	10/30/95	01/30/96	295.5	0 *7	12/12/95
FS	Hilkey et. al. spec. use	CO	Colorado	12/01/95	02/01/96	202.95	0 *7	01/23/96
FS	Cyprus Coal Drilling	UT	Green	08/01/91	11/01/91	2	23	10/07/91
FS	Cyprus 3 Hole Drilling	UT	Green	10/09/92	01/09/93	1	12	10/21/92
FS	Mountain Coal Exploration	UT	Green	12/01/92	03/01/93	0.6	7	12/14/92
FS	Manti-Lasal Oil & Gas	UT	Green	11/03/92	02/03/92	67.6		12/18/92
FS	Pacific Corp Coal Expl	UT	Green	08/10/93	11/10/93	0.74	0 *7	09/17/93
FS	PacificCorp	UT	Green	05/02/94	08/02/94	1.4		06/30/94
FS	Convulsion Canyon	UT	Green	05/02/94	08/02/94	.15		07/01/94
FS	Soda Unit Natural Gas	WY	Green	12/13/88	03/15/89	102	1,020	03/14/89
FS	Bridger/Teton Forest Plan	WY	Green	03/27/89	08/15/89	*4	*4	08/15/89
FS	Pelican Ponds	WY	Green	08/16/94	11/16/94	174	2,145 *7	09/22/94

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FMS	Ouray Fish Hatchery	UT	Green	08/03/92	11/03/92	36	0 *6	09/23/92
FMS	Featherdown Wetland	WY	Green	10/15/92	01/15/93	4	47	11/13/92
FMS	Small Depletions	REG	CO-Green	---	---	1000	Exempt *4*7	07/03/94
FMS	Small Depletions	REG	CO-Green	---	---	2000	Exempt *4*7	03/09/95
NPS	Natural Bridges National Monument	UT	Colorado	07/22/92	10/22/92	1	12	08/13/92
OSM	Colowyo Coal Company	CO	Yampa	01/11/88	04/09/88	127	1,270	04/18/88
OSM	Trapper Mine	CO	Colorado	03/25/88	06/25/88	123	1,228	04/18/88
OSM	Apex #2 Mine	CO	Yampa	08/30/88	11/30/88	3	34	10/18/88
USM	Munger Canyon Mine	CO	Colorado	09/12/88	12/12/88	2	20	08/08/89
OSM	Munger/McCane Mine	CO	Colorado	03/02/92	06/02/92	4	40	04/16/92
OSM	Colowyo Coal Expand	CO	Yampa	01/14/92	04/14/92	3	30	05/22/92
OSM	Salt Creek Mine	CO	Colorado	03/05/92	06/05/92	3.5	40	06/02/92
OSM	Sanborn East Tract	CO	Colo	12/11/92	03/11/93	30	364	02/03/93
OSM	Hayden Gulch Loadout	CO	Yampa	03/02/93	06/02/93	56	676 *7	07/23/93
OSM	Orchard Valley Mine	CO	Gunnison	03/15/94	06/15/94	37.5	463 *7	05/31/94
OSM	Bear Mine #3	CO	Colorado	03/29/94	06/29/94	15.3	189 *7	05/31/94
OSM	Kammerer Mine Mod	WY	Green	06/11/87	09/11/87	107	1,600	02/09/88
OSM	Black Butte Mine	WY	Green	02/05/88	05/05/88	72	720	04/18/88
OSM	Lion Coal Swanson Mine	WY	Green	11/09/93	02/09/93	11	148 *7	12/22/93
OSM	Mt. Coal West Elk	CO	Gunnison	09/16/93	12/16/93	17.1	211 *7	06/30/94
OSM	Foideal Creek Mine	CO	Yampa	04/20/95	07/20/95	165.45	2,103 *7	05/04/95
SCS	Bray Irrigation	CO	Dolores	05/12/94	08/12/94	11.84	146 *7	06/03/94

Yding

Coors Duchesne Oil & Gas
Aspinall
Ute Pipeline
UP MISC.

- *1 \$10/AF Pre FY 1990, \$10.41/AF FY 1990, \$10.91/AF FY 1991, \$11.50/AF FY 1992, \$11.98/AF FY 1993, \$12.34/AF FY 1994, \$12.71/AF FY 1995, \$13.04 FY 1996, \$13.41 FY 1997
- *2 Historic Depletion
- *3 Subject to Flaming Gorge Biological Opinion
- *4 Amount to be determined on project specific basis
- *5 Consultation period extended
- *6 No depletion charge because project has net benefit to fish
- *7 Consultation under section 7 Agreement
- *8 Payments were collected under individual consultations for Enron, Chevron, Pacific, Coastal, Texaco, and Mobil

Note: Since 1988, the Service has consulted on 175 projects with a potential to deplete a total of 209,581 acre-feet in the Upper Colorado River Basin, of which 45 are historic depleting 18,767 acre-feet.

Operation of Flaming Gorge dam enhances spring peak flows on the Green River by up to 145,787 acre-feet each year. Operation of Ruedi Reservoir provides approximately 20,000 acre-feet to augment late summer and fall flows in the Colorado River.