STATE OF COLORADO

Colorado Water Conservation Board
Department of Natural Resources
1313 Sherman Street, Room 721
Denver, Colorado 80203
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www.cwcb.state.co.us

MEMORANDUM

TO: Colorado Water Conservation Board Members

FROM: Randy Seaholm, Chief Water Supply Protection

DATE: September 4, 2009

RE: Agenda Item 26, September 15-16, 2009 Board Meeting, Species Conservation Trust Fund (SCTF) - Uncompahgre Valley Water Users Association – Salinity/Selenium Control Project

Pursuant to HB98-1006 the CWCB is to consult annually with the Director of the Department of Natural Resources in the preparation of a species conservation eligibility list. At its January 27-28, 2009 meeting the CWCB considered the financial status of the SCTF and the FY 2009-10 funding needs for the various endangered species recovery programs and other efforts to keep species from becoming threatened or endangered. Part of the CWCB's $8,760,000 recommendation included $500,000 for a selenium reduction program in the Gunnison Basin in accord with Upper Colorado River Recovery Program.

CWCB Recommendation - Selenium Reduction Program for the Gunnison Basin ($500,000)

The US Fish and Wildlife Service (USFWS) has designated critical habitat on the Gunnison River for the Colorado River Endangered Fish beginning at Delta, Colorado and extending downstream to the confluence of the Gunnison River with the Colorado River. The USFWS, working in concert with the Upper Colorado Recovery Implementation Program (UCRIP), has also developed flow recommendations for the Gunnison River. Pursuant to the UCRIP – Recovery Action Plan (RIPRAP) the US Bureau of Reclamation (USBR) is undertaking a NEPA process to evaluate alternative operations of the Aspinall Unit to attempt to satisfy the flow recommendations to the extent possible within the authorizing legislation for the Aspinall Unit. In addition to this NEPA process Reclamation, the State and Gunnison Basin water users are supportive of obtaining a Programmatic Biological Opinion (PBO) for all water uses in the Gunnison Basin under both Section 7 and Section 9 of the ESA. However, the USFWS has unequivocally stated that a basinwide Selenium Reduction Program must be part of any PBO. The State, water users and Reclamation have been working to develop such a selenium reduction program benefiting the endangered fish and the $500,000 requested here will be used to the maximum extent possible to leverage other funding available in order to meet, to the extent possible, the requirements of the USFWS for a Selenium Reduction Program.

The Department of Natural Resources included this recommendation as part of the Department's recommendation to the General Assembly and the General Assembly subsequently passed HB09-1289 which authorized the expenditure of $500,000 from the capital account of the SCTF for the Upper Colorado River Recovery Program.

Discussion

Given the importance of this activity towards maintaining sufficient progress under Upper Colorado River Recovery Implementation Program and given the rather general nature of the CWCB recommendation for expenditures from the SCTF and the very general language in HB09-1289, staff felt it would be helpful to the process for distributing the authorized SCTF funds if there was additional context and explanation of how the funds would be used.

At present the U.S. Fish and Wildlife Service has not finalized a PBO for the Gunnison Basin. However, staff has had an opportunity to look at the draft PBO. The draft PBO specifically requires the U.S. Bureau of Reclamation (USBR) to, *"develop and implement a Selenium Management Program to reduce adverse effects of selenium on endangered fish species in the Gunnison and Colorado rivers..."* One of the 10 elements required in the proposed Selenium Management Program described in the draft PBO is, *"Accelerated implementation of salinity/selenium control projects for irrigated lands."*

Attached is an application that the Uncompahgre Valley Water Users Association (UVWUA) made to the Colorado River Salinity Control Forum Workgroup (WG). At the WG's August 2009 meeting it recommended that the USBR expend up to $1.5 million from the Colorado River Basin Funds for a "special project" that would line 1.3 miles of the EC canal on the Uncompahgre Project located in the Delta-Montrose area. That application also identified the $500,000 requested from the SCTF to line another .3 miles of the EC canal as a demonstration project. More specific details describing this 1.6 mile phase of canal lining on the Uncompahgre Project is contained in the attached application.

In addition to the application please find attached a memo from the UVWUA further describing the project benefits and a letter from the Gunnison Basin Selenium Task Force expressing support for this proposed project.

In other related actions the USBR has already developed a draft outline for the Gunnison Basin Selenium Management Plan. Also, the UVWUA is seeking additional funding assistance from the Colorado River Water Conservation District and others to do a comprehensive study of irrigation practices and needs with the end goal of project operations that are as efficient as possible. We would further note that there have been discussions with the CWCB about the possibility of obtaining an additional $25,000 for this irrigation study.

In conclusion, the above demonstrates that a selenium reduction plan has been developed and that actions to implement the plan are already occurring. The $500,000 identified in HB09-1289 has been used to obtain up to $1.5 million in funding from the Colorado River Salinity Control Program which when combined with the SCTF funding will line a total of 1.6 miles of the EC canal. The canal lining will reduce the salt loading to the Colorado River by 1100 tons\year of which 110 pounds will be selenium. The UVWUA will oversee the construction of this canal ling project and therefore it is appropriate to contract with and provide the SCTF funds to the UVWUA.

Recommendation

Staff recommends that the Board concur in providing the authorized SCTF funds for the Upper Colorado River Recovery Program identified in HB09-1289 to the UVWUA for use in lining .3 miles of the EC canal for salinity/selenium reduction purposes.

Attachments

THE GUNNISON TUNNEL PROJECT
The Uncompahgre Valley Water Users Association
601 North Park Ave. * P.O. Box 69 * Montrose, CO 81402-0069
Phone: 970-249-3813 Fax: 970-249-6830

Doug Robotham
Colorado Department of Natural Resources
1313 Sherman Street, Room 718
Denver, CO 80203

Re: HB 09-1289 Species Conservation Trust Fund and Request to Fund Scope of Work for the "Selenium / Salinity Control Demonstration Project: EC Canal Lining"

Dear Mr. Robotham,

The Uncompahgre Valley Water Users Association (UVWUA) is formally requesting the financial assistance provided for House Bill 09-1289 to implement the following scope of work which will reduce selenium runoff for the benefit of several federally listed endangered fish species in the Colorado and Gunnison Rivers. Section 2 (1)(a)(II) entitled: "Upper Colorado River Recovery Program" provides for the expenditure of $500,000 for the conservation of native species. We believe our project fulfills this need and we would like to begin contracting for these monies as soon as possible.

General background and problem description

The goal of this proposal, *"Selenium/Salinity Control Demonstration Project: EC Canal Lining"* is to demonstrate that a new canal lining technology can be employed to reduce selenium and salt loading to the lower Gunnison and Colorado River systems and to begin implementing this solution, if successful. The demonstration and implementation of this new canal lining technology will help bring selenium impaired 303(d) listed segments into compliance with Colorado and EPA standards and significantly reduce salt loading to the Colorado River Basin. By integrating this cost effective technology for large canals into a large-scale implementation program that is specified by the recently released USFWS Draft Programmatic Biological Opinion (DPBO), the project will help recover several federally listed endangered fish species and comply with the federal Salinity Control Act.

The area proposed for this demonstration is characterized by highly saline and seleniferous soils and the canal to be lined is known to be prone to seepage and leakage. This combination of factors can cause salinity and selenium loading to the lower Gunnison River basin. To date, canal lining has not been implemented in this area due to technical difficulties and prohibitive cost. A new approach that uses an impervious liner in conjunction with engineered geo-textiles and cellular confinement systems commonly called "geocell, geoweb and/or geogrid" with concrete promises cheaper installation costs and structural advantages. Additionally, the canal lining is projected to minimize operations and maintenance requirements for the life of the project (estimated to be at least 50 years).

Although the initial demonstration effort is limited in scope (0.3 miles), it is projected to reduce an estimated 20 pounds of selenium and 200 tons of salt loading per year and it has vast potential

for widespread application. Adoption of this lining technology could dramatically change how earthen canals get converted and modernized through out the Upper Colorado River Basin and throughout the west. New approaches are especially important and needed on the east side of the Uncompahgre Valley which has been identified as a significant contributor of salt and selenium to the Colorado River system (the Lower Gunnison River Basin including the Uncompahgre Valley is estimated to be responsible for approximately 30% of the selenium load into Lake Powell (USBR, Engberg; 1999).

The successful implementation of the demonstration project will enable the second phase of the proposed canal lining project to broaden the scope of the project. It will apply the experience gained in the smaller demonstration section (winter 2009/2010) to guide and inform the design and implementation of the larger section (up to 1.3 additional miles in winters 2010-2012) of the same EC canal. Phase II is proposed to utilize Colorado River Basin Salinity Program (CRBSCP) Forum Workgroup special project funds.

The majority of waters within the lower Gunnison River Basin are classified for aquatic life, recreation, and agricultural uses. Elevated selenium concentrations above the 4.6 ppb chronic water-quality standard are presumed to threaten aquatic life use attainment in these listed segments. In areas of the Gunnison Basin, which have local geological sources of salts and selenium, application of water to the soil (e.g., via irrigation water, leaking canals, seepage from ponds and septic leaching systems) mobilizes selenium and salts and creates hydraulic gradients that can result in the discharge of non-point source polluted surface and groundwater into irrigation drains and local waterways. High selenium concentrations, in some circumstances, have been shown to cause reproductive failure and deformities in aquatic birds and fish. The lower Gunnison River from the confluence of the Uncompahgre River serves as occupied critical habitat to at least two of four listed endangered fish species (razorback sucker, humpback chub, bonytail chub, and Colorado pikeminnow).

Salinity is also a major concern for the State of Colorado and the other six Colorado Basin States. The effects of salinity contributions from natural, agricultural, industrial, and municipal sources on the water quality of receiving streams is being addressed through the Colorado River Salinity Control Program (CRBSP). Federal water-quality regulations for salinity (CWA Sections 303(a) and (b)) are addressed through the *Salinity Implementation Plan - Colorado River System.* Partial funding for this program comes from power revenues generated from USBOR hydropower projects which help finance salinity control projects via the *Basin States Program.* The Colorado State Conservation Board (CSCB) administers these funds for projects in the State.

In addition, the Gunnison Basin Selenium Task Force (GBSTF) have been working since 1998 to address selenium issues in the lower Gunnison River basis. As such, members have provided the State with selenium data and information such as characterization studies, source control options, and remediation planning. This information provides the foundation for TMDL development for selenium in the lower Gunnison Basin and related management actions. The GBSTF is a group of private, local, regional, state, and federal interests committed to reducing selenium loading within the affected reaches while maintaining the economic viability and agricultural heritage of the lower Gunnison River Basin. The UVWUA and the CSCB have been active members of the GBSTF and cooperating partners since the group's inception.

The GBSTF has developed a remediation "Action Plan" focused on reducing selenium and attaining water-quality standards. Canal lining and lateral piping projects have been identified as the highest priority remediation option and the most effective selenium reduction technique. In addition, the GBSTF has identified priority areas for remediation where the highest selenium

concentrations and loading rates have been measured. The east side of the Uncompahgre Valley has been identified as having the most significant selenium source area and consequently exhibits the highest average selenium concentrations in the valley. The EC Canal, a large unlined earthen irrigation ditch, is located in this high-priority area in the headwaters of the Loutzenhizer Arroyo (COGUUN04, 303(d) listed for elevated selenium). Approximately 25% of the selenium produced in the lower Gunnison River basin originates in the Loutzenhizer basin (USBR, 2005). This Arroyo intercepts selenium and salt laden groundwater from canal and lateral seepage and on-farm irrigation application and subsequently flows to the Uncompahgre River (COGUUN12, 303(d) listed for selenium) and eventually to the Gunnison and Colorado Rivers. The EC canal delivers water from the Selig Canal system and can carry more than 100 cubic feet per second (cfs). This is shown on Figure 1.

Grant Sponsor and Financial considerations

The UVWUA is the managing entity for the Uncompahgre Project and is the applicant for this SCTF proposal. The Uncompahgre Project is a federal irrigation project operated by the UVWUA under contract to the USBOR serving approximately 80,000 acres of highly productive irrigated land. The UVWUA has extensive experience managing both large and small construction projects and has specifically chosen to line this section of the EC Canal not only because of associated high selenium and salt loading contributions, but because they will have associated lateral piping projects in this same sub-basin. By coordinating construction activities and multiple funding sources, it is hoped that the UVWUA will be able to reduce construction cost, leverage funding, and eventually increase the project scope, and maximize water quality benefits.

It is anticipated that several significant partners will participate in the proposed project. The USBOR will provide the surveying, design, NEPA compliance activities, cultural resources clearances, and documentation of right-of-way issues, as necessary. The Colorado River Water Conservation District (CRWCD) will be providing in-kind technical assistance through the GBSTF as well as with some direct financial assistance ($39,000 grant previously awarded).

Technical Approach

<table>
<tr><td colspan="2">Part I -- EXECUTIVE SUMMARY</td></tr>
<tr><td colspan="2">ES. EXECUTIVE SUMMARY</td></tr>
<tr><td>ES.1</td><td>APPLICANT NAME:
City/town, State</td></tr>
<tr><td></td><td>Uncompahgre Valley Water Users Association
Montrose, Colorado</td></tr>
<tr><td>ES.2</td><td>APPLICATION NAME:</td></tr>
<tr><td></td><td>"Selenium/Salinity Control Demonstration Project: EC Canal Lining" This canal lining project is for a segment of the EC Lateral, off of Selig Canal, located on the East Side of Uncompahgre Valley</td></tr>
<tr><td>ES.3</td><td>FUNDING REQUEST SUMMARY: [* denotes an in-kind contribution]
<table>
<tr><th>FUNDING SOURCE</th><th>FUNDING AMOUNT</th></tr>
<tr><td>Phase I – Demonstration Project</td><td></td></tr>
<tr><td>Colorado Department of Natural Resources (SCTF)</td><td>$500,000</td></tr>
<tr><td>Selenium Task Force</td><td>* TBD</td></tr>
<tr><td>Colorado River Water Conservation District</td><td>$39,000</td></tr>
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Phase II – Implementation Project	
CRBSCP – Workgroup Special Projects Funding (requested and approved)	$1,490,050
TOTAL PROJECT FUNDING:	$2,029,050

ES.4 ABBREVIATED PROJECT SUMMARY:

The total project (Phase I&II) will involve lining a total of approximately 1.6 miles of the upper portion of the EC Lateral with a PVC liner covered with concrete-filled "Geoweb" on the side slopes with river cobbles covering the bottom of the lateral canal. The demonstration portion of the project is approximately 0.3 miles long.

ES.5 ESTIMATED SALT / SELENIUM LOAD REDUCTION AND ENVIRONMENTAL BENEFIT:

The combined project is projected to reduce approximately 1100 tons of salt/year and up to 110 pounds of selenium/year (of the total, it is estimated that the 0.3 mile long "demonstration section" will reduce 200 tons of salt per yr; and up to 20 pounds of selenium/year.

ES.6 ESTIMATED COST EFFECTIVENESS VALUE:

For the monies contributed by the CRBSCF, the combined project cost effectiveness is approximately $70/ton of salt removed using a 50 year life and cost recovery factor provided by the USBR.

ES.7 PROJECT MANAGER CONTACT INFORMATION:

Name:	Marcus W. Catlin
Title:	Manager
Address:	601 North Park Ave. Montrose, CO 81401
Telephone:	970-249-3813
Fax:	970-249-6830
E-mail:	mcatlin@montrose.net

PART II – BACKGROUND & INFORMATION

A. BACKGROUND & DESCRIPTION OF PROJECT AREA:

The Uncompahgre Project is operated by the UVWUA and is located in the Uncompahgre River Basin, a sub-basin within the lower Gunnison River Basin. Major project features include the Taylor Park Reservoir, seven diversion dams, 138 miles of canals, and 414 miles of laterals. Nearly 80,000 acres of irrigated lands can be serviced by canals and laterals operated by UVWUA. The majority of salt loading occurs on the east side of the valley which is all located on Mancos shale-derived soils. This area has been extensively studied by the Bureau of Reclamation as part of the Lower Gunnison Basin Unit. The information cited in this proposal is from the documentation developed by Reclamation engineers and environmental scientists from the Grand Junction, Colorado office. Reclamation has developed the salt loading estimates and the related selenium loading estimates for all the canals and laterals within the Project area.

B.	**PROJECT MAP(S):** A detailed map is attached as Figure 1 that identifies the project area, existing facilities, and major geographic features. The section of canal that is proposed for improvement under this application is depicted as part of the larger EC canal.
C.	**WATER RIGHTS AND SUPPLY:** The water rights used for the proposed canal lining project include some or all of the following:
	1904 Gunnison Tunnel Water Right, 1882 Uncompahgre River Right, 1937 Taylor Park Reservoir Storage Right
D.	**DESCRIPTION OF PROPOSED PROJECT:** The total project will treat approximately 1.6 miles (demonstration project length is 0.3 miles) of the EC Lateral, which carries approximately 105 cfs through this reach, using a PVC membrane with geofabrics covered with "geoweb" cells filled with concrete. The bottom of the lateral would be protected with cobbles and boulders. A subsurface drain (below the liner) is to be installed to prevent against excessive hydrostatic groundwater pressure.

Part III – PROJECT PROPOSED for funding	
A.	**DETAILED DESCRIPTION OF PROPOSED PROJECT:**
	The UVWUA will line the upper section of the EC Lateral using a 30 mil PVC membrane liner with geotextile material under and on top of liner. Geoweb with 3" deep cells will then be placed on side slopes of the lateral prism and filled with concrete. The bottom of canal will then be covered with one foot of cobble rock over the liner. This design is intended to provide a flexible, polyethylene-reinforced concrete cover that protects the PVC liner. A drain will be placed under the canal liner. Existing structures (drops, checks, delivery structures, etc.) will be retained, as appropriate.
B.	**DESIGN & IMPLEMENTATION:**
	The project will be designed to Reclamation standards by the Reclamation designers in the Grand Junction Office. They will prepare plans and specs, as necessary, and the project will be performed by experienced local contractors and labor. UVWUA staff will oversee and supervise the project construction.
C.	**ENVIRONMENTAL CONSIDERATIONS:**
C.1	**NEPA COMPLIANCE:**
	An existing environment assessment covering the entire East Side Laterals Project area is available from the Bureau of Reclamation. For this proposed project, the existing EA will be supplemented by a Categorical Exclusion Checklist (CEC) prepared by Reclamation staff. Reclamation estimates this cost at $7,600.
C.2	**OTHER BENEFITS:**
	In this area, previous USGS studies indicate that about 0.1 pound of selenium will be prevented from being mobilized for each ton of salt removed by the proposed project.
C.3	**ENDANGERED SPECIES CONCERNS:**
	No endangered/threatened species are expected to be negatively affected by the construction of the project. However, Reclamation will conduct a field inspection of the project site to verify this. By reducing selenium loads in drainage from the Uncompahgre Project, the proposal can be expected to positively affect endangered fish species in the downstream reaches of the Gunnison and Colorado Rivers.
C.4	**CULTURAL RESOURCES:**

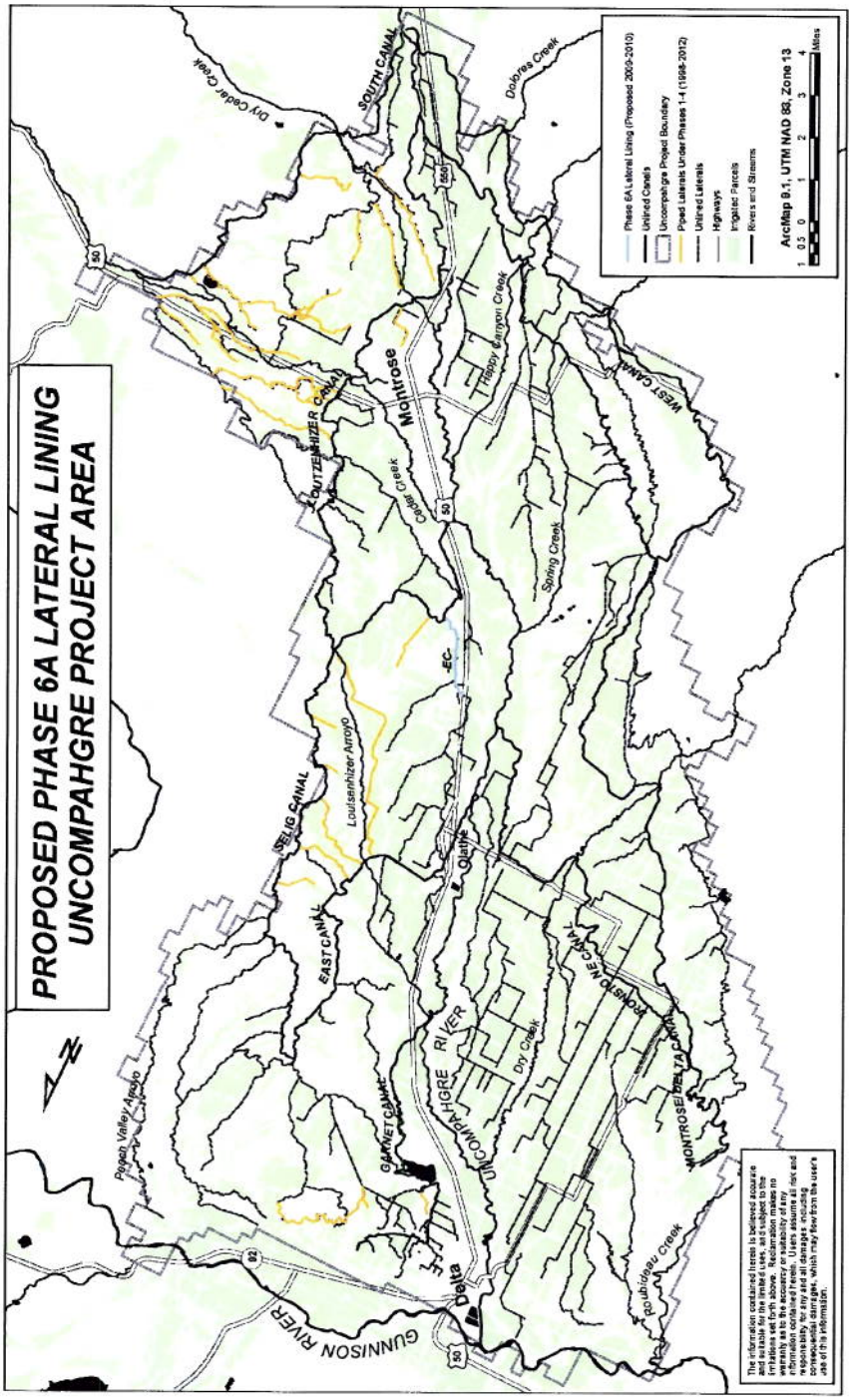
Part III – PROJECT PROPOSED for funding	
	No known sites. A cultural resources survey will be undertaken under Reclamation direction, and the State Historic Preservation Officer (SHPO) will be consulted prior to initiation of construction.
D.	**HABITAT REPLACEMENT PLAN:**
	A preliminary inventory indicates that up to 8-10 habitat units may be affected. Reclamation staff will conduct an evaluation of the losses during the preparation of the NEPA compliance documents. The cost of these studies is included in the NEPA compliance costs (total of $7,600). It is anticipated that additional habitat improvements will be undertaken at the Escalante State Wildlife area to replace these losses. Funding in the amount of about $86,000 (this represents 5% of the total construction costs) will be set aside for implementation of the habitat replacement requirements for the total project including Phases I&II.
E.	**OPERATION, MAINTENANCE AND MANAGEMENT PLAN:**
	Operation and maintenance will be the responsibility of UVWUA under its O & M management strategy. The lining covering is being designed by Reclamation engineers to be somewhat flexible to avoid cracking but durable enough to allow cleaning of accumulated sediment, as necessary.
F.	**PROJECT EXPERIENCE:**
	Since 1998, the UVWUA has extensive experience replacing laterals with pipe on the east side of the Uncompahgre River. These have involved 5 separate cooperative agreements with Reclamation. Work is completed under the first three of these agreements and is proceeding well on the last two (Phases 3 and 4). Additionally, the State of Colorado through the Water Quality Control Division is providing funding to help pipe the EF Lateral this coming winter (2009/10) to reduce selenium loading. Once work is completed under all these agreements, the UVWUA will have replaced about 51 miles of open laterals with pipe. Additionally, the UVWUA has some limited experience in installing and maintaining segments of concrete lining in several of its minor laterals.
Part IV – PROJECT COSTS & FUNDING PLAN	
A.	**DETAILED COST ESTIMATE:** Upon request, a table can be provided that indicates the unit prices and summarizes the detailed cost estimate along with costs related to NEPA, habitat replacement, cultural clearance and contingencies.
B.	**FUNDING PLAN:**
	The SCTF monies will be combined with Colorado River Water Conservation District grant funds (previously awarded $39,000 through their competitive grant program) to fully fund the demonstration project. In addition, up to $1.5 MM of the required funding is being requested from the Colorado River Basin Salinity Control Forum Workgroup "Special Projects" funds for Phase II. After construction, any/all operation and maintenance activities will be fully funded by the UVWUA.

D. CONSTRUCTION & FUNDING SCHEDULE:

The following is a preliminary schedule which is subject to change depending on funding availability and other unknowns.

Item	Schedule	FY09[1] funding	FY10[2] funding	FY11[2] funding
NEPA compliance preparation	September – November 2009	5,000	2,600	2,000
Cultural resource survey & SHPO clearance	September – November 2009	12,200	2,000	
Surveying and design	September – December 2009	48,000	49,400	12,600
Award construction contract	November 2009 (approx.)	--	--	--
Construction	January 2010 – March 2011	471,800	640,653	654,258
Habitat replacement plan implementation	April – September 2010		86,034	
R-O-W Documentation	April – May 2011			12,300
Constr. Mgt. & overhead	September 2009 – May 2011	2,000	28,205	28,205
Totals		539,000	808,892	679,158

1. Monies provided by State of Colorado and Colorado River District
2. Monies from the Colorado River Basin Salinity Control Forum



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Basin Salinity

THE GUNNISON TUNNEL PROJECT
The Uncompahgre Valley Water Users Association
601 North Park Ave. * P.O. Box 69 * Montrose, CO 81402-0069
Phone: 970-249-3813 Fax: 970-249-6830

Memorandum

To: Randy Seaholm, Board of Directors, Colorado Water Conservation Board
From: Dave Kanzer, P.E., Colorado River District, *on behalf of* Marc Catlin, Manager

Re: ***Selenium/Salinity Control Demonstration Project: EC Canal Lining***

Date: September 4, 2009

This memo describes how the State of Colorado Species Conservation Trust Fund (SCTF) monies and the Colorado River Salinity Control Program (CRBSCP) Workgroup (Workgroup) "special projects" funds are proposed to be combined to achieve crucial improvements to the Uncompahgre Valley irrigation system through a canal lining demonstration and related implementation project in 2009-2012. The Uncompahgre Valley Water Users Association (UVWUA) had originally provided the following list of reasons to the CRBSCP, as requested by the Workgroup. It has been slightly revised and augmented to address additional issues related to the SCTF.

Based, in part, upon the following "compelling reasons," on *September 1, 2009, the Workgroup approved up to $1.5 Million be made available to UVWUA to support the proposed, jointly funded project.*

In summary, the most significant and compelling reasons for providing financial resources to the UVWUA to implement a combined $2,029,050 canal lining project are as follows:

1. Colorado SCTF funds ($500,000) when combined with CRBSCP Forum Worgroup "special project" funds ($1,500,000) reduce the cost of salt control from over $95/ton to approximately $70/ton and when fully implemented will reduce approximately 110 pounds of selenium loading to the Gunnison / Colorado River systems;
2. Funding the canal lining demonstration project will provide invaluable information, including cost data and construction experience that can reduce future implementation costs and enable potential widespread implementation of this new technology to other water quality improvement efforts in the lower Gunnison and throughout the Upper Colorado River Basin; it is hoped that this funding will help speed the implementation of the draft selenium control program that is anticipated to be part of the final USFWS Programmatic Biological Opinion (PBO) for the Gunnison River Basin;

3. The demonstration project could help USBR develop canal lining standards for future projects for the CRBSCP by providing valuable site specific information;
4. The demonstration project fits within the UVWUA modernization plan for canals and laterals and is focused on the highest salt and selenium loading sub-basin of the lower Gunnison River Basin: the Loutzenheiser Arroyo;
5. The canal lining project is to be integrated with related future lateral piping projects and will help control salt in areas where piping is currently either cost- or technically-prohibitive;
6. The project is hoped to lead to additional NRCS work and cost-share opportunities by providing reliable flows and connection to piped laterals; (in fact, NRCS is contemplating adding a coordinator to its staff to maximize "systemized irrigation" such as sprinklers, on the east side of the Uncompahgre Valley.)
7. Monies are needed immediately to jump start the project, in particular funds are needed for design and approvals to allow the project to move forward during this construction season;
8. Cannot afford wait for other funding sources; work is scheduled to begin in November of 2009 and project will achieve maximum possible benefits if project can begin immediately;
9. It is recognized that the SCTF funds are dependent upon mineral severance tax and subject to potential rescission, even after contracts are in place. Therefore, salinity funds can provide needed "insurance" should severance tax receipts be less than projected and cause SCTF funding to be reduced.

In summary, the demonstration portion of this project that is to be funded by the SCTF will give the UVWUA a head start on actions that will most certainly be part of the Gunnison Basin PBO, thereby helping to protect historical beneficial uses for all of the water users in the Gunnison River Basin .

Additional details (e.g., maps, tables, budget, milestones etc.) have been provided in the proposed Scope of Work. It clearly shows how this project fits within historical and on-going phases of the piping and lining efforts in the federal Uncompahgre Project area. To date the UVWUA has installed, or is the process of installing approximately 51 miles of piped laterals and has plans to continue piping approximately 5-10 miles per year; to date no significant canal lining has been accomplished in the Uncompahgre Project area.

The UVWUA is committed to protecting irrigated agriculture in the lower Gunnison basin and believe the SCTF funds are crucial to this mission. We sincerely appreciate your consideration and hope that you will provide the financial assistance requested.

Gunnison Basin & Grand Valley Selenium Task Forces

"FINDING WAYS TO REDUCE SELENIUM IN OUR LOCAL WATERWAYS"

114 Sandpiper Trail, Gunnison, CO, 81230
Phone/Fax: (970) 641-8927
Email: info@seleniumtaskforce.org Web: www.seleniumtaskforce.org

September 4, 2009

Colorado Water Conservation Board
Randy Seaholm, Chief
Water Supply Protection Section
1313 Sherman Street, Rm 721
Denver, Colorado 80203

Re: Selenium Task Force letter of support for the UVWUA Canal Lining Demonstration Project

Dear Mr. Seaholm,

The Gunnison Basin and Grand Valley Selenium Task Forces (STF) would like to submit the following letter of support for the Uncompahgre Valley Water Users Association (UVWUA) request for funding for the "*Selenium/Salinity Control Demonstration Project: EC Canal Lining*" (Project) under the Species Conservation Trust Fund (SCTF).

The Selenium Task Forces are a voluntary group of private, local, regional, state, and federal interests *committed to finding ways to reduce selenium in our locally affected waterways while maintaining the economic viability and agricultural heritage of the Lower Gunnison River Basin and Grand Valley* (membership list attached). The STF have been working diligently since 1998 to develop and implement selenium reduction "Action Plans" that meet State of Colorado chronic water-quality standards for aquatic life protection.

These Action Plans have identified and prioritized steps to help achieve the principal objective of reducing selenium loading to help meet water-quality standards for selenium. They include characterization studies, education and outreach, and on-the-ground Best Management Practices (BMPs) such as piping of irrigation laterals and canal lining. In fact, the Action Plans identify canal lining and lateral piping as the highest priority action item. Canal lining provides multiple benefits to our stakeholders by improving and preserving irrigated agriculture while reducing selenium loads for the benefit of endangered fish species and other State of Colorado Species of Special Concern. The canal lining Project will significantly reduce seepage from the irrigation water delivery system thereby minimizing the mobilization of selenium and salts from the soils while conserving water and helping the UVWUA address water supply and demand issues. Canal modernization projects also provide greater opportunity for the creation of pressurized delivery systems to further enable irrigation modernization technologies such as sprinklers. Sprinklers have been shown to reduce selenium, salinity, and sediment loads while increasing crop yields and decreasing labor.

The STF has been working diligently to obtain funding for, and to implement piping and lining projects such as the proposed Project put forth by the UVWUA. Additionally, the STF has been researching canal lining technologies and we feel that the proposed lining approach offers considerable promise for the soils in the Uncompahgre Project Area. The location for the project is ideal because it is located in the Loutzenhizer Arroyo sub-basin and is part of a comprehensive

piping and lining "high priority action area." The Loutzenhizer sub-basin contributes 25% of the selenium loading within the Lower Gunnison River Basin.

In summary, the STF gives the *Selenium/Salinity Control Demonstration Project: EC Canal Lining* proposal our enthusiastic and full support. This project will help fulfill our highest priority of lining and piping canals in our targeted area while enhancing the agricultural heritage of the Lower Gunnison Basin. Your financial support will help ensure that farmers can continue their irrigated agricultural practices while addressing water-quality, quantity, and endangered species issues within the basin. We urge you to fund this effort – ***your help is integral to our success***.

Sincerely,

Sonja R. Chavez de Baca, Coordinator
Gunnison Basin / Grand Valley Selenium Task Forces

Gunnison Basin / Grand Valley Selenium Task Force Membership List

Colorado River Water Conservation District

Delta County

Montrose County

Mesa County

City of Delta

City of Montrose

City of Grand Junction

Town of Paonia

Colorado State University Cooperative Extension

Colorado State University

Golder Associates

Shavano Conservation District

Delta Conservation District

Mesa Conservation District

Uncompahgre Valley Water Users Association

Project 7 Water Authority

Water Quality Control Division

United States Bureau of Reclamation

United States Geological Survey

United State Fish & Wildlife Service

Colorado Division of Wildlife

Natural Resource Conservation Service

Western Colorado Water Congress

Colorado Stone, Sand & Gravel Association

Colorado State Conservation Board

Colorado Water Conservation Board

Division of Water Resources

High Country Citizen's Alliance

Painted Sky RC&D

Private Citizens