COLORADO WATER CONSERVATION BOARD

WATER SUPPLY RESERVE ACCOUNT
2007-2008 GRANT APPLICATION FORM

Stillwater Reservoir Seepage Project – Yampa/White Basin

Name of Water Activity/Project **River Basin Location**

Total Budget $209K $20K from Applicant $189K from Basin Funds				
Amount of Funds Requested	X	Basin Account	X	Yes
		Statewide Account		No
	Please Check Applicable Box		Approval Letter Signed By Roundtable Chair and Description of Results of Evaluation and Approval Process	

*** For the Basin Account, the Application Deadline is 60 Days Prior to the Bimonthly CWCB meeting. The CWCB meetings are posted at www.cwcb.state.co.us and are generally the third week of the month.**

*** For the Statewide Account, the Application Deadline is 60 Days Prior to the March and September CWCB Board Meetings.**

* In completing the application you may attach additional sheets if the form does not provide adequate space. If additional sheets are attached please be sure to reference the section number of the application that you are addressing (i.e., A.1. etc.).

Instructions: This application form must be submitted in electronic format (Microsoft Word or Original PDF are preferred). The application can be emailed or a disc can be mailed to the address at the end of the application form. The Water Supply Reserve Account Criteria and Guidelines can be found at http://cwcb.state.co.us/IWMD/. **The criteria and guidelines should be reviewed and followed when completing this application**. You may attach additional sheets as necessary to fully answer any question, or to provide additional information that you feel would be helpful in evaluating this application. Include with your application a cover letter summarizing your request for a grant. If you have difficulty with any part of the application, contact Rick Brown of the Intrastate Water Management and Development (Colorado Water Conservation Board) for assistance, at (303) 866-3514 or email Rick at rick.brown@state.co.us. Generally, the applicant is also the prospective owner and sponsor of the proposed water activity. If this is not the case, contact the Rick Brown before completing this application.

Water Supply Reserve Account – Grant Application Form
Form Revised May 2007

Part A. - Description of the Applicant (Project Sponsor or Owner);

1. Applicant Name(s): Bear River Reservoir Company

Mailing address: P.O. Box 139
Yampa, Colorado
80483

Taxpayer ID#: 84-0465290 Email address: john@bioheatusa.com

Phone Numbers: Business: 970-638-4471
Home:
Fax:

2. Person to contact regarding this application if different from above:

Name: John Redmond P.E.,PO Box 420
Yampa CO 80483, 970-638-0918

Position/Title: President, Bear River Reservoir Company

3. Provide a brief description of your organization below: see "Description of Applicant" in Part 2 of Criteria and Guidance for required information.

Bear River Reservoir Company is a private 501(c) Nonprofit Corporation Water Company as recognized by the Colorado Secretary of State. The Bear River Reservoir Company was incorporated in 1956. Attached are the following documents:

- Restated Articles of Incorporation of Bear River Reservoir Company
- Articles of Amendment of Bear River Reservoir Company
- By-Laws of the Bear River Reservoir Company
- Corporate Certificate of Standing from the Colorado Secretary of State
- Non-profit Determination Letter from the Internal Revenue Service

The Bear River Reservoir Company (Company) provides water to eighteen users for irrigation water and the municipality of Yampa, Colorado. The Company operates on a basis of 5,175 shares each of which

corresponds to one acre-foot of water when the reservoir is full. Income for the Company is primarily in the form of annual assessments that have been historically in the range of $2.00 to $2.50 per share. The annual income, in the range of $10,000 to $13,000, is used to pay operating expenses including employees, insurance, minor repairs, mileage, etc. The Company employs one part-time bookkeeper on a year-around basis.

4. If the Contracting Entity is different then the Applicant (Project Sponsor or Owner) please describe the Contracting Entity here.

Part B. - Description of the Water Activity – Please Refer to Criteria and Guidance Document for Eligibly Requirements

1. Name of water activity/project:

Stillwater Reservoir Seepage Project

[ ] Environmental compliance and feasibility study

[ ] Technical Assistance regarding permitting, feasibility studies, and environmental compliance

[ ] Studies or analysis of structural, nonstructural, consumptive, nonconsumptive water needs, projects

Study or Analysis of:

- [ ] Structural project or activity
- [ ] Nonstructural project or activity
- [ ] Consumptive project or activity
- [ ] Nonconsumptive project or activity

[X] Structural and/ or nonstructural water project or activity

2. Describe how the water activity meets these **Threshold Criteria.**

1. The water activity meets the eligibility requirements outlined in Part 2 of the Criteria and Guidelines.

   The Bear River is within the eligible group, Private Incorporated - mutual ditch companies, homeowners associations, non-profit corporations

2. The water activity is consistent with Section 37-75-102 Colorado Revised Statutes. The requirements/language from the statute is provided in Part 3 of the Criteria and Guidelines.

   This project is consistent with 37-75-102. It seeks to repair the Stillwater Reservoir thereby making the storage of water currently adjudicated for storage consistently available by the reduction of seepage losses.

3. The water activity underwent an evaluation and approval process and was approved by the Basin Roundtable (BRT) and the application includes a description of the results of the BRTs evaluation and approval of the activity. At a minimum, the description must include the level of agreement reached by the roundtable, including any minority opinion(s) if there was not general agreement for the activity. The description must also include reasons why general agreement was not reached (if it was not), including who opposed the activity and why they opposed it. Note- If this information is included in the letter from the roundtable chair simply reference that letter.

   TBD

4. The water activity meets the provisions of Section 37-75-104(2), Colorado Revised Statutes. The requirements/language from the statute is provided in Part 3 of the Criteria and Guidelines.

   Although this project does not seek to address unappropriated waters this project seeks to improve the use of appropriated waters in the basin. This will have a positive effect on overall water use in the basin by improving an existing facility and reducing the need for additional appropriations in the upper basin which is over appropriated.

3. For Applications that include a request for funds from the Statewide Account, describe how the water activity meets the **Evaluation Criteria**. See Part 3 of Criteria and Guidelines.

This request is from Basin Funds.

4. Please provide an overview of the water project or activity to be funded including – type of activity, statement of what the activity is intended to accomplish, the need for the activity, the problems and opportunities to be addressed, expectations of the participants, why the activity is important, the service area or geographic location, and any relevant issues etc. Please include any relevant TABOR issues that may affect the Contracting Entity. Please refer to Part 2 of Criteria and Guidance document for additional detail on information to include.

The Reservoir is located in Garfield County, CO at the headwaters of the Bear River and is used primarily for irrigation of agricultural lands in Routt County, CO with municipal water being owned by the Town of Yampa, CO. The agricultural land irrigated primarily is in the Yampa River drainage, with a portion of the irrigated land being in the Colorado River drainage.

The reduction of seepage from the Reservoir to improve storage efficiency has the potential to reduce the need to develop additional unappropriated waters in the upper basin.

Area benefited – direct benefit to the irrigated areas above Yampa, CO and the Town of Yampa. Unlike other communities in the area the Town of Yampa does not a lot of storage options and will be evaluating its water needs through a grant previously awarded to the town of Yampa.

This project would provide an indirect benefit to downstream users by providing return flows later in the summer for use in satisfying other rights.

Irrigation from the Reservoir is predominately for production of native grass hay, with an average production of approximately 2.5 tons/acre. The production of hay in this area is an important aspect of maintain agricultural practices on these lands.

5. Please summarize the proposed scope of work. Please refer to Part 2 of the Criteria and Guidance document for detailed requirements. On the following page there is an example format for the Scope of Work. You can use the example format or your own format, provided that comparable information is included.

   The scope of work should outline by task how the water activity will be accomplished. It is important that the scope of work detail the specific steps, activities/procedures that will be followed to accomplish the water activity and the specific products/deliverables that will be accomplished. The scope of work should include but not be limited to: task description, key personnel, budget, schedule and deliverables and the final report/project documentation upon completion of the water activity.

This scope of work has been prepared to present a program to address the seepage issues at the Reservoir. This scope of work has been developed to make full use of available information to complete required engineering and permitting work for the project, but is focused on actual constructive work performed to reduce the amount of seepage from the Reservoir. The four discrete tasks anticipated for this scope of work are presented below:

1. Install new outlet flume

The first item of work to be performed as part of the project is to install a new measuring flume at the outlet of the reservoir. The purpose of this flume installation is to replace the original concrete flume that has broken down with a new steel flume to allow a more accurate measurement of the outflow and seepage from the Reservoir.

A steel flume would be purchased from a supplier and installed and sealed within the existing concrete structure for the flume.

2. Engineering/Geologic Evaluation

An engineering evaluation would be performed to determine the most cost effective way to reduce the seepage from the Reservoir

Review existing data and reports followed by a site investigation. Based on the results of the evaluation a preferred alternative for addressing the seepage will be developed

3. Permitting

Prepare State Engineer Repair Application
USFS Review

4. Seepage Repair

Due to the potentially large interstitial spaces present in the dam foundation material, and the possibility

that a single row grout curtain may not seal it effectively, a two row grout curtain is being costed as a potential seepage reduction measure for this project. In a two row grout program, the first row of holes is place to seal a portion of the large interstitial spaces and fractures that are likely to be present so that the upstream row of grout holes achieve better grout distribution by having an area of hydraulic resistance downstream to pump against.

Preliminary Budget - $209K

1. Flume –$4k installed (30" x 7' flume $2265 – Warren Anderson 970-874-3171)

2. Engineering/Geologic Evaluation – $50K
   $25k Studies, $25k plans and specs Based on discussions with D. Johnson GEI Consultants – 303-440-5234

3. Permitting - $5K
   Submittal of Plans and specs to SEO and USFS
   Assume no special use permit required by the USFS based on discussion with Yampa District personnel.

4. Seepage Repair – $150K
   24 - 75 foot deep grout holes with 100% overage on the grout
   Top head drive air rotary drill rig
   Cost estimated by Brian Dellet – Layne Western drilling 303-856-2174

Project Management
This project will be managed by John Redmond, P.E. for the Company. John is a registered Professional Civil Engineer with 18 years experience managing engineering projects. These project have included design and construction monitoring and construction management for projects up to $30 million. Formal project management training has included completion of the Project Management and Senior Project Management classes at MWH University. Until recently, John was a Principal Engineer and Vice-President with MWH managing a staff of 35 professionals in the Steamboat Springs, CO office.

Suggested Format for Scope of Work

The scope of work will form the basis for the contract between the Applicant and the State of Colorado. In short, the Applicant is agreeing to undertake the work for the compensation outlined in the scope of work and budget, and in return, the State of Colorado is receiving the deliverables/products specified. Summarized below is a suggested format for the Scope of Work.

I. Task 1

- Description of task:
- Method or procedure that will be used or followed to accomplish the task and identify who will undertake the task:
- Description of the major deliverables/products that will be produced upon successful completion of the task:

Task 2 (Repeat the above format for each task)

II. Personnel

Provide a list of key water activity/project participants and their qualifications to accomplish the water activity/project. If specific individuals or firms have not yet been identified indicate the types of expertise that will be sought (i.e. professional engineering firm, registered land surveyor, aquatic biologist etc.).

III. Budget

A detailed budget by task, which includes the level of effort (hours) and rates. Any unit costs or other direct costs must be specified (i.e. mileage, number of miles, dollars per mile). For an example budget format – See Attachment 1 at the end of this application.

If applicable, the budget should also detail the source and amount of matching funds and/or in-kind contributions, if any. If applicable, the budget should also include any other outstanding or previously applied for funding that also supports the water activity:

IV. Schedule

A detailed project schedule including key milestones and the dates these are expected to be completed.

NOTE: Costs incurred prior to execution of a contract or purchase order are not subject to reimbursement.

6. Water Availability and Sustainability – this information is needed to assess the viability and effectiveness of the water project or activity. Please provide a description of each water supply source to be utilized for, or the water body to be affected by, the water activity. For water supply sources being utilized, describe its location, yield, extent of development, and water right status. For water bodies being affected, describe its location, extent of development, and the expected effect of the water activity on the water body, in either case, the analysis should take into consideration a reasonable range of hydrologic variation.

The Stillwater No. 1 Dam is located approximately 14.5 miles west - southwest of Yampa, CO near the headwaters of the Bear River. The dam has a crest elevation of 10,255 ft AMSL and has a drainage area of 5,440 acres. Due to its high elevation, the basin receives a considerable amount of snow during the winter months and has sufficient yield to fill the reservoir.

Water rights for the reservoir are a decreed amount of 6,392 acre-feet that have an appropriation date of 1/9/1935 and an adjudication date of 9/14/1946. The constructed capacity of the reservoir is 6,088 acre-feet and due to the seepage problems with storing water in the reservoir, the Company operates on a basis of 5,175 acre-feet.

The Bear River above the Town of Yampa, CO is over appropriated and under administration for most of the summer irrigation season. Due to its lower priority, the reservoir typically gets called out of priority early in the irrigation season and is required to bypass flows to downstream senior water rights. This limits the ability of the reservoir to refill on an annual basis if drained. However, inflows to the reservoir continue to be at least 1 to 2 cfs during the non-irrigating season.

The effect of the seepage from the reservoir is that it limits the ability to effectively store water during runoff and from year to year. There have been years when the available water in the reservoir was not all used during the summer irrigation season and it was carried over in the reservoir to the following spring; however at the time of first inspection of the reservoir the following year the amount of stored water is substantially less than what was in the reservoir the previous fall. This loss to seepage decreases the ability of the reservoir to buffer the effect of a dry year following a normal water year.

7. Please provide a brief narrative of any related or relevant previous studies.

In 1999 a "Stillwater No. 1 Dam Repair Feasibility" report was prepared by Marcus D. Hodges, P.E.L.S. in cooperation with B&RW Construction Co. Inc. This report evaluated the possibility of surface sealing of the identified areas of leakage for the Stillwater No. 1 Dam.

8. Additional Information – If you feel you would like to add any additional pertinent information please feel free to do so here.

The above statements are true to the best of my knowledge:

Signature of Applicant:

Print Applicant's Name:

Project Title:

Return this application to:

Mr. Todd Doherty
Intrastate Water Management and Development Section
COLORADO WATER CONSERVATION BOARD
1580 Logan Street, Suite 600
Denver, CO 80203

To submit applications by Email, send to: todd.doherty@state.co.us

Reference Information

The following information is available via the internet. The reference information provides additional detail and background information regarding these criteria and guidelines and water policy issues affecting our state.

Sample Contract and Purchase Order –

http://cwcb.state.co.us/IWMD/RelatedInformation/ToolsResources/

Colorado Water Conservation Board Policies

Loan and Grant policies and information are available at – http://cwcb.state.co.us/Finance/

Water Supply Reserve Account Criteria and Guidelines –
http://cwcb.state.co.us/IWMD/RelatedInformation/ToolsResources/

Interbasin Compact Committee and Basin Roundtables

Interbasin Compact Committee By-laws and Charter (under Helpful Links section) –
http://ibcc.state.co.us/Basins/IBCC/

Legislation

House Bill 05-1177 - Also known as the Water for the 21st Century Act –
http://cwcbweblink.state.co.us/DocView.aspx?id=105662&searchhandle=28318

House Bill 06-1400 – Adopted the Interbasin Compact Committee Charter –
http://cwcbweblink.state.co.us/DocView.aspx?id=21291&searchhandle=12911

Senate Bill 06-179 – Created the Water Supply Reserve Account –
http://cwcbweblink.state.co.us/DocView.aspx?id=21379&searchhandle=12911

Statewide Water Supply Initiative

General Information – http://cwcb.state.co.us/IWMD/

Phase 1 Report – http://cwcb.state.co.us/IWMD/SWSITechnicalResources/SWSIPhaseIReport/

Attachment 1

Sample Budget Table: Please note that this budget table is an example and will need to be adapted to fit each individual application. In the tables below please list the personnel by specialty/ expertise i.e. project manager, project engineer, etc. Also, tasks should correspond to the scope of work of your project and the number of tasks listed will vary accordingly.

Total Costs				
	Labor	Other Direct Costs	Matching Funds (If Applicable)	Total Project Costs
Task 1 - (Specify name of task)				
Task 2 -				
In-Kind Contributions				
Total Costs:				

1) Identify specific source and amount by task.

Example Titles

Example Project Personnel: Hourly Rate:	Project Manager	Project Engineer	Geologist	Scientist	Graphics/ Designer	Clerical		Total Costs
Task 1 -								
Task 2 -								
Total Hours:								
Cost:								

Other Direct Costs						
Item: Units: Unit Cost:	Copies No.	Materials	Equipment/ Supplies	Mileage Miles		Total
Task 1 -						
Task 2 -						
Total Units:						
Total Cost:						

In-Kind Contributions (If Applicable)				
Project Personnel: Hourly Rate:				Total
Task 1 -				
Task 2 -				
Total Hours:				
Total Cost:				