

# STATE OF COLORADO

## Colorado Water Conservation Board

### Department of Natural Resources

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Denver, Colorado 80203  
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## MEMORANDUM

To: Colorado Water Conservation Board Members

From: Dan Merriman and Linda Bassi  
Stream and Lake Protection Section

Date: January 17, 2006

Re: **Agenda No. 28, January 24-25, 2006 Board Meeting: U.S. Bureau of Reclamation Paradox Salinity Control Unit; (Case Nos. 7-83CW45 and 4-83CW14) -- Injury with Mitigation Proposal**

Bill Owens  
Governor

Russell George  
Executive Director

Rod Kuharich  
CWCB Director

Rick Brown  
Acting Deputy  
Director

This agenda item addresses an injury with mitigation proposal under ISF Rule 8i. (3) (Injury Accepted with Mitigation). This is the second meeting of the two-meeting process required by Rule 8i.(3). At its September 13-14, 2005 meeting, the Board made the preliminary determination that the natural environment of the Dolores River could be preserved to a reasonable degree with the proposed injury to the Board's Dolores River instream flow water right if the Bureau of Reclamation provided the proposed mitigation.

### Background

The Board holds an instream flow water right on the Dolores River for 78 cfs from McPhee Dam to the confluence with the San Miguel River, decreed by the Division 7 Water Court on September 29, 1975 in Case No. 75W1346 ("Dolores River ISF") with an appropriation date of May 1, 1975. The Bureau of Reclamation ("Reclamation") operates the Paradox Valley Unit ("the Unit"), which is located adjacent to the Dolores River near Bedrock, Colorado. (See attached map). The Dolores River picks up an estimated 205,000 tons of salt annually as it crosses Paradox Valley, primarily from the surfacing of natural brine groundwater. The Unit is designed to prevent this natural salt load from entering the river and degrading the water quality of the Dolores River downstream of the Unit and the main stem of the Colorado River. The Unit intercepts the brine groundwater before it enters the Dolores River and disposes the brine by deep well injection.

In 1983, to enable full operation of the Unit, Reclamation applied for and obtained a decree for a change of water rights and plan for augmentation in Case Nos. 83CW45 (Water Division 7) and 83CW14 (Water Division 4). Reclamation sought to change several surface water rights from

irrigation to replacement storage for salinity control and fish and wildlife propagation in McPhee Reservoir. The Dolores Water Conservancy District ("District") operates McPhee Reservoir as part of the Dolores Project, using water stored in McPhee Reservoir for irrigation, municipal and industrial use, recreation, fish and wildlife, and production of hydroelectric power. After consolidation of the two applications, the Division 4 Water Court entered a decree in both cases on February 5, 1986 ("1986 Decree"). The Court found that the changed water rights' average annual consumptive use was 924 acre-feet. The 1986 Decree provides that Reclamation may store the consumptive use amount of the changed water rights in McPhee Reservoir and use that water to replace out-of-priority depletions in the Dolores River resulting from out-of-priority pumping of one or more wells at the Unit. Releases will be made from McPhee Reservoir to replace said depletions along with the necessary transportation losses as assessed by the Division Engineer for Division 4. However, the decree permits Reclamation to store the changed water rights in McPhee Reservoir only during the historic use period when the water rights are in priority, and only when there is adequate space available in McPhee Reservoir, "so as to provide that Dolores Project supplies will not be reduced."

The 1986 Decree further provides that if the storage in McPhee Reservoir allocated to the plan for augmentation is exhausted and Reclamation is unable to provide a substitute supply of replacement water, the Unit wells shall be subject to administration and curtailment in accordance with the priority system. The CWCB was an objector in Case Nos. 83CW45 and 83CW14 and stipulated to the entry of the decree. However, neither the CWCB's statement of opposition nor the stipulation or decree specifically addressed the Dolores River ISF.

Under the above-mentioned limitations in the decree, the changed water rights have not always yielded 924 acre-feet per year and Reclamation has not been able to fully replace out-of-priority depletions resulting from pumping Unit wells every year. To address this situation, Reclamation and the District have developed a proposed allocation of downstream releases from McPhee Reservoir that would guarantee Reclamation 700 acre-feet per year of water to be released for augmentation of out-of-priority depletions from well pumping at the Unit. The proposed allocation will be documented in a written agreement between the District and Reclamation. Reclamation and the District entered into an interim operating agreement for 2005 providing for 700 acre-feet to be released from McPhee Reservoir to augment the Unit's out-of-priority depletions.

### **Injury with Mitigation Proposal**

#### **1. Current and Potential Injury to the Dolores River ISF**

Typically, the Unit is in priority one to two months a year, and the Unit's out-of-priority depletions have averaged about 240 acre-feet per year. The Division Engineer for Water Division 4 estimates that approximately 315 acre-feet of the 700 acre-feet released from McPhee Reservoir would reach the Unit to replace out-of-priority depletions. While the amount of augmentation water to be released appears to be sufficient to cover the Unit's annual out-of-priority depletions, the releases may not always match the timing of the Unit's depletions, which could injure the Dolores River ISF. Further, the potential exists for Reclamation to increase the operation of the Unit from 325 days a year to 365 days a year if the need to pump more brine ground water arises, which could result in additional out-of-priority depletions. It is important to

note that currently, Reclamation does not intend to increase Unit operations, and the 700 acre-foot release will result in a minimal amount of injury that only will occur if the released water does not match the timing of the out-of-priority depletions.

## 2. Proposed Mitigation

Under this proposal, the mitigation results from both the Unit operations and from the guaranteed annual release of 700 acre-feet of water from McPhee Reservoir. Unit operations have significantly benefited the natural environment of the Dolores River at and below the Unit. Prior to the initiation of the Unit's operation in 1990, the salinity levels in the Dolores River through Paradox Valley most often exceeded levels that aquatic life could tolerate. By 1996, about ninety per cent reduction of the brine inflow had been realized (313 tons per day to 29 tons per day). This reduction in total dissolved solids has allowed aquatic organisms to reinhabit the last seven miles of the Dolores River to its confluence with the San Miguel River. Further, due to reductions in salinity levels, the Dolores River through Paradox Valley is no longer a barrier to upstream migration for native fishes as it most often was prior to Unit operations.

The release of the 700 acre-feet from McPhee Reservoir will be timed both to meet fishery needs downstream of the Reservoir and to meet Reclamation's augmentation requirements at the Unit. The guaranteed release of 700 acre-feet to the Dolores River below McPhee Reservoir and the addition of water to the fishery pool will benefit the natural environment of the Dolores River by enhancing habitat conditions for the tailwater trout fishery and the native fishery further downstream. The native fishes benefited include the flannelmouth sucker, bluehead sucker and the roundtail chub. In addition, riparian vegetation will also be benefited during the growing season by the slight increase in Dolores River water elevations. The additional released water will benefit the entire ISF reach of 125 miles, including the approximately seven-mile segment of the reach that could be injured by the Unit's depletions.

## Proposed Memorandum of Agreement

Staff presented a proposed Memorandum of Agreement ("MOA") with Reclamation to the Board at its September 2005 meeting. The MOA

- describes the operations of the Unit
- quantifies the past and potential future injury to the Dolores River ISF
- describes the mitigation provided by the Unit and the 700 acre-feet of water to be released annually
- sets forth the obligations of Reclamation to:
  - work with the District to ensure that the 700 acre-feet of augmentation water is available for release every year
  - operate the Unit in a manner that will maximize environmental benefits to the Dolores River
  - notify the CWCB of any plans to modify the Unit that may result in a change in the amount of out-of-priority depletions at the Unit
- provides that the CWCB will not place a call at or downstream of the Unit for the Dolores River ISF while the agreement is in effect, except under certain conditions after

consultation with Reclamation, or if Reclamation has augmentation water available for release but does not release it when requested to do so by the Division Engineer.

- provides that the parties will reevaluate and amend the agreement if necessary in the event Reclamation develops plans to modify the Paradox Unit in a manner that may change the amount of out-of-priority depletions at the Unit.

This proposal would allow some injury to the Dolores River instream flow water right, but Staff believes that the mitigation offered by the Applicant will enable the Board to accept that injury while continuing to preserve the natural environment of the Dolores River to a reasonable degree. This proposal will allow both preservation of the natural environment of the Dolores River by the CWCBC and maintenance of the significant environmental benefits realized by the continued operation of the Paradox Salinity Control Unit. The Colorado Division of Wildlife concurs with staff's recommendation to approve this proposal (see letter attached to this memo).

### **Follow-Up Actions Following the September 2005 Board Meeting**

The Division Engineers for Water Divisions 7 and 4 have reviewed this proposal and find it acceptable and administrable. Staff has consulted with the Attorney General's Office on whether Reclamation must amend its augmentation plan decree to be able to implement the MOA, and concluded that amending the decree is not necessary. Reclamation has provided the draft MOA to its attorneys for review.

At its January 12, 2006 meeting, the District's board approved in concept a written agreement with Reclamation that would address the Paradox Unit's augmentation needs. The intent of this agreement is to document the annual guarantee of 700 acre-feet of water to be added to the fishery pool in McPhee Reservoir and to be released for augmentation of depletions from the Paradox Unit. The 700 acre-feet would not be affected by any shortages of water in McPhee Reservoir. Reclamation and the District are in the process of negotiating language to be included in the agreement and anticipate finalizing the agreement in the near future. Because the guarantee of the availability of the 700 acre-feet of water for release from McPhee Reservoir for augmentation purposes is integral to this injury with mitigation proposal, staff recommends that the Board condition entering into the MOA on the agreement being finalized.

### **Staff Recommendation**

As stated above, injury with mitigation is a two-meeting process. At the first meeting, the Board made a preliminary determination that the natural environment of the Dolores River could be preserved to a reasonable degree with the proposed injury or interference if Reclamation provided the proposed mitigation. At this second meeting, the Board may take final action to ratify, refuse to ratify or ratify with additional conditions. Staff recommends that the Board:

- 1) Make a final determination that the natural environment of the Dolores River can be preserved to a reasonable degree with the proposed injury or interference to the Board's Dolores River instream flow water right if Reclamation provides the proposed mitigation.
- 2) Ratify the proposed Memorandum of Agreement and authorize the Director to execute the Memorandum of Agreement on behalf of the Board, conditioned upon Reclamation and the District finalizing a written agreement guaranteeing the availability of the 700 acre-feet of water for Paradox augmentation purposes.

STATE OF COLORADO

Bill Owens, Governor  
DEPARTMENT OF NATURAL RESOURCES  
**DIVISION OF WILDLIFE**

AN EQUAL OPPORTUNITY EMPLOYER

Bruce McCloskey, Director  
8080 Broadway  
Denver, Colorado 80218  
Telephone: (303) 297-1192



*For Wildlife-  
For People*

January 13, 2006

Ms. Linda Bassi  
Colorado Water Conservation Board  
Water Supply Protection Section  
1313 Sherman Street, Room 723  
Denver, Colorado 80203

**Re: Paradox Valley Unit Injury with Mitigation Plan.**

The purpose of this letter is to transmit the Colorado Division of Wildlife's (DOW) support for the attached Injury with Mitigation Plan regarding the Paradox Valley Unit (PVU) operated by the Bureau of Reclamation (BoR). The PVU is operated to intercept naturally occurring saline groundwater or brine from entering the Dolores River and disposing the brine by injecting it into deep wells. The reach of the Dolores River covered by this injury with mitigation proposal begins at the outlet of McPhee Reservoir and extends downstream to the confluence with the San Miguel River, a distance of approximately 105 miles.

**General Background**

The CWCB holds a decreed instream flow water right on the Dolores River for 78 cfs, Case No. 75W1346, with an appropriation date of May 1, 1975. The BoR, in 1983, filed for a change of water right application including a plan for augmentation in Water Divisions 4 and 7, Case Nos. 83CW14 and 83CW45 respectively, to augment out-of-priority depletions from the PVU. The BoR obtained 924 acre-feet of consumptive use credits by converting senior irrigation water rights from the House, Sommers, Kuhlman, Bradfield, Dickinson, Porter, Van Winkle, Durham, Johnson, Aztec and Ritter Ditches to replacement storage for salinity control and fish and wildlife propagation in the reservoir. BoR's water court decree allows the BoR to store water in McPhee Reservoir for fish and wildlife purposes, if space is available, before being released to augment out-of-priority depletions to the Dolores River.

The BoR's current operational practices of the PVU results in 309 acre-feet of depletions to the Dolores River, 240 acre-feet of the depletions are out-of-priority depletions. The BoR does not currently have plans to increase depletions. However, the potential does exist for the BoR to increase out-of-priority depletions from 240 acre-feet to 300 acre-feet, an additional 60 acre-feet, if the PVU is required to pump brine 365 days of year rather than the 325 days a year it is currently pumping.

**Proposed Injury with Mitigation Plan**

Due to the substantial distance involved, 95 miles, from the upstream augmentation source, McPhee Reservoir, and the downstream depletions it has been impossible for the BoR to completely augment the out-of-priority depletions in the same amount, timing and location in which they occurred. To mitigate

DEPARTMENT OF NATURAL RESOURCES, Russell George, Executive Director  
WILDLIFE COMMISSION, Jeffrey Crawford, Chair • Tom Burke, Vice Chair • Ken Torres, Secretary  
Members, Bernard Black • Rick Enstrom • Phillip James • Claire O'Neal • Brad Phelps • Robert Shoemaker  
Ex Officio Members, Russell George and Don Ament

this potential injury the BoR has agreed to enter into an agreement with the Dolores Water Conservancy District (District), the operator of McPhee Reservoir, guaranteeing 700 acre-feet of water per year will be released from McPhee Reservoir to augment the out-of-priority depletions caused by the operation of the PVU. It has been estimated that only 45 percent of the water released from McPhee Reservoir reaches the stream reach affected by the out-of-priority depletions due to transit losses. The guaranteed 700 acre-feet of augmentation water will be added to the existing McPhee Reservoir Fish and Wildlife Storage Pool. This addition to the Fish and Wildlife Storage Pool will allow the augmentation water to be stored and released to maximize the benefits to the downstream fishery and replace the out-of-priority depletions more successfully.

In addition, if the amount of out-of-priority depletions changes the BoR has agreed to reevaluate the mitigation plan. Any amendments to the plan must be made in writing and must be fully executed prior to commencement of any changes to the PVU.

### **Dolores River Benefits**

In addition to the benefits from the operation of the PVU, decreased salinity in the Dolores River, the proposed mitigation plan guarantees 700 acre-feet of water will be released upstream of the out-of-priority depletions occurring from the operation of the PVU. Depending on stream conditions, approximately 315 acre-feet of the augmentation water should reach the area of those depletions, approximately 95 miles downstream. However, the 315 acre-feet of augmentation water may not replace the estimated maximum 300 acre-feet of out-of-priority depletions in the exact timing in which they occur. The DOW believes the 385 acre-feet of additional augmentation water that is released and lost to evaporation, transpiration and groundwater recharge, before reaching the area of out-of-priority depletions, mitigates any potential injury related to the non-augmented out-of-priority depletions. The natural environment of the Dolores River downstream of McPhee Reservoir benefits from the additional reservoir releases by increasing stream flows below the dam.

### **DOW Recommendation**

The DOW recommends the CWCB approve the attached Injury with Mitigation Plan.

Sincerely,



Mark Uppendahl  
Colorado Division of Wildlife  
Instream Flow Program Coordinator

Cc: Jay Skinner, CDOW Water Unit Program Manager – w/o attachments  
Mike Japhet, CDOW Senior Fish Biologist – Southwest Region – w/o attachments  
Dave Graf, CDOW Southern Colorado Water Rights Specialist - w/o attachments  
Patt Dorsey, CDOW AWM Area – w/o attachments  
Chris Kloster, CDOW Conservation Biologist -- w/o attachments

*January 11, 2006 Draft*

## MEMORANDUM OF AGREEMENT

This Agreement dated this \_\_\_\_\_ day of \_\_\_\_\_, 2006, is between the United States of America, Department of Interior, Bureau of Reclamation ("Reclamation") acting through the Secretary of Interior, and the State of Colorado, Department of Natural Resources, acting through the Colorado Water Conservation Board ("CWCB").

### Recitals

1. Reclamation operates the Paradox Valley Unit ("the Unit"), which is located adjacent to the Dolores River near Bedrock, Colorado. The Dolores River picks up an estimated 205,000 tons of salt annually as it crosses Paradox Valley, primarily from the surfacing of natural brine groundwater. The Unit is designed to prevent this natural salt load from entering the river and degrading the water quality of the main stem of the Colorado River. The Unit intercepts the brine groundwater before it enters the Dolores River and disposes the brine by deep well injection. Major project facilities include a brine production well field, brine surface treatment facility, injection facility, a 15,932 feet deep injection well, and associated roads, pipelines, and electrical facilities.

2. The CWCB has an instream flow water right on the Dolores River for 78 cfs from McPhee Dam to the confluence with the San Miguel River, decreed by the Division 7 Water Court on September 29, 1975 in Case No. W1346-75 ("Dolores River ISF") with an appropriation date of May 1, 1975.

3. The Dolores Water Conservancy District ("District") operates McPhee Reservoir as part of the Dolores Project, using water stored in McPhee Reservoir for irrigation, municipal and industrial use, recreation, fish and wildlife, and production of hydroelectric power. The Dolores Project was authorized by the Colorado River Basin Act of September 30, 1968 (Public Law 90-537), as a participating project under the Colorado River Storage Project Act of April 11, 1956 (Public Law 84-485).

4. To enable full operation of the Unit, Reclamation applied for and obtained a decree for a change of water rights and plan for augmentation in Case Nos. 83CW45 (Water Division 7) and 83CW14 (Water Division 4). Reclamation sought to change several surface water rights from irrigation to replacement storage for salinity control and fish and wildlife propagation in McPhee Reservoir. The Colorado Supreme Court ordered the Division 4 Water Court to hear both applications, and the Division 4 Water Court entered a decree in both cases on February 5, 1986 ("1986 Decree").

5. The Division 4 Water Court found that the changed water rights' average annual consumptive use was 924 acre-feet. The 1986 Decree provides that Reclamation may store the consumptive use amount of the changed water rights in McPhee Reservoir and use that water to replace out-of-priority depletions in the Dolores River resulting from out-of-priority pumping of one or more wells at the Unit. Releases will be made from McPhee Reservoir to replace said depletions along with the necessary transportation losses as required by the Division Engineer for Division 4. However, the decree permits Reclamation to store the changed water rights in

McPhee Reservoir only during the historic use period when the water rights are in priority, and only when there is adequate space available in McPhee Reservoir, "so as to provide that Dolores Project supplies will not be reduced."

6. The augmentation plan decree further provides that Reclamation may pump Unit wells out-of-priority without injuring vested water rights if it meets the following conditions: (1) the total pumping rate may not exceed 4.94 cfs; (2) water is released from storage in McPhee Reservoir at a rate to be determined by the Division Engineer; (3) if the need to augment the Dolores River continues for an extended period of time, the total pumping rate can be reduced to a maximum of 2.0 cfs; and (4) if the storage in McPhee Reservoir allocated to the plan for augmentation is exhausted and Reclamation is unable to provide a substitute supply of replacement water, the Unit wells shall be subject to administration and curtailment in accordance with the priority system. The CWCB was an objector in Case Nos. 83CW45 and 83CW14 and stipulated to the entry of the decree.

7. Due to several variables, including a lack of adequate storage space available in McPhee Reservoir, the changed water rights have not yielded 924 acre-feet per year and Reclamation has not been able to fully replace out-of-priority depletions resulting from pumping Unit wells every year. The drought of 2002, MVIC placing a call on the Dolores River in 2003, and Dolores Project water shortages in both years pointed out the need to develop an operating plan that would more precisely quantify senior water rights and account for Reclamation's Paradox Unit augmentation water. In 2004, Reclamation and the District, with the agreement of the Division of Water Resources, entered into a one-year interim operating plan to, among other things, provide 500 acre-feet for augmentation of the Unit's depletions. Reclamation and the District have entered into another interim operating agreement for 2005, that provides for 700 acre-feet to augment the Unit's out-of-priority depletions.

8. Reclamation and DWCD have developed a proposed allocation of downstream releases from McPhee Reservoir that would guarantee Reclamation 700 acre-feet per year of water to be released for augmentation of out-of-priority depletions from well pumping at the Unit. The 700 acre-feet will be accounted for as part of the downstream fish and wildlife pool, which is a managed pool in McPhee Reservoir from which releases are made for downstream fish and wildlife. The release of the 700 acre-feet will be timed both to meet fishery needs downstream of McPhee Reservoir and to meet Reclamation's augmentation requirements at the Unit, as required by the Division Engineer for Water Division 4. Said releases will benefit fish populations throughout the entire Dolores River ISF reach. While Reclamation will retain full decision making authority for fish releases from McPhee Dam, it fully intends to meet its augmentation requirements.

9. The parties acknowledge that in some years, Reclamation still may not be able to fully replace out-of-priority depletions at the Paradox Unit, which may injure the Dolores River ISF. Pursuant to Rule 8i.(3) of the Rules Concerning the Colorado Instream Flow and Natural Lake Level Program, the CWCB has evaluated both the extent of the potential injury and the mitigation that the guaranteed 700 acre-feet per year will provide. At its \_\_\_\_\_ meeting, the CWCB concluded that the mitigation offered by Reclamation will enable the CWCB to accept the potential injury and continue to preserve the natural environment to a reasonable degree in the Dolores River ISF reach.

10. This Agreement sets forth the basis for and terms of the injury with mitigation agreement of the parties. The parties acknowledge that the elements of the Unit may need to be replaced, upgraded or changed in the future, and that any such action by Reclamation could necessitate amending this Agreement.

Agreement

Now, therefore, in consideration of the above recitals and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

- A. Water Year. As used in this Agreement, the terms “annual” and “annually” refer to the downstream fish and wildlife pool water year, which runs from April 1 to March 31.
- B. Quantification of Injury to Dolores River ISF
  - 1. Annual depletions of the Unit since 1990 have ranged from 6 acre-feet in 1990 to 509 acre-feet in 1998, with the past four years’ total depletions averaging 309 acre-feet. Records show that the actual historical average injury to the Dolores River ISF since 1997 – when the Unit became fully operational – is 240 acre-feet, the amount of out-of-priority depletions incurred. Reclamation has no plans to increase depletions above 309 acre-feet in the future. While Reclamation does not currently plan to increase depletions, the potential exists that Reclamation may determine that it needs to pump brine for more days per year than it currently does, which is 325 days a year. If Reclamation were to pump brine at the Unit 365 days per year, additional out-of-priority depletions of up to 60 acre-feet could result, which may not be replaced.
  - 2. The Division Engineer for Water Division 4 currently assesses transit losses on the Dolores River from McPhee Reservoir to the Paradox Unit at a rate of 55%, with such assessment rate subject to change at any time if necessary under the Division Engineer’s statutory authority. Using a transit loss rate of 55%, approximately 315 acre-feet of the 700 acre-feet released from McPhee Reservoir would reach the Unit to replace out-of-priority depletions. At the current rate of depletion and actual historical injury, the 700 acre-feet release will be sufficient to replace such depletions. However, the augmentation water may not always replace the out-of-priority depletions at the time they occur.
- C. Mitigation of Injury to the Dolores River ISF
  - 1. Prior to the initiation of the Unit’s operation, the salinity levels in the Dolores River through Paradox Valley most often exceeded levels that aquatic life could tolerate. Aquatic studies conducted by the Colorado Division of Wildlife in the mid 1970s concluded that only during periods of high flow, typically associated with spring snow melt, could fish inhabit the lower seven miles of river downstream of Paradox Valley. The Unit’s operations have significantly benefited the natural environment of the Dolores River at and below the Unit as follows: By 1996, about ninety per cent reduction of the brine inflow had been realized (313 tons per day to 29 tons per day). (USGS, 2003). This reduction in total dissolved solids has allowed aquatic organisms to inhabit the last seven miles of the Dolores River to its confluence with the San

Miguel River. Further, due to reductions in salinity levels, the Dolores River through Paradox Valley is no longer a barrier to upstream migration for native fishes as it most often was prior to the Unit's operation. In addition, the eventual reduction of salts within the Dolores River riparian zone downstream of Paradox Valley would allow for less salt tolerant plants to become established and not to exclusively favor more salt tolerant plant species such as salt cedar.

2. The guaranteed release of 700 acre-feet to Dolores River below McPhee Reservoir and the addition of water to the fishery pool will benefit the natural environment of the Dolores River by enhancing the quality of the aquatic environment downstream of the Reservoir. The addition of 700 acre-feet to this pool, although a relatively small addition, would enhance habitat conditions for the tailwater trout fishery, the native fishery further downstream and the riparian vegetation. The native fishes benefited include the flannelmouth sucker, bluehead sucker and the roundtail chub. In addition, riparian vegetation would also be benefited during the growing season by the slight increase in Dolores River water elevations. The additional released water will benefit the entire instream flow reach of 125 miles, including the approximately seven-mile segment of the reach that could be injured by the Unit's depletions.

D. Obligations of Reclamation

1. Reclamation shall work with the District to ensure that the 700 acre-feet of augmentation water is available for release every year. Under the District's repayment contract with Reclamation, Reclamation and the District are required to enter into a separate operating agreement ("SOA") that documents project operations. Reclamation and the District have entered into a written agreement, dated \_\_\_\_\_, 2006, that provides for an annual pool of 700 acre-feet to be released for augmentation of Paradox Unit out-of-priority well pumping. The augmentation pool releases will also benefit fish populations throughout the entire Dolores River ISF reach.
2. Reclamation shall use its best efforts to minimize injury to the Dolores River ISF from Paradox Unit operations.
3. Reclamation shall use its best efforts to operate the Paradox Unit in a manner that will maximize environmental benefits to the Dolores River.
4. Reclamation shall notify the CWCB of any plans to modify the Paradox Unit that may result in a change in the amount of out-of-priority depletions at the Unit.

E. Obligations of the CWCB

1. The CWCB shall not place a call at or downstream of the Unit for the Dolores River ISF while this Agreement is in effect. However, if Reclamation is unable to obtain and provide 700 acre-feet of augmentation water, the CWCB may place a call at or downstream of the Unit for the Dolores River ISF after consultation with Reclamation. If for any reason Reclamation elects to not provide augmentation water when required to do so by the Division Engineer when all or a portion of the 700 acre-feet of augmentation water is available for release, the CWCB may place a call at or downstream of the Unit for the Dolores River ISF.

F. Mutual Obligations

1. If Reclamation develops plans to modify the Paradox Unit in a manner that may change the amount of out-of-priority depletions at the Unit, the parties shall re-evaluate this Agreement and amend it if necessary. Any such amendment must be in writing and must be fully executed prior to commencement of any such changes to the Paradox Unit.

F. Addresses for mailing. All notices, correspondence, or other documents required by this agreement shall be delivered or mailed to the following addresses:

For the CWCB:  
Colorado Water Conservation Board  
1313 Sherman Street, Room 721  
Denver, CO 80203

For Reclamation:  
Bureau of Reclamation  
60 S. Cactus  
Cortez, CO 81321

Attn: Stream and Lake Protection Section

G. Integration of understandings. This contract is intended as the complete integration of all understandings between the parties. No prior or contemporaneous addition, deletion, or other amendment hereto shall have any force or effect whatsoever unless embodied herein in writing. No subsequent novation, renewal, addition, deletion, or other amendment hereto shall have any force or effect unless embodied in a written contract executed and approved by the parties hereto.

Executed as of the date first set forth above.

U.S. BUREAU OF RECLAMATION

By: \_\_\_\_\_  
Rick L. Gold, Regional Director  
Upper Colorado Region

COLORADO WATER CONSERVATION BOARD

By: \_\_\_\_\_  
Rod Kuharich, Director